**Last Revised: February 27, 2019**
*TPD# KARA.00010*

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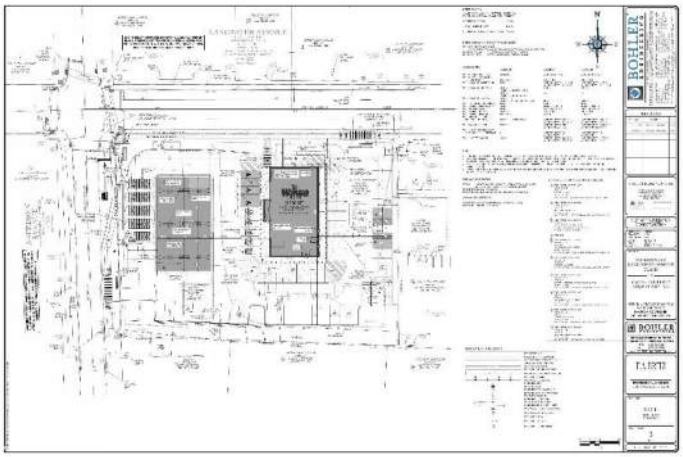
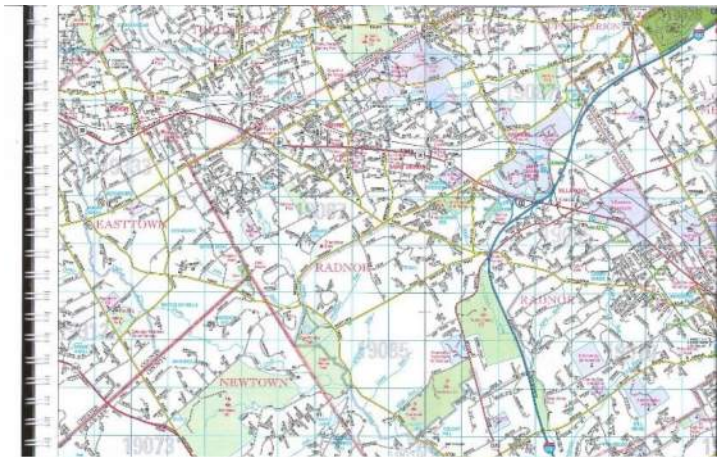
TRAFFIC PLANNING AND DESIGN, INC.






# WAWA – Lancaster Avenue (S.R. 0030) & Aberdeen Avenue

Transportation Impact Study

*Radnor Township, Delaware County*

**For Submission To:**

PennDOT District 6-0 & Radnor Township

*2500 East High Street, Suite 650, Pottstown, PA 19464 | 610.326.3100 | TPD@TrafficPD.com*

# WAWA – LANCASTER AVENUE & ABERDEEN AVENUE
# TRANSPORTATION IMPACT STUDY

FOR SUBMISSION TO:

Radnor Township, Delaware County, PA
& PennDOT District 6-0

Prepared For:
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October 9, 2018
(Last Revised: February 27, 2019)
*TPD # KARA.00010*


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# EXECUTIVE SUMMARY

The purpose of this revised study is to examine the potential traffic impact associated with the Proposed WAWA Convenience Market with Gasoline on the roadway network in Radnor Township, Delaware County, PA. Based on this evaluation, the following conclusions were reached:

- The project site is located on the southeastern corner of Lancaster Avenue (S.R. 0030) and Aberdeen Avenue. The Existing Site consists of the following uses:
  - Sunoco – Ten (10) Fueling Positions, Four (4) Service Bays;
  - BP - Eight (8) Fueling Positions, One (1) Carwash Tunnel.
- Access to the Existing Site is provided by four (4) curb cuts to Lancaster Avenue (S.R. 0030) and two (2) curb cuts to Aberdeen Avenue.
- The Proposed Site will replace these existing uses with a 4,736 s.f. WAWA Convenience Market with 12 fueling positions.
- Access to the Proposed Site will be provided by:
  - One (1) full-access driveway to Lancaster Avenue (S.R. 0030)
  - One (1) full-access driveway to Aberdeen Avenue.
- The measured sight distances at the site driveways exceed all PennDOT Sight Distance Criteria.
- The Proposed Site will generated 94 new trips during the weekday A.M. peak hour, 94 new trips during the weekday Midday peak hour, 78 new trips during the weekday P.M. peak hour, 102 new trips during the Saturday Midday peak hour, and 102 new trips during the Sunday peak hour.
- Based on the counts conducted at the Existing Site driveways, the Existing Site(s) generate 120 total trips during the weekday A.M. peak hour, 142 total trips during the weekday Midday peak hour, 196 total trips during the weekday P.M. peak hour, 198 total trips during the Saturday Midday peak hour, and 113 total trips during the Sunday peak hour.
- Under all projected (build) conditions with the development of the proposed site and with site-related recommendations outlined in **Table II** (With and Without the PennDOT-requested northbound right turn (NBR) lane on Aberdeen Avenue), all study area intersections will satisfy PennDOT ILOS Standards.
- Levels of Service (LOS) for the study area intersections have been summarized in matrix form. **Table I** details the overall intersection LOS for each study area intersection:

## TABLE I
## LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

| Intersection | Peak Hour | 2018 Exist | 2020 | | | 2025 | | | Satisfied ILOS? |
|---|---|---|---|---|---|---|---|---|---|
| | | | Base | Proj.[1] | Proj.[2] | Base | Proj.[1] | Proj.[2] | |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | AM Peak | C(23.3) | C(23.6) | C(27.4) | C(29.4) | C(24.4) | C(28.2) | C(30.4) | Yes |
| | PM Peak | B(13.0) | B(13.2) | B(14.1) | B(14.0) | B(13.7) | B(14.7) | B(14.6) | |
| | SAT Peak | B(19.2) | B(19.3) | C(21.0) | C(24.3) | B(19.6) | C(21.2) | C(22.8) | |
| | SUN Peak | B(12.6) | B(12.7) | B(15.8) | B(17.3) | B(13.0) | B(16.1) | B(17.6) | |
| | MID Peak | C(20.2) | C(20.3) | C(22.7) | C(26.4) | C(20.7) | C(23.2) | C(24.7) | |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | AM Peak | A(0.0) | A(0.0) | -- | | A(0.0) | -- | | Yes |
| | PM Peak | A(0.0) | A(0.0) | -- | | A(0.0) | -- | | |
| | SAT Peak | A(0.0) | A(0.0) | -- | | A(0.0) | -- | | |
| | SUN Peak | A(0.0) | A(0.0) | -- | | A(0.0) | -- | | |
| | MID Peak | A(0.0) | A(0.0) | -- | | A(0.0) | -- | | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway | AM Peak | A(0.2) | A(0.2) | -- | | A(0.2) | -- | | Yes |
| | PM Peak | A(0.2) | A(0.2) | -- | | A(0.2) | -- | | |
| | SAT Peak | A(0.1) | A(0.1) | -- | | A(0.1) | -- | | |
| | SUN Peak | A(0.2) | A(0.2) | -- | | A(0.2) | -- | | |
| | MID Peak | A(0.1) | A(0.1) | -- | | A(0.1) | -- | | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | AM Peak | A(0.0) | A(0.0) | -- | | A(0.0) | -- | | Yes |
| | PM Peak | A(0.1) | A(0.1) | -- | | A(0.1) | -- | | |
| | SAT Peak | A(0.2) | A(0.2) | -- | | A(0.2) | -- | | |
| | SUN Peak | A(0.0) | A(0.0) | -- | | A(0.0) | -- | | |
| | MID Peak | A(0.1) | A(0.1) | -- | | A(0.1) | -- | | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | AM Peak | A(0.1) | A(0.1) | A(1.6) | | A(0.1) | A(1.7) | | Yes |
| | PM Peak | A(0.3) | A(0.3) | A(1.1) | | A(0.3) | A(1.2) | | |
| | SAT Peak | A(0.4) | A(0.3) | A(1.0) | | A(0.4) | A(1.0) | | |
| | SUN Peak | A(0.3) | A(0.3) | A(1.1) | | A(0.3) | A(1.1) | | |
| | MID Peak | A(0.4) | A(0.4) | A(1.7) | | A(0.4) | A(1.8) | | |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | AM Peak | A(0.5) | A(0.5) | -- | | A(0.5) | -- | | Yes |
| | PM Peak | A(0.4) | A(0.4) | -- | | A(0.4) | -- | | |
| | SAT Peak | A(0.5) | A(0.5) | -- | | A(0.5) | -- | | |
| | SUN Peak | A(0.6) | A(0.6) | -- | | A(0.6) | -- | | |
| | MID Peak | A(0.2) | A(0.2) | -- | | A(0.2) | -- | | |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | AM Peak | A(0.2) | A(0.2) | A(2.8) | | A(0.2) | A(2.7) | | Yes |
| | PM Peak | A(0.4) | A(0.4) | A(2.7) | | A(0.4) | A(2.6) | | |
| | SAT Peak | A(0.1) | A(0.1) | A(2.5) | | A(0.1) | A(2.4) | | |
| | SUN Peak | A(0.5) | A(0.5) | A(3.2) | | A(0.5) | A(3.2) | | |
| | MID Peak | A(0.3) | A(0.2) | A(3.3) | | A(0.2) | A(3.2) | | |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | AM Peak | B(13.2) | B(13.3) | B(13.0) | | B(13.5) | B(13.2) | | Yes |
| | PM Peak | B(14.9) | B(14.8) | B(14.5) | | B(14.9) | B(14.6) | | |
| | SAT Peak | B(13.8) | B(13.8) | B(13.6) | | B(14.0) | B(13.8) | | |
| | SUN Peak | B(14.0) | B(14.1) | B(14.1) | | B(14.1) | B(14.1) | | |
| | MID Peak | B(19.2) | B(18.7) | B(18.7) | | B(18.7) | B(18.9) | | |

*Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario*
*1 = With Site-Related Recommendations*
*2 = With PennDOT-requested NBR lane*

TABLE I (CONTINUED)
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

| Intersection | Peak Hour | 2018 Exist | 2020 | | 2025 | | Satisfied ILOS? |
|---|---|---|---|---|---|---|---|
| | | | Base | Proj.[1] | Base | Proj.[1] | |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | AM Peak | A(4.0) | A(4.0) | A(3.9) | A(4.2) | A(4.0) | Yes |
| | PM Peak | A(4.2) | A(4.1) | A(4.1) | A(4.1) | A(4.2) | |
| | SAT Peak | A(4.9) | A(4.9) | A(5.2) | A(4.9) | A(5.2) | |
| | SUN Peak | A(3.3) | A(3.3) | A(3.5) | A(3.4) | A(3.6) | |
| | MID Peak | A(3.3) | A(3.3) | A(3.7) | A(3.4) | A(3.8) | |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | AM Peak | B(10.7) | B(10.6) | B(10.8) | B(11.0) | B(11.1) | Yes |
| | PM Peak | A(8.5) | A(8.5) | A(8.3) | A(8.4) | A(8.5) | |
| | SAT Peak | A(7.4) | A(7.4) | A(7.5) | A(7.5) | A(7.4) | |
| | SUN Peak | A(6.6) | A(6.6) | A(6.7) | A(6.7) | A(6.7) | |
| | MID Peak | A(7.6) | A(7.6) | A(7.6) | A(7.7) | A(7.7) | |
| Aberdeen Avenue & Midland Avenue | AM Peak | A(9.9) | A(10.0) | A(9.9) | B(10.1) | A(10.0) | Yes |
| | PM Peak | A(8.6) | A(8.6) | A(8.5) | A(8.6) | A(8.6) | |
| | SAT Peak | A(8.1) | A(8.1) | A(8.0) | A(8.1) | A(8.1) | |
| | SUN Peak | A(7.6) | A(7.6) | A(7.6) | A(7.6) | A(7.6) | |
| | MID Peak | A(8.7) | A(8.8) | A(8.7) | A(8.8) | A(8.7) | |
| Louella Avenue & Midland Avenue | AM Peak | A(2.2) | A(2.2) | A(2.2) | A(2.3) | A(2.2) | Yes |
| | PM Peak | A(2.8) | A(2.8) | A(2.8) | A(2.8) | A(2.8) | |
| | SAT Peak | A(3.6) | A(3.5) | A(3.6) | A(3.6) | A(3.5) | |
| | SUN Peak | A(4.1) | A(4.1) | A(4.1) | A(4.0) | A(4.0) | |
| | MID Peak | A(3.7) | A(3.7) | A(3.7) | A(3.7) | A(3.7) | |

*Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario*
*1 = With Site-Related Recommendations*

- Site-related recommendations are summarized in **Table II**:

TABLE II
RECOMMENDATIONS

| Intersection | Recommendation |
|---|---|
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | Although not needed to mitigate the impact of the Proposed Site, as requested by PennDOT, provide a northbound right turn (NBR) lane on Aberdeen Avenue |
| | Optimize signal timings and provide for Traffic Adaptive Signal Equipment |
| | Work with PennDOT and Radnor Township to provide/upgrade Pedestrian/ADA facilities at this intersection, to the extent feasible |
| Lancaster Avenue (S.R. 0030) & Proposed Driveway | Provide adequate ingress/egress radii to facilitate access to/from the site |
| | Provide a "STOP"-sign on the NB egress approach of the driveway |
| | Work with PennDOT and Radnor Township to provide/upgrade Pedestrian/ADA facilities at this intersection, to the extent feasible |
| Aberdeen Avenue & Proposed Driveway | Provide adequate ingress/egress radii to facilitate access to/from the site |
| | Provide a "STOP"-sign on the WB egress approach of the driveway |
| | Provide "Do Not Block Intersection" signage on NB Aberdeen Avenue |
| | Work with PennDOT and Radnor Township to provide/upgrade Pedestrian/ADA facilities at this intersection, to the extent feasible |

# INTRODUCTION

Traffic Planning and Design, Inc. (TPD) has completed a revised Transportation Impact Study (TIS) for a proposed WAWA Convenience Market with Gasoline in Radnor Township, Delaware County, Pennsylvania. The project site is located on the southeastern corner of Lancaster Avenue (S.R. 0030) and Aberdeen Avenue, as shown in **Figure 1**. The Existing Site consists of the following uses:

- Sunoco – Ten (10) Fueling Positions, Four (4) Service Bays;
- BP - Eight (8) Fueling Positions, One (1) Carwash Tunnel.

As shown in **Figure 2**, the Proposed Site will replace these existing uses with a 4,736 s.f. WAWA Convenience Market with 12 fueling positions.

Access to the Existing Site is provided by four (4) curb cuts to Lancaster Avenue (S.R. 0030) and two (2) curb cuts to Aberdeen Avenue. Access to the Proposed Site will be provided by:

- One (1) full-access driveway to Lancaster Avenue (S.R. 0030)
- One (1) full-access driveway to Aberdeen Avenue.

TPD assumed future years of 2020 and 2025.

This report has been prepared in accordance with PennDOT's *Policies and Procedures for Transportation Impact Studies*, found in PennDOT's Publication 282, Appendix A, dated July, 2017. The scope of this study has also been confirmed through PennDOT's Scoping Process, via the PennDOT Scoping Review, dated July 12, 2018. Additionally, this TIS has been revised based on the following review letters:

- EPS Scoping Review Letter, dated July 12, 2018, prepared by PennDOT District 6-0
- Scoping Review Letter, dated July 31, 2018, prepared by Gilmore & Associates
- Scoping Review Letter, dated October 26, 2018, prepared by Gilmore & Associates
- EPS Review Letter, dated November 8, 2018, prepared by PennDOT District 6-0

All relevant correspondence pertaining to this project has been included in **Appendix A**.

# EXISTING ROADWAY NETWORK

A field review of the existing roadway system in the study area was conducted. The existing roadway characteristics within the study area are summarized in **Table 1**. Photographs of the study area intersections are included in **Appendix B**.

TABLE 1
ROADWAY CHARACTERISTICS WITHIN STUDY AREA

| Roadway | State Route | Functional Classification/ Roadway Type | Predominant Directional Orientation | Average Daily Traffic[1] | 85th Percentile Speed | Posted Speed Limit |
|---|---|---|---|---|---|---|
| Lancaster Avenue | S.R. 0030 | Urban Principal Arterial | East-West | 28,086 | EB: 38 mph<br>WB: 39 mph | 25-35 mph |
| Aberdeen Avenue | N/A | Local Road | North-South | N/A | NB: 28 mph<br>SB: 28 mph | 25 mph |
| Wayne Avenue | S.R. 1046 | Urban Collector (North of S.R. 0030)<br>Minor Arterial (South of S.R. 0030) | North-South | 6,604 | N/A | 25 mph |
| Louella Avenue | N/A | Local Road | North-South | N/A | | 25 mph |
| St. Davids Road | N/A | Local Road | North-South | N/A | | 25 mph |
| Chamounix Road | N/A | Local Road | North-South | N/A | | 25 mph |
| Midland Avenue | N/A | Local Road | East-West | N/A | | 25 mph |

*1 = PennDOT iTMS Website (August 2018)*

## Bicycle and Pedestrian Facilities

Based on observations during field visits, pedestrian ramps, push buttons, and crosswalks, exist at all the signalized intersections in the Study Area. Sidewalk exists along both site frontages. There are no specific bicycle facilities in the Study Area.

## Mass Transit Facilities

Bus service is provided in the Study Area via SEPTA Bus Routes 105 and 106, with stops at the intersection with Aberdeen Avenue and at Pembroke Avenue to the east. The closest train service is provided in the Study Area at the Wayne and St. David's Stations on the SEPTA Paoli Line, located less than 1 mile away.

## Crash Data Investigation

Crash data were obtained from PennDOT for the study area intersections. PennDOT defines a reportable crash as follows, "A reportable (crash) is one in which an injury or fatality occurs or if at least one of the vehicles involved requires towing from the scene." Reportable crashes were tabulated for the five-year time period beginning 01/01/2013 and ending 12/31/2017. For a given intersection, PennDOT considers a crash occurrence of 5 reportable, correctable crashes over a continuous twelve-month period during the past five years to be a threshold value, above which the intersection design should be reviewed to examine if corrective measures can be taken to enhance safety. The number of reportable crashes at the study area intersections is shown in **Table 2.**

TABLE 2
PENNDOT TOTAL REPORTABLE (CORRECTABLE) CRASH DATA

| Study Area Intersection | Total Number of Reportable Crashes | | | | |
|---|---|---|---|---|---|
| | 2013 | 2014 | 2015 | 2016 | 2017 |
| Lancaster Avenue & Aberdeen Avenue | 5(3) | 4(1) | 2(1) | 1(0) | 1(1) |
| Lancaster Avenue & Louella Avenue | 2(0) | 2(1) | 0(0) | 1(0) | 0(0) |
| Lancaster Avenue & Wayne Avenue | 2(2) | 3(1) | 3(1) | 2(2) | 2(1) |
| Lancaster Avenue & St. Davids Road/Chamounix Road | 7(3) | 3(1) | 2(0) | 2(0) | 1(0) |
| Aberdeen Road & Midland Avenue | 0(0) | 0(0) | 0(0) | 0(0) | 1(0) |
| Louella Avenue & Midland Avenue | 0(0) | 0(0) | 0(0) | 0(0) | 0(0) |

Total Reportable Crashes (Correctable Crashes)

Based on a review of the crash data in **Table 2**, there were no twelve-month periods during the past five years where 5 or more crashes occurred that were deemed correctable.

# EXISTING TRAFFIC CONDITIONS

## Manual Turning Movement Counts

Manual traffic counts were conducted on 15-minute intervals during the weekday morning (7:00 to 9:00 A.M.), weekday evening (2:00 to 6:00 P.M.), Saturday midday (11:00 A.M. to 1:00 P.M.), Sunday church (9:00 to 11:30 A.M.) and weekday Midday (11:00 A.M. to 1:00 P.M.) peak periods. ***The Sunday church peak time period was determined based on correspondence with the local churches pertaining to the peak service attendance on Sunday.*** Data pertaining to heavy vehicles, pedestrians and transit vehicles were observed during the manual counts. Peak hours and count dates for the study area intersections are identified in **Table 3**.

TABLE 3
MANUAL TRAFFIC COUNT INFORMATION[1]

| Intersection | Date of Traffic Counts[1] | Time Period | Intersection Peak Hour[2] |
|---|---|---|---|
| *Lancaster Avenue (S.R. 0030) & Aberdeen Avenue* | Thursday, May 31, 2018/ Tuesday, September 11, 2018 | Weekday A.M. | 7:45 to 8:45 A.M. |
| | | Weekday P.M. | 4:45 to 5:45 P.M. |
| | Saturday, June 2, 2018 | SAT Midday | 11:15 A.M. to 12:15 P.M. |
| | Sunday, September 9, 2018 | SUN Peak | 10:30 to 11:30 A.M. |
| | Thursday, December 13, 2018 | Weekday MID | 11:15 A.M. to 12:15 P.M. |
| *Lancaster Avenue (S.R. 0030) & Existing Sunoco/BP Driveways (4)* | Thursday, May 31, 2018/ Tuesday, September 11, 2018 | Weekday A.M. | 7:00 to 8:00 A.M.[3] |
| | | Weekday P.M. | 2:45 to 3:45 P.M.[3] |
| | Saturday, June 2, 2018 | SAT Midday | 11:00 A.M. to 12:00 P.M.[3] |
| | Sunday, September 9, 2018 | SUN Peak | 10:15 to 11:15 A.M.[3] |
| | Thursday, December 13, 2018 | Weekday MID | 12:00 to 1:00 P.M. |
| *Aberdeen Avenue & Existing Sunoco Driveways (2)* | Thursday, May 31, 2018/ Tuesday, September 11, 2018 | Weekday A.M. | 7:00 to 8:00 A.M.[3] |
| | | Weekday P.M. | 2:45 to 3:45 P.M.[3] |
| | Saturday, June 2, 2018 | SAT Midday | 11:00 A.M. to 12:00 P.M.[3] |
| | Sunday, September 9, 2018 | SUN Peak | 10:15 to 11:15 A.M.[3] |
| | Thursday, December 13, 2018 | Weekday MID | 11:00 A.M to 12:00 P.M. |
| *Lancaster Avenue (S.R. 0030) & Wayne Avenue* | Tuesday, September 11, 2018 | Weekday A.M. | 7:45 to 8:45 A.M. |
| | | Weekday P.M. | 4:30 to 5:30 P.M |
| | Saturday, June 2, 2018 | SAT Midday | 11:45 A.M. to 12:45 P.M. |
| | Sunday, September 9, 2018 | SUN Peak | 10:30 to 11:30 A.M. |
| | Thursday, December 13, 2018 | Weekday MID | 11:30 A.M to 12:30 P.M. |
| *Lancaster Avenue (S.R. 0030) & Louella Avenue* | Tuesday, September 11, 2018 | Weekday A.M. | 7:45 to 8:45 A.M. |
| | | Weekday P.M. | 4:30 to 5:30 P.M |
| | Saturday, September 8, 2018 | SAT Midday | 11:45 A.M. to 12:45 P.M. |
| | Sunday, September 9, 2018 | SUN Peak | 10:30 to 11:30 A.M. |
| | Thursday, December 13, 2018 | Weekday MID | 12:00 to 1:00 P.M. |
| *Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road* | Tuesday, September 11, 2018 | Weekday A.M. | 7:45 to 8:45 A.M. |
| | | Weekday P.M. | 5:00 to 6:00 P.M |
| | Saturday, September 8, 2018 | SAT Midday | 11:45 A.M. to 12:45 P.M. |
| | Sunday, September 9, 2018 | SUN Peak | 10:30 to 11:30 A.M. |
| | Tuesday, December 18, 2018 | Weekday MID | 11:45 A.M. to 12:45 P.M. |

*1 =Schools confirmed to be in session*
*2 =Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur*
*3 =Site Peak Hour*

TABLE 3 (CONTINUED)
MANUAL TRAFFIC COUNT INFORMATION[1]

| Intersection | Date of Traffic Counts[1] | Time Period | Intersection Peak Hour[2] |
|---|---|---|---|
| *Aberdeen Avenue & Midland Avenue* | Tuesday, September 11, 2018 | Weekday A.M. | 7:30 to 8:30 A.M. |
| | | Weekday P.M. | 2:45 to 3:45 P.M |
| | Saturday, September 8, 2018 | SAT Midday | 11:00 A.M. to 12:00 P.M. |
| | Sunday, September 9, 2018 | SUN Peak | 10:30 to 11:30 A.M. |
| | Tuesday, December 18, 2018 | Weekday MID | 12:00 to 1:00 P.M. |
| *Louella Avenue & Midland Avenue* | Tuesday, September 11, 2018 | Weekday A.M. | 7:15 to 8:15 A.M. |
| | | Weekday P.M. | 2:45 to 3:45 P.M |
| | Saturday, September 8, 2018 | SAT Midday | 11:30 A.M. to 12:30 P.M. |
| | Sunday, September 9, 2018 | SUN Peak | 9:45 to 10:45 A.M. |
| | Thursday, December 13, 2018 | Weekday MID | 12:00 to 1:00 P.M. |

*1 =Schools confirmed to be in session*
*2 =Peak Hour consists of the four consecutive 15-minute intervals where the highest traffic volumes occur*

The 2018 Existing Condition traffic volumes for the weekday A.M., weekday P.M., Saturday Midday and Sunday church peak hours are illustrated in **Figures 3-7**. Manual traffic count data sheets are provided in **Appendix C**.

### Speed Study

TPD conducted a speed study using a Decatur Radar Gun on Lancaster Avenue and Aberdeen Avenue, in the vicinity of the proposed site driveway locations. The travel speed, as defined by PennDOT, is established by determining the 85$^{th}$ percentile speed, which is the speed which 85% of the drivers travel at or below. Based on the speed study, the 85$^{th}$ percentile speed on Lancaster Avenue in the vicinity of the proposed site driveway locations was found to be **38 m.p.h.** eastbound, and **39 m.p.h.** westbound. The 85$^{th}$ percentile speed on Aberdeen Avenue in the vicinity of the proposed site driveway location was found to be **28 m.p.h.** northbound, and **28 m.p.h.** southbound. The speed study worksheets are included in **Appendix C**.

## BASE (NO-BUILD) CONDITIONS

A background growth factor for the roadways in the study area was developed based on growth factors for August 2018 to July 2019 obtained from the PennDOT Bureau of Planning and Research (BPR). The PennDOT BPR suggests using a background growth trend factor of 0.00% per year in Delaware County for urban non-interstate roadways. However, to be conservative, TPD utilized the previous BPR growth trend factor of 0.38% per year. As such, the background growth factor was applied annually to yield overall growth percentages of 0.76% (0.38% per year compounded over 2 years) for the 2020 Opening Year and 2.69% (0.38% per year compounded over 7 years) for the 2025 Design Year.

The additional traffic volumes due to background growth were added to the existing traffic data to produce 2020 and 2025 Base Conditions, as illustrated in **Figures 8-17.**

## SCHEDULED ROADWAY IMPROVEMENTS

Based on a review of the PennDOT 12-Year Plan and the DVRPC Transportation Improvement Program (TIP), there are no planned roadway improvements in the vicinity of the proposed site.

# PROPOSED SITE ACCESS

Access to the Existing Site is provided by four (4) curb cuts to Lancaster Avenue (S.R. 0030) and two (2) curb cuts to Aberdeen Avenue. Access to the Proposed Site will be provided by:

- One (1) full-access driveway to Lancaster Avenue (S.R. 0030)
- One (1) full-access driveway to Aberdeen Avenue.

## Sight Distance Analysis

A sight distance analysis was prepared for the proposed site driveways. In general, recommended safe sight distances depend upon the posted speed limit and roadway grades. The existing sight distances at the proposed driveways were measured in accordance with PennDOT Publication 282 Highway Occupancy Permit Guidelines and compared to PennDOT's desirable sight distance standard, which is identified in 67 PA Code Chapter 441.8(h), "Access to and Occupancy of Highways by Driveways and Local Roads." In addition, measured sight distances at the proposed driveways were compared to PennDOT's safe stopping sight distance standard, which is calculated by the following equation:

$$SSSD = 1.47VT + V^2/[30(f \pm g)]$$

SSSD = safe stopping sight distance (acceptable sight distance)
V = Vehicle Speed
T = Perception Reaction Time of Driver (2.5 seconds)
f = Coefficient of Friction for Wet Pavements
g = Percent of Roadway Grade Divided by 100

**Table 4** shows the measured, desirable, acceptable (SSSD), and required sight distances at the site driveways for vehicles entering and exiting the site.

TABLE 4
SIGHT DISTANCE ANALYSIS
PROPOSED SITE DRIVEWAYS

| | Direction | Posted Speed Limit (mph) | 85th Percentile Speed (mph) | Sight Distances (feet) | | | |
|---|---|---|---|---|---|---|---|
| | | | | Grade[1] (%) | DES[2] | SSSD[3] | EXIST |
| **Lancaster Avenue Full-Access Driveway** | | | | | | | |
| **Exiting Movements** | *To the left* | 35 | 38 | +1 | 300[4] | 274 | **500+** |
| | *To the right* | 35 | 39 | -1 | 350[4] | 293 | **500+** |
| **Entering Left Turns** | *Approaching same direction* | 35 | 39 | -1 | N/A | 293 | **500+** |
| | *Approaching opposite direction* | 35 | 38 | +1 | 320[4] | 274 | **500+** |
| **Aberdeen Avenue Full-Access Driveway** | | | | | | | |
| **Exiting Movements** | *To the left* | 25 | 28 | +2 | 250 | 174 | **500+** |
| | *To the right* | 25 | 28 | -2 | 195 | 183 | **500+** |
| **Entering Left Turns** | *Approaching same direction* | 25 | 28 | -2 | N/A | 183 | **500+** |
| | *Approaching opposite direction* | 25 | 28 | +2 | 190 | 174 | **500+** |

*DES = PennDOT Desirable Sight Distance*
*SSSD = PennDOT Acceptable Sight Distance*
*EXIST = Existing (measured) Sight Distance*

*1 = Roadway Grade Approaching Driveway*
*2 = Based on the posted speed*
*3 = Based on the 85th Percentile Speed*
*4 = Based on 4 Lane Cross-Section*

As shown in **Table 4** above, the measured sight distances at the site driveways exceed all PennDOT Sight Distance Criteria.

# TRIP GENERATION

The trip generation rates for the proposed site were obtained from the manual *Trip Generation*, Tenth Edition, 2017, an Institute of Transportation Engineers (ITE) Informational Report. The data are categorized by Land Use Codes, with total vehicular trips for a given land use estimated using an independent variable and statistically generated rates or equations.

**Table 5** shows the rates/equations and directional percentages for the analyzed time periods.

TABLE 5
TRIP GENERATION DATA – PROPOSED SITE

| Land Use (ITE #) | Time Period | Size (X) | Rate | Enter % | Pass-By % |
|---|---|---|---|---|---|
| Super Convenience Market/ Gas Station (#960) | Average Weekday | 4.736 ksf | ***T = 837.58*(X)*** | 50% | N/A |
| | Weekday AM Peak Hour | | T = 83.14*(X)<br>***T = 137.38*(X) – 264.53*** | 50% | 76% |
| | Weekday PM Peak Hour | | ***T = 69.28*(X)*** | 50% | 76% |
| | Saturday Midday Peak Hour | | ***T = 63.80*(X)***<br>T = 104.71*(X) – 204.23 | 50% | 66%[1] |
| | Sunday Peak Hour[2] | | T = 63.80*(X)<br>***T = 104.71*(X) – 204.23*** | 50% | 66%[1] |
| | Weekday Midday Peak Hour[3] | | T = 83.14*(X)<br>***T = 137.38*(X) – 264.53*** | 50% | 76% |
| | Average Weekday | 12 fp | T = 230.52*(X) | 50% | N/A |
| | Weekday AM Peak Hour | | T = 28.08*(X) | 50% | 76% |
| | Weekday PM Peak Hour | | T = 22.96*(X) | 50% | 76% |
| | Saturday Midday Peak Hour | | T = 23.26*(X) | 50% | 66%[1] |
| | Sunday Peak Hour[2] | | T = 23.26*(X) | 50% | 66%[1] |
| | Weekday Midday Peak Hour[3] | | T = 28.08*(X) | 50% | 76% |

*T = Total Trips; X = Independent Variable, ksf = 1000 sf, fp = fueling position*
*[1]No data available, used 10% less than P.M. peak hour.*
*[2]No data available, used Saturday midday peak hour data.*
*[3]No data available, used Weekday A.M. peak hour data*
***Bold/Italics = Higher Generation Utilized***

The results of the trip generation calculations are summarized in **Table 6**.

TABLE 6
TRIP GENERATION – PROPOSED DEVELOPMENT

| Peak Hour | Land use Code | Size | Total | Pass-By Trips | | | New Trips | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Enter | Exit | Total | Enter | Exit |
| Average Weekday | #960 | 4.736 ksf | 3968 | N/A | N/A | N/A | 3968 | 1984 | 1984 |
| Weekday A.M. | | | 394 | 300 | 150 | 150 | 94 | 47 | 47 |
| Weekday P.M. | | | 328 | 250 | 125 | 125 | 78 | 39 | 39 |
| SAT Midday | | | 302 | 200 | 100 | 100 | 102 | 51 | 51 |
| SUN Peak | | | 302 | 200 | 100 | 100 | 102 | 51 | 51 |
| Weekday MID | | | 394 | 300 | 150 | 150 | 94 | 47 | 47 |

***Based on the information contained in Table 6, the Proposed Site will generated 94 new trips during the weekday A.M. peak hour, 94 new trips during the weekday Midday peak hour, 78 new trips during the weekday P.M. peak hour, 102 new trips during the Saturday Midday peak hour, and 102 new trips during the Sunday peak hour.***

***Based on the counts conducted at the Existing Site driveways, the Existing Site(s) generate 120 total trips during the weekday A.M. peak hour, 142 total trips during the weekday Midday peak hour, 196 total trips during the weekday P.M. peak hour, 198 total trips during the Saturday Midday peak hour, and 113 total trips during the Sunday peak hour.***

# TRIP DISTRIBUTION

## New Trips

The distribution and assignment of new trips generated by the proposed development was based upon existing traffic patterns in the Study Area. Based on this evaluation, the new trips for the proposed development were distributed to the local roadway network based on the percentages shown in **Table 7.**

TABLE 7
TRIP DISTRIBUTION PERCENTAGES – NEW TRIPS

| Direction - To/From | Assignment - To/From | Distribution Percentage AM/PM/SAT/SUN/MID |
|---|---|---|
| East | via Lancaster Avenue | 36% |
| West | via Lancaster Avenue | 27% |
| North | via Wayne Avenue | 8% |
| North | via Aberdeen Avenue | 7% |
| South | via Wayne Avenue | 6% |
| North | via Chamounix Road | 5% |
| South | via Aberdeen Avenue | 4% |
| South | via St. Davids Road | 3% |
| South | via Louella Avenue | 2% |
| East | via Midland Avenue | 2% |

## Pass-By Trips

Pass-by trips were established based on the existing thru traffic passing the proposed site driveways. The percentages used for the distribution of pass-by trips to the project site are shown below in **Table 8**.

TABLE 8
TRIP DISTRIBUTION PERCENTAGES – PASS-BY TRIPS

| Direction | Pass-by Trip Distribution Percentages | | | | |
|---|---|---|---|---|---|
| | Weekday A.M. | Weekday P.M. | SAT Midday | SUN Peak | Weekday MID |
| WB Lancaster Avenue | 45% | 45% | 45% | 44% | 44% |
| EB Lancaster Avenue | 42% | 42% | 41% | 44% | 44% |
| NB Aberdeen Avenue | 9% | 6% | 8% | 7% | 7% |
| SB Aberdeen Avenue | 4% | 7% | 6% | 5% | 5% |

## Existing Site Re-distributions

With the development of the Proposed WAWA with Gasoline, the Existing Site will be replaced. Therefore, the traffic associated with the Existing Site was removed via a re-distribution of base condition traffic. TPD assumed that the Existing Site driveways display the pass-by characteristics of ITE #945 (Gasoline/Service Station with Convenience Market). Therefore TPD assumed the volumes at the Existing Site Driveways consisted of 62%, 56%, 46% (PM minus 10%), 46% (PM minus 10%), and 46% (PM minus 10%)

pass-by trips during the weekday A.M., P.M., Saturday midday, Sunday peak and weekday Midday peak hours, respectively. These re-distributions are included in **Figures 18-22.**

The distribution of site-generated trips for the proposed development during the weekday A.M., P.M., Saturday Midday, Sunday peak, and weekday Midday peak hours are shown in **Figures 23-27**. The trip assignment percentage information is included in **Appendix D**.

## PROJECTED (BUILD) CONDITION TRAFFIC VOLUMES

The site-generated trips for the proposed development and the re-distribution of base condition traffic were added to the base (no-build) conditions to develop respective projected (build) condition traffic volumes, as shown in **Figures 28-37**. Volume development spreadsheets are contained in **Appendix E.**

## DRIVEWAY CLASSIFICATION

Driveways intersecting state roads are classified in the Pennsylvania Code, Title 67, Chapter 441. Low volume driveways are used by 25 to 750 vehicles per day. A medium volume driveway is used by 750 to 1500 vehicles per day. High volume driveways are used by more than 1500 vehicles per day. Based on the anticipated site trip generation and the assignment of site traffic, the classifications of the site driveways intersecting state roads are listed in **Table 9.**

TABLE 9
DRIVEWAY CLASSIFICATIONS

| Road | Driveway | Weekday Trips | Weekday Vehicles | Driveway Type |
|---|---|---|---|---|
| Lancaster Avenue (S.R. 0030) | Proposed Driveway | 2678 | 1339 | Medium Volume |
| Aberdeen Avenue | Proposed Driveway | 1290 | 645 | Low Volume |

*Note: A "trip" equals an entering or an exiting vehicle. Therefore, weekday vehicles = weekday trips/2.*

## LEVELS OF SERVICE FOR AN INTERSECTION

For analysis of intersections, level of service is defined in terms of delay, which is a measure of driver discomfort and frustration, fuel consumption, and lost travel time. LOS criteria is stated in terms of control delay per vehicle for a one-hour analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The criteria are shown in **Table 10**. Delay, as it relates to level of service, is a complex measure and is dependent upon a number of variables. For signalized intersections, these variables include the quality of vehicle progression, the cycle length, the green time ratio, and the volume/capacity ratio for the lane group in question. For unsignalized intersections, delay is related to the availability of gaps in the flow of traffic on the major street and the driver's discretion in selecting an appropriate gap for a particular movement from the minor street (straight across, left or right turn).

TABLE 10
LEVEL OF SERVICE CRITERIA
UNSIGNALIZED AND SIGNALIZED INTERSECTIONS[1]

| Level of Service | Control Delay Per Vehicle (Seconds) | |
|---|---|---|
| | Signalized | Unsignalized |
| A | < 10 | < 10 |
| B | > 10 and < 20 | > 10 and < 15 |
| C | > 20 and < 35 | > 15 and < 25 |
| D | > 35 and < 55 | > 25 and < 35 |
| E | > 55 and < 80 | > 35 and < 50 |
| F | > 80 or v/c > 1.0 | > 50 or v/c > 1.0 |

[1]*Obtained from Exhibits 18-4 and 19-1 of the Transportation Research Board's Highway Capacity Manual 2010*

## CAPACITY ANALYSIS METHODOLOGY

Capacity analyses were conducted for the weekday A.M., P.M., Saturday midday, Sunday church peak, and weekday Midday peak hours at the study area intersections. These analyses were conducted according to the methodologies contained in the 2010 *Highway Capacity Manual* (HCM) using *Synchro 10* software, a Trafficware product.

The following conditions were analyzed, as applicable:

- 2018 Existing conditions;
- 2020 Base conditions (Build-out year without development);
- 2025 Base conditions (Design year without development);
- 2020 Projected conditions (Build-out year with development);
- 2025 Projected conditions (Design year with development).

It should be noted that based on methodologies contained in Chapter 10 of PennDOT's Publication 46, TPD adjusted the following 2010 HCM default values in the *Synchro 10* capacity analysis. These adjustments were made at the signalized intersections within the study area for all time periods based on the study area location being classified as Suburban:

- Base saturation flow rates for signalized intersections. The saturation flow rate was changed from the default value of 1900 to 1800 based on Exhibit 10-9.
- Start-up lost time and extension of effective green time for signalized intersections. The startup lost time was changed from the default value of 2.0 seconds to 2.5 seconds. Based on the total clearance time (yellow plus all-red time) being greater than 5 seconds, the extension of green time was changed from the default value of 2 seconds to 3.5 seconds. These adjusted values are based on Exhibit 10-10.
- Critical and Follow-Up Gap times were adjusted relative to the difference between default and PA Default values contained in Exhibits 10-11 and 10-12. As requested by PennDOT, worksheets/tables showing how these values were calculated are included in **Appendix F**.

In addition, capacity analyses were conducted at the proposed site driveway intersections under the projected conditions. As requested, lane utilization calculations were assumed and calculated along Lancaster Avenue (S.R. 0030) along the site frontage due to the lack of left-turn lanes and the effects of left-turn movements in the Study Area. These Lane Utilization calculations are included in **Appendix G**. The capacity analysis worksheets are included in **Appendix H**. The PennDOT-approved signal plans are included in **Appendix I**.

***The following intersections could not be analyzed using HCM 2010 Methodology:***

- ***Lancaster Avenue & Aberdeen Avenue: It is TPD's understanding that there is a glitch in Synchro's HCM 2010 Methodology that causes illogical results under the projected conditions. Therefore HCM 2000 was used to analyze the level of service, and Synchro was used to determine the 95th Percentile Queues.***
- ***Lancaster Avenue & Wayne Avenue: HCM 2010 doesn't support a protected/permitted left turn phase without a separate lane. Therefore HCM 2000 was used to analyze the level of service, and Synchro was used to determine the 95th Percentile Queues.***
- ***Lancaster Avenue & Louella Avenue: HCM 2010 doesn't support a protected/permitted left turn phase without a separate lane. Therefore HCM 2000 was used to analyze the level of service, and Synchro was used to determine the 95th Percentile Queues.***

***In order to determine the true impact of the Proposed Site during the Design Year analysis, TPD optimized the signal timings under design year base (future no-build) conditions. TPD utilized these optimized timings under design year projected (future build) conditions.***

PennDOT's Transportation Impact Study Guidelines outlined in Strike-Off Letter 470-09-4, dated February 12, 2009 contain the following criteria regarding levels of service:

- Page 29 of the Guidelines state that if evaluation of the With Development Horizon Year Scenario to the Without Development Horizon Year Scenario indicates that the overall intersection level of service has dropped, the applicant will be required to mitigate the level of service if the increase in overall intersection delay is greater than 10-seconds. If the overall intersection delay increase is less than or equal to 10-seconds, mitigation of the intersection will not be required.
- Page 29 of the Guidelines state that for mitigation scenarios, applicants are expected to mitigate the overall intersection LOS to the original Without Development LOS; the 10-second delay variance is not applied to mitigation scenarios. Applicants may be required to address available storage and queue lengths at critical movements or approaches even if the overall LOS requirements are met.
- Page 31 of the Guidelines state that if signalization is the preferred alternative for mitigation, overall intersection LOS C in rural areas and LOS D in urban areas is acceptable.
- Page 31 of the Guidelines states new signalized or unsignalized intersection established to serve as access to the development shall be designed to operate at minimum LOS C for rural areas, and minimum LOS D for urban areas.

## LEVELS OF SERVICE IN THE STUDY AREA

Level of service (LOS) matrices for the study area intersections are shown in **Tables 11-13**.

TABLE 11
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

| Intersection | Movement | Weekday AM | | | | | | | Weekday PM | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2018 Exist | 2020 | | | 2025 | | | 2018 Exist | 2020 | | | 2025 | | |
| | | | Base | Proj.[1] | Proj.[2] | Base | Proj.[1] | Proj.[2] | | Base | Proj.[1] | Proj.[2] | Base | Proj.[1] | Proj.[2] |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | EBLTR | C | C | C | C | C | C | C | A (9.8) | B (10.1) | B | B | B | B | B |
| | WBLTR | B | B | B | B | B | B | C | B | B | B | B | B | B | B |
| | NBLT | C | C (34.5) | D (54.6) | D (39.8) | C | D | D | B | B (17.8) | C (21.8) | B (19.7) | B (17.8) | C (21.9) | B (19.8) |
| | NBR | | | | C (24.7) | | | C | | | | B (16.8) | | | B (16.7) |
| | SBLTR | D | D | D (40.0) | E (68.8) | D | D | E | C | C | C | C | C | C | C |
| | **ILOS** | **C(23.3)** | **C(23.6)** | **C(27.4)** | **C(29.4)** | **C(24.4)** | **C(28.2)** | **C(30.4)** | **B(13.0)** | **B(13.2)** | **B(14.1)** | **B(14.0)** | **B(13.7)** | **B(14.7)** | **B(14.6)** |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | WBL | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | NBLR | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | **ILOS** | **A(0.0)** | **A(0.0)** | **--** | | **A(0.0)** | **--** | | **A(0.0)** | **A(0.0)** | **--** | | **A(0.0)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway | WBL | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | NBL | C | C | -- | | C | -- | | B | B | -- | | B | -- | |
| | NBR | | | -- | | | -- | | | | -- | | | -- | |
| | **ILOS** | **A(0.2)** | **A(0.2)** | **--** | | **A(0.2)** | **--** | | **A(0.2)** | **A(0.2)** | **--** | | **A(0.2)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | WBL | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | NBLR | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | **ILOS** | **A(0.0)** | **A(0.0)** | **--** | | **A(0.0)** | **--** | | **A(0.1)** | **A(0.1)** | **--** | | **A(0.1)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | WBL | A | A | A | | A | A | | A | A | A | | A | A | |
| | NBL | B (14.9) | C (15.0) | C | | C | C | | C | C | C | | C | C | |
| | NBR | | | | | | | | | | | | | | |
| | **ILOS** | **A(0.1)** | **A(0.1)** | **A(1.6)** | | **A(0.1)** | **A(1.7)** | | **A(0.3)** | **A(0.3)** | **A(1.1)** | | **A(0.3)** | **A(1.2)** | |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | WBLR | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | SBL | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | **ILOS** | **A(0.5)** | **A(0.5)** | **--** | | **A(0.5)** | **--** | | **A(0.4)** | **A(0.4)** | **--** | | **A(0.4)** | **--** | |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | WBLR | A | A | A | | A | A | | A | A | A | | A | A | |
| | SBL | A | A | A | | A | A | | A | A | A | | A | A | |
| | **ILOS** | **A(0.2)** | **A(0.2)** | **A(2.8)** | | **A(0.2)** | **A(2.7)** | | **A(0.4)** | **A(0.4)** | **A(2.7)** | | **A(0.4)** | **A(2.6)** | |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | EBLTR | A | A | A | | A | A | | A | A | A | | A | A | |
| | WBLT | A | A | A | | A | A | | A | A | A | | A | A | |
| | WBR | A | A | A | | A | A | | A | A | A | | A | A | |
| | NBL | D | D | D | | D | D | | D | D | D | | D | D | |
| | NBTR | D | D | D | | D | D | | D | D | D | | D | D | |
| | SBL | E | E | E | | E | E | | E | E (57.0) | D (54.5) | | E (57.5) | D (54.6) | |
| | SBTR | D | D | D | | D | D | | E (56.7) | D (54.8) | D | | D | D | |
| | **ILOS** | **B(13.2)** | **B(13.3)** | **B(13.0)** | | **B(13.5)** | **B(13.2)** | | **B(14.9)** | **B(14.8)** | **B(14.5)** | | **B(14.9)** | **B(14.6)** | |

*Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario*
*1 = Projected conditions with site-related recommendations*
*2 = With NBR lane requested by PennDOT*

TABLE 11 (CONTINUED)
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

| Intersection | Movement | Weekday AM | | | | | Weekday PM | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2018 Exist | 2020 | | 2025 | | 2018 Exist | 2020 | | 2025 | |
| | | | Base | Proj.[1] | Base | Proj.[1] | | Base | Proj.[1] | Base | Proj.[1] |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | EBTR | A | A | A | A | A | A | A | A | A | A |
| | WBLT | A | A | A | A | A | A | A | A | A | A |
| | NBLR | D | D | D | D | D | C | C | C | C | C |
| | **ILOS** | **A(4.0)** | **A(4.0)** | **A(3.9)** | **A(4.2)** | **A(4.0)** | **A(4.2)** | **A(4.1)** | **A(4.1)** | **A(4.1)** | **A(4.2)** |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | EBLTR | A | A | A | A | A | A | A | A | A | A |
| | WBLTR | B | B | B | B | B | A | A | A | A | A |
| | NBLTR | C | C | C | C | C | D | D | D | D | D |
| | SBLTR | C | C | C | C | C | D | D | D | D | D |
| | **ILOS** | **B(10.7)** | **B(10.6)** | **B(10.8)** | **B(11.0)** | **B(11.1)** | **A(8.5)** | **A(8.5)** | **A(8.3)** | **A(8.4)** | **A(8.5)** |
| Aberdeen Avenue & Midland Avenue | EBLTR | A | A | A | A | A | A | A | A | A | A |
| | WBLTR | A | A | A | A | A | A | A | A | A | A |
| | NBLTR | B | B | B | B | B | A | A | A | A | A |
| | SBLTR | A | A | A | A | A | A | A | A | A | A |
| | **ILOS** | **A(9.9)** | **A(10.0)** | **A(9.9)** | **B(10.1)** | **A(10.0)** | **A(8.6)** | **A(8.6)** | **A(8.5)** | **A(8.6)** | **A(8.6)** |
| Louella Avenue & Midland Avenue | WBLR | A | A | A | A | A | A | A | A | A | A |
| | SBL | A | A | A | A | A | A | A | A | A | A |
| | **ILOS** | **A(2.2)** | **A(2.2)** | **A(2.2)** | **A(2.3)** | **A(2.2)** | **A(2.8)** | **A(2.8)** | **A(2.8)** | **A(2.8)** | **A(2.8)** |

*Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario*
*1 = Projected conditions with site-related recommendations*

TABLE 12
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

| Intersection | Movement | SAT Midday | | | | | | | SUN Peak | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2018 | 2020 | | | 2025 | | | 2018 | 2020 | | | 2025 | | |
| | | Exist | Base | Proj.[1] | Proj.[2] | Base | Proj.[1] | Proj.[2] | Exist | Base | Proj.[1] | Proj.[2] | Base | Proj.[1] | Proj.[2] |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | EBLTR | B | B | B | B | B | B | B | A | A | A | A | A | A | A |
| | WBLTR | A | A (9.8) | B (10.2) | B | B | B | B | A | A | A | A | A | A | A |
| | NBLT | D | D | D | D | D | D | D | D | D (48.3) | E (65.8) | E (65.8) | D (48.1) | E (65.9) | E (65.2) |
| | NBR | | | | D | | | D | | | | D (45.2) | | | D (44.9) |
| | SBLTR | E | E | E (60.6) | F (81.5) | E | E (60.0) | F (81.0) | E | E (58.8) | D (51.5) | E (75.5) | E (59.7) | D (51.8) | E(77.1) |
| | **ILOS** | **B(19.2)** | **B(19.3)** | **C(21.0)** | **C(24.3)** | **B(19.6)** | **C(21.2)** | **C(22.8)** | **B(12.6)** | **B(12.7)** | **B(15.8)** | **B(17.3)** | **B(13.0)** | **B(16.1)** | **B(17.6)** |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | WBL | A | A | -- | | A | -- | | A | A | -- | | E | -- | |
| | NBLR | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | **ILOS** | **A(0.0)** | **A(0.0)** | **--** | | **A(0.0)** | **--** | | **A(0.0)** | **A(0.0)** | **--** | | **A(0.0)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway | WBL | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | NBL | B | B | -- | | B | -- | | B | B | -- | | B | -- | |
| | NBR | | | -- | | | -- | | | | -- | | | -- | |
| | **ILOS** | **A(0.1)** | **A(0.1)** | **--** | | **A(0.1)** | **--** | | **A(0.2)** | **A(0.2)** | **--** | | **A(0.2)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | WBL | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | NBLR | C | C | -- | | C | -- | | B | B | -- | | B | -- | |
| | **ILOS** | **A(0.2)** | **A(0.2)** | **--** | | **A(0.2)** | **--** | | **A(0.0)** | **A(0.0)** | **--** | | **A(0.0)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | WBL | A | A | A | | A | A | | A | A | A | | A | A | |
| | NBL | B | B | B | | B | B | | B | B | B | | B | B | |
| | NBR | | | | | | | | | | | | | | |
| | **ILOS** | **A(0.4)** | **A(0.3)** | **A(1.0)** | | **A(0.4)** | **A(1.0)** | | **A(0.3)** | **A(0.3)** | **A(1.1)** | | **A(0.3)** | **A(1.1)** | |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | WBLR | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | SBL | A | A | -- | | A | -- | | A | A | -- | | A | -- | |
| | **ILOS** | **A(0.5)** | **A(0.5)** | **--** | | **A(0.5)** | **--** | | **A(0.6)** | **A(0.6)** | **--** | | **A(0.6)** | **--** | |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | WBLR | A | A | A | | A | A | | A | A | A | | A | A | |
| | SBL | A | A | A | | A | A | | A | A | A | | A | A | |
| | **ILOS** | **A(0.1)** | **A(0.1)** | **A(2.5)** | | **A(0.1)** | **A(2.4)** | | **A(0.5)** | **A(0.5)** | **A(3.2)** | | **A(0.5)** | **A(3.2)** | |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | EBLTR | A | A | A | | A | A | | A | A | A | | A | A | |
| | WBLT | A | A | A | | A | A | | A | A | A | | A | A | |
| | WBR | A | A | A | | A | A | | A | A | A | | A | A | |
| | NBL | D | D | D | | D | D | | D | D | D | | D | D | |
| | NBTR | D | D | D | | D | D | | D | D | D | | D | D | |
| | SBL | D | D (54.8) | D | | E (55.9) | D (54.7) | | E | E | E | | E | E | |
| | SBTR | D | D | D | | D | D | | D | D | D | | D | D | |
| | **ILOS** | **B(13.8)** | **B(13.8)** | **B(13.6)** | | **B(14.0)** | **B(13.8)** | | **B(14.0)** | **B(14.1)** | **B(14.1)** | | **B(14.1)** | **B(14.1)** | |

*Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario*
*1 = Projected conditions with site-related recommendations*
*2 = With NBR lane requested by PennDOT*

TABLE 12 (CONTINUED)
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

| Intersection | Movement | SAT Midday | | | | | SUN Peak | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2018 Exist | 2020 | | 2025 | | 2018 Exist | 2020 | | 2025 | |
| | | | Base | Proj.[1] | Base | Proj.[1] | | Base | Proj.[1] | Base | Proj.[1] |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | EBTR | A | A | A | A | A | A | A | A | A | A |
| | WBLT | A | A | A | A | A | A | A | A | A | A |
| | NBLR | D | D | D | D | D | D | D | D | D | D |
| | **ILOS** | **A(4.9)** | **A(4.9)** | **A(5.2)** | **A(4.9)** | **A(5.2)** | **A(3.3)** | **A(3.3)** | **A(3.5)** | **A(3.4)** | **A(3.6)** |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | EBLTR | A | A | A | A | A | A | A | A | A | A |
| | WBLTR | A | A | A | A | A | A | A | A | A | A |
| | NBLTR | D | D | D | D | D | D | D | D | D | D |
| | SBLTR | D | D | D | D | D | D | D | D | D | D |
| | **ILOS** | **A(7.4)** | **A(7.4)** | **A(7.5)** | **A(7.5)** | **A(7.4)** | **A(6.6)** | **A(6.6)** | **A(6.7)** | **A(6.7)** | **A(6.7)** |
| Aberdeen Avenue & Midland Avenue | EBLTR | A | A | A | A | A | A | A | A | A | A |
| | WBLTR | A | A | A | A | A | A | A | A | A | A |
| | NBLTR | A | A | A | A | A | A | A | A | A | A |
| | SBLTR | A | A | A | A | A | A | A | A | A | A |
| | **ILOS** | **A(8.1)** | **A(8.1)** | **A(8.0)** | **A(8.1)** | **A(8.1)** | **A(7.6)** | **A(7.6)** | **A(7.6)** | **A(7.6)** | **A(7.6)** |
| Louella Avenue & Midland Avenue | WBLR | A | A | A | A | A | A | A | A | A | A |
| | SBL | A | A | A | A | A | A | A | A | A | A |
| | **ILOS** | **A(3.6)** | **A(3.5)** | **A(3.6)** | **A(3.6)** | **A(3.5)** | **A(4.1)** | **A(4.1)** | **A(4.1)** | **A(4.0)** | **A(4.0)** |

*Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario*
*1 = Projected conditions with site-related recommendations*
*2 = With NBR lane requested by PennDOT*

TABLE 13
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

| Intersection | Movement | Weekday Midday | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 2018 Exist | 2020 | | | 2025 | | |
| | | | Base | Proj.[1] | Proj.[2] | Base | Proj.[1] | Proj.[2] |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | EBLTR | B | B | B | B | B | B | B |
| | WBLTR | A (9.9) | B (10.0) | B | B | B | B | B |
| | NBLT | D | D | D | D | D | D (53.8) | D (43.7) |
| | NBR | | | | C | | | C (34.6) |
| | SBLTR | E | E | E | E | E | E | E |
| | **ILOS** | **C(20.2)** | **C(20.3)** | **C(22.7)** | **C(26.4)** | **C(20.7)** | **C(23.2)** | **C(24.7)** |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | WBL | A | A | -- | | A | -- | |
| | NBLR | A | A | -- | | A | -- | |
| | **ILOS** | **A(0.0)** | **A(0.0)** | **--** | | **A(0.0)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway | WBL | A | A | -- | | A | -- | |
| | NBL | B | B | -- | | B | -- | |
| | NBR | | | -- | | | -- | |
| | **ILOS** | **A(0.1)** | **A(0.1)** | **--** | | **A(0.1)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | WBL | A | A | -- | | A | -- | |
| | NBLR | C | C | -- | | C | -- | |
| | **ILOS** | **A(0.1)** | **A(0.1)** | **--** | | **A(0.1)** | **--** | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | WBL | A | A | A | | A | A | |
| | NBL | B | B | C | | B | C | |
| | NBR | | | | | | | |
| | **ILOS** | **A(0.4)** | **A(0.4)** | **A(1.7)** | | **A(0.4)** | **A(1.8)** | |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | WBLR | A | A | -- | | A | -- | |
| | SBL | A | A | -- | | A | -- | |
| | **ILOS** | **A(0.2)** | **A(0.2)** | **--** | | **A(0.2)** | **--** | |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | WBLR | A | A | A | | A | A | |
| | SBL | A | A | A | | A | A | |
| | **ILOS** | **A(0.3)** | **A(0.2)** | **A(3.3)** | | **A(0.2)** | **A(3.2)** | |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | EBLTR | A | A | A | | A | A | |
| | WBLT | A | A | A | | A | A | |
| | WBR | A | A | A | | A | A | |
| | NBL | D | D | D | | D | D | |
| | NBTR | D | D | D | | D | D | |
| | SBL | F (87.7) | F (81.1) | F (84.3) | | E (79.3) | F (85.4) | |
| | SBTR | E | E (56.1) | D (54.6) | | E | E | |
| | **ILOS** | **B(19.2)** | **B(18.7)** | **B(18.7)** | | **B(18.7)** | **B(18.9)** | |

*Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario*
*1 = Projected conditions with site-related recommendations*
*2 = With NBR lane requested by PennDOT*

TABLE 13 (CONTINUED)
LEVEL OF SERVICE DELAY (SECONDS) SUMMARY

| Intersection | Movement | Weekday Midday | | | | |
|---|---|---|---|---|---|---|
| | | 2018 Exist | 2020 | | 2025 | |
| | | | Base | Proj.[1] | Base | Proj.[1] |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | EBTR | A | A | A | A | A |
| | WBLT | A | A | A | A | A |
| | NBLR | D | D | D | D | D |
| | **ILOS** | **A(3.3)** | **A(3.3)** | **A(3.7)** | **A(3.4)** | **A(3.8)** |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | EBLTR | A | A | A | A | A |
| | WBLTR | A | A | A | A | A |
| | NBLTR | D | D | D | D | D |
| | SBLTR | D | D | D | D | D |
| | **ILOS** | **A(7.6)** | **A(7.6)** | **A(7.6)** | **A(7.7)** | **A(7.7)** |
| Aberdeen Avenue & Midland Avenue | EBLTR | A | A | A | A | A |
| | WBLTR | A | A | A | A | A |
| | NBLTR | B | B | B | B | B |
| | SBLTR | A | A | A | A | A |
| | **ILOS** | **A(8.7)** | **A(8.8)** | **A(8.7)** | **A(8.8)** | **A(8.7)** |
| Louella Avenue & Midland Avenue | WBLR | A | A | A | A | A |
| | SBL | A | A | A | A | A |
| | **ILOS** | **A(3.7)** | **A(3.7)** | **A(3.7)** | **A(3.7)** | **A(3.7)** |

*Exist. = Existing Condition, Base = No-Build scenario, Proj. = Build scenario*
*1 = Projected conditions with site-related recommendations*
*2 = With NBR lane requested by PennDOT*

As shown in **Tables 11-13**, under all projected (build) conditions with the development of the proposed site, with site-related recommendations outlined in **Table 21 (With and Without the PennDOT-requested NBR on Aberdeen Avenue)**, all study area intersections will satisfy PennDOT ILOS Standards.

## 95TH PERCENTILE QUEUE ANALYSIS

Queue analyses were conducted at the study area intersections using *Synchro 10* software. For this analysis, the 95$^{th}$ percentile queue is defined as the queue length that is exceeded in 5% of the signal cycles. As an example, for a signal with a 90-second cycle, this means that the 95$^{th}$ percentile queue length will be exceeded during 2 of the 40 signal cycles that occur during the peak hour. The queue analysis results are summarized in **Tables 14-18**.

## TABLE 14
## 95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | Weekday AM | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2020 | | | 2025 | | |
| | | | Base | Proj. | | Base | Proj. | |
| | | | | 1 | 2 | | 1 | 2 |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | EBLTR | -- | 456 | 459 | 459 | 467 | 470 | 470 |
| | WBLTR | [80]/ [250] | 384 | 382 | 383 | 397 | 396 | 396 |
| | NBLT | [135] | 195 | 335 | 256 | 200 | 341 | 260 |
| | NBR | 75 | | | 46 | | | 47 |
| | SBLTR | -- | 287 | 283 | 359 | 295 | 291 | 369 |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBLR | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway/ Proposed RIRO Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBL | -- | <25 | -- | | <25 | -- | |
| | NBR | -- | <25 | <25 | | <25 | <25 | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | WBL | -- | <25 | <25 | | <25 | <25 | |
| | NBLR | -- | <25 | 33 | | <25 | 35 | |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*2 = With NBR Requested By PennDOT*
*[Storage to next study area intersection]*

## TABLE 14 (CONTINUED)
## 95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | Weekday AM | | | | |
|---|---|---|---|---|---|---|---|
| | | | 2020 | | | 2025 | |
| | | | Base | Proj. | | Base | Proj. |
| | | | | 1 | 2 | | 1 | 2 |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | WBLR | -- | <25 | <25 | | <25 | <25 | |
| | SBL | [135] | <25 | <25 | | <25 | <25 | |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | EBLTR | 1000+ | 157 | 160 | | 163 | 165 | |
| | WBLT | 625 | 154 | 136 | | 163 | 145 | |
| | WBR | 160 | 52 | 44 | | 53 | 48 | |
| | NBL | 70 | 55 | 55 | | 57 | 57 | |
| | NBTR | 1000+ | 149 | 149 | | 152 | 152 | |
| | SBL | 85 | 117 | 117 | | 120 | 120 | |
| | SBTR | 470 | 136 | 136 | | 138 | 138 | |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | EBTR | 625 | 70 | 70 | | 71 | 71 | |
| | WBLT | 1000+ | 43 | 68 | | 44 | 68 | |
| | NBLR | [400] | 98 | 98 | | 101 | 101 | |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | EBLT | 1000+ | 198 | 198 | | 200 | 203 | |
| | EBTR | 1000+ | 183 | 185 | | 188 | 188 | |
| | WBLT | 1000+ | 375 | 378 | | 390 | 393 | |
| | WBTR | 1000+ | 335 | 340 | | 350 | 355 | |
| | NBLTR | 1000+ | 130 | 130 | | 130 | 133 | |
| | SBLTR | 1000+ | 148 | 148 | | 148 | 153 | |
| Aberdeen Avenue & Midland Avenue | EBLTR | 1000+ | <25 | <25 | | <25 | <25 | |
| | WBLTR | 1000+ | <25 | <25 | | <25 | <25 | |
| | NBLTR | 400 | 48 | 48 | | | 50 | |
| | SBLTR | [240] | <25 | <25 | | <25 | <25 | |
| Louella Avenue & Midland Avenue | WBLR | 1000+ | <25 | <25 | | <25 | <25 | |
| | SBL | 400 | <25 | <25 | | <25 | <25 | |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*2 = With NBR Requested By PennDOT*
*[Storage to next study area intersection]*

TABLE 15
95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | Weekday PM | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2020 | | | 2025 | | |
| | | | Base | Proj. | | Base | Proj. | |
| | | | | 1 | 2 | | 1 | 2 |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | EBLTR | -- | 307 | 298 | 298 | 316 | 308 | 308 |
| | WBLTR | [80]/ [250] | 260 | 257 | 257 | 270 | 267 | 267 |
| | NBLT | [135] | 73 | 118 | 99 | 76 | 120 | 101 |
| | NBR | 75 | | | 26 | | | 27 |
| | SBLTR | -- | 169 | 182 | 195 | 172 | 198 | 201 |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBLR | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway/ Proposed RIRO Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBL | -- | <25 | -- | | <25 | -- | |
| | NBR | -- | <25 | <25 | | <25 | <25 | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | WBL | -- | <25 | <25 | | <25 | <25 | |
| | NBLR | -- | <25 | <25 | | <25 | <25 | |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | WBLR | -- | <25 | <25 | | <25 | <25 | |
| | SBL | [135] | <25 | <25 | | <25 | <25 | |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | EBLTR | 1000+ | 184 | 180 | | 192 | 187 | |
| | WBLT | 625 | 91 | 106 | | 98 | 112 | |
| | WBR | 160 | 26 | 29 | | <25 | 26 | |
| | NBL | 70 | 38 | 38 | | 39 | 39 | |
| | NBTR | 1000+ | 146 | 144 | | 147 | 145 | |
| | SBL | 85 | 136 | 130 | | 137 | 132 | |
| | SBTR | 470 | 211 | 211 | | 214 | 214 | |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | EBTR | 625 | 138 | 133 | | 129 | 123 | |
| | WBLT | 1000+ | 35 | 42 | | 36 | 43 | |
| | NBLR | [400] | 39 | 39 | | 40 | 39 | |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*2 = With NBR Requested By PennDOT*
*[Storage to next study area intersection]*

## TABLE 15 (CONTINUED)
## 95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | Weekday PM | | | |
|---|---|---|---|---|---|---|
| | | | 2020 | | 2025 | |
| | | | Base | Proj. 1 | Base | Proj. 1 |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | EBLT | 1000+ | 228 | 210 | 213 | 213 |
| | EBTR | 1000+ | 230 | 230 | 240 | 240 |
| | WBLT | 1000+ | 283 | 258 | 268 | 268 |
| | WBTR | 1000+ | 273 | 275 | 285 | 288 |
| | NBLTR | 1000+ | 78 | 75 | 78 | 78 |
| | SBLTR | 1000+ | 193 | 185 | 188 | 188 |
| Aberdeen Avenue & Midland Avenue | EBLTR | 1000+ | <25 | <25 | <25 | <25 |
| | WBLTR | 1000+ | <25 | <25 | <25 | <25 |
| | NBLTR | 400 | <25 | <25 | <25 | <25 |
| | SBLTR | [240] | <25 | <25 | <25 | <25 |
| Louella Avenue & Midland Avenue | WBLR | 1000+ | <25 | <25 | <25 | <25 |
| | SBL | 400 | <25 | <25 | <25 | <25 |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*2 = With NBR Requested By PennDOT*
*[Storage to next study area intersection]*

## TABLE 16
## 95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | SAT Midday | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2020 | | | 2025 | | |
| | | | Base | Proj. 1 | Proj. 2 | Base | Proj. 1 | Proj. 2 |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | EBLTR | -- | 270 | 269 | 272 | 283 | 278 | 278 |
| | WBLTR | [80]/ [250] | 299 | 303 | 308 | 314 | 317 | 323 |
| | NBLT | [135] | 168 | 238 | 191 | 170 | 241 | 192 |
| | NBR | 75 | | | 52 | | | 52 |
| | SBLTR | -- | 270 | 265 | 279 | 274 | 268 | 282 |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBLR | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway/ Proposed RIRO Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBL | -- | <25 | -- | | <25 | -- | |
| | NBR | -- | <25 | <25 | | <25 | <25 | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |

*Base = No-Build scenario, Proj. = Build scenario*
*1 = With Site-Related Recommendations*
*2 = With NBR Requested By PennDOT*
*[Storage to next study area intersection]*

TABLE 16 (CONTINUED)
95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | SAT Midday | | | |
|---|---|---|---|---|---|---|
| | | | 2020 | | 2025 | |
| | | | Base | Proj. 1 | Base | Proj. 1 |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | WBL | -- | <25 | <25 | <25 | <25 |
| | NBLR | -- | <25 | <25 | <25 | <25 |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | WBLR | -- | <25 | -- | <25 | -- |
| | SBL | -- | <25 | -- | <25 | -- |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | WBLR | -- | <25 | <25 | <25 | <25 |
| | SBL | [135] | <25 | <25 | <25 | <25 |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | EBLTR | 1000+ | 149 | 148 | 155 | 153 |
| | WBLT | 625 | 67 | 67 | 68 | 68 |
| | WBR | 160 | <25 | <25 | <25 | <25 |
| | NBL | 70 | 87 | 87 | 89 | 89 |
| | NBTR | 1000+ | 178 | 178 | 181 | 179 |
| | SBL | 85 | 97 | 95 | 98 | 97 |
| | SBTR | 470 | 165 | 165 | 169 | 170 |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | EBTR | 625 | 91 | 90 | 93 | 93 |
| | WBLT | 1000+ | 41 | 66 | 41 | 68 |
| | NBLR | [400] | 136 | 136 | 139 | 139 |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | EBLT | 1000+ | 180 | 175 | 190 | 165 |
| | EBTR | 1000+ | 180 | 175 | 190 | 178 |
| | WBLT | 1000+ | 218 | 223 | 223 | 213 |
| | WBTR | 1000+ | 215 | 215 | 218 | 225 |
| | NBLTR | 1000+ | 100 | 100 | 100 | 98 |
| | SBLTR | 1000+ | 153 | 158 | 158 | 153 |
| Aberdeen Avenue & Midland Avenue | EBLTR | 1000+ | <25 | <25 | <25 | <25 |
| | WBLTR | 1000+ | <25 | <25 | <25 | <25 |
| | NBLTR | 400 | <25 | <25 | <25 | <25 |
| | SBLTR | [240] | <25 | <25 | <25 | <25 |
| Louella Avenue & Midland Avenue | WBLR | 1000+ | <25 | <25 | <25 | <25 |
| | SBL | 400 | <25 | <25 | <25 | <25 |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*2 = With NBR Requested By PennDOT*
*[Storage to next study area intersection]*

TABLE 17
95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | SUN Peak | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2020 | | | 2025 | | |
| | | | Base | Proj. | | Base | Proj. | |
| | | | | 1 | 2 | | 1 | 2 |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | EBLTR | -- | 136 | 148 | 139 | 146 | 158 | 148 |
| | WBLTR | [80]/ [250] | 109 | 120 | 108 | 115 | 127 | 113 |
| | NBLT | [135] | 123 | 185 | 157 | 185 | 157 | 160 |
| | NBR | 75 | | | 48 | | | 49 |
| | SBLTR | -- | 175 | 169 | 182 | 180 | 174 | 187 |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBLR | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway/ Proposed RIRO Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBL | -- | <25 | -- | | <25 | -- | |
| | NBR | -- | <25 | <25 | | <25 | <25 | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | WBL | -- | <25 | <25 | | <25 | <25 | |
| | NBLR | -- | <25 | <25 | | <25 | <25 | |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | WBLR | -- | <25 | <25 | | <25 | <25 | |
| | SBL | [135] | <25 | <25 | | <25 | <25 | |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | EBLTR | 1000+ | 97 | 98 | | 103 | 103 | |
| | WBLT | 625 | 47 | 47 | | 49 | 49 | |
| | WBR | 160 | <25 | <25 | | <25 | <25 | |
| | NBL | 70 | 51 | 51 | | 54 | 54 | |
| | NBTR | 1000+ | 141 | 142 | | 144 | 144 | |
| | SBL | 85 | 105 | 105 | | 104 | 106 | |
| | SBTR | 470 | 152 | 152 | | 155 | 155 | |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | EBTR | 625 | 42 | 42 | | 46 | 47 | |
| | WBLT | 1000+ | 28 | 51 | | 30 | 52 | |
| | NBLR | [400] | 73 | 73 | | 77 | 77 | |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*2 = With NBR Requested By PennDOT*
*[Storage to next study area intersection]*

TABLE 17 (CONTINUED)
95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | SUN Peak | | | |
|---|---|---|---|---|---|---|
| | | | 2020 | | 2025 | |
| | | | Base | Proj. 1 | Base | Proj. 1 |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | EBLT | 1000+ | 103 | 108 | 110 | 113 |
| | EBTR | 1000+ | 95 | 100 | 103 | 103 |
| | WBLT | 1000+ | 118 | 120 | 123 | 125 |
| | WBTR | 1000+ | 110 | 113 | 113 | 120 |
| | NBLTR | 1000+ | 90 | 93 | 93 | 93 |
| | SBLTR | 1000+ | 103 | 105 | 105 | 108 |
| Aberdeen Avenue & Midland Avenue | EBLTR | 1000+ | <25 | <25 | <25 | <25 |
| | WBLTR | 1000+ | <25 | <25 | <25 | <25 |
| | NBLTR | 400 | <25 | <25 | <25 | <25 |
| | SBLTR | [240] | <25 | <25 | <25 | <25 |
| Louella Avenue & Midland Avenue | WBLR | 1000+ | <25 | <25 | <25 | <25 |
| | SBL | 400 | <25 | <25 | <25 | <25 |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*[Storage to next study area intersection]*

TABLE 18
95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | Weekday Midday Peak | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | 2020 | | | 2025 | | |
| | | | Base | Proj. | | Base | Proj. | |
| | | | | 1 | 2 | | 1 | 2 |
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | EBLTR | -- | 372 | 388 | 380 | 387 | 396 | 388 |
| | WBLTR | [80]/ [250] | 308 | 318 | 325 | 323 | 333 | 341 |
| | NBLT | [135] | 144 | 230 | 180 | 146 | 234 | 182 |
| | NBR | 75 | | | 52 | | | 52 |
| | SBLTR | -- | 273 | 270 | 283 | 277 | 274 | 288 |
| Lancaster Avenue (S.R. 0030) & Existing Western Sunoco Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBLR | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern Sunoco Driveway/ Proposed RIRO Driveway | WBL | -- | <25 | -- | | <25 | -- | |
| | NBL | -- | <25 | -- | | <25 | -- | |
| | NBR | -- | -- | -- | | -- | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Western BP Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |
| Lancaster Avenue (S.R. 0030) & Existing Eastern BP Driveway/ Proposed Driveway | WBL | -- | <25 | <25 | | <25 | <25 | |
| | NBLR | -- | <25 | 38 | | <25 | 38 | |
| Aberdeen Avenue & Existing Northern Sunoco Driveway | WBLR | -- | <25 | -- | | <25 | -- | |
| | SBL | -- | <25 | -- | | <25 | -- | |
| Aberdeen Avenue & Existing Southern Sunoco Driveway/ Proposed Driveway | WBLR | -- | <25 | <25 | | <25 | <25 | |
| | SBL | [135] | <25 | <25 | | <25 | <25 | |
| Lancaster Avenue (S.R. 0030) & Wayne Avenue | EBLTR | 1000+ | 197 | 202 | | 203 | 208 | |
| | WBLT | 625 | 59 | 58 | | 60 | 60 | |
| | WBR | 160 | <25 | <25 | | <25 | <25 | |
| | NBL | 70 | 67 | 67 | | 70 | 70 | |
| | NBTR | 1000+ | 209 | 213 | | 212 | 215 | |
| | SBL | 85 | 163 | 173 | | 165 | 176 | |
| | SBTR | 470 | 230 | 230 | | 235 | 235 | |
| Lancaster Avenue (S.R. 0030) & Louella Avenue | EBTR | 625 | 58 | 60 | | 61 | 63 | |
| | WBLT | 1000+ | 43 | 76 | | 43 | 77 | |
| | NBLR | [400] | 91 | 91 | | 93 | 94 | |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*2 = With NBR Requested By PennDOT*
*[Storage to next study area intersection]*

TABLE 18 (CONTINUED)
95TH PERCENTILE QUEUE ANALYSIS

| Intersection | Movement/ Storage | | Weekday Midday Peak | | | |
|---|---|---|---|---|---|---|
| | | | 2020 | | 2025 | |
| | | | Base | Proj. 1 | Base | Proj. 1 |
| Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road | EBLT | 1000+ | 190 | 185 | 193 | 190 |
| | EBTR | 1000+ | 193 | 190 | 195 | 193 |
| | WBLT | 1000+ | 258 | 258 | 268 | 268 |
| | WBTR | 1000+ | 245 | 245 | 250 | 250 |
| | NBLTR | 1000+ | 80 | 80 | 80 | 83 |
| | SBLTR | 1000+ | 168 | 170 | 170 | 173 |
| Aberdeen Avenue & Midland Avenue | EBLTR | 1000+ | <25 | <25 | <25 | <25 |
| | WBLTR | 1000+ | <25 | <25 | <25 | <25 |
| | NBLTR | 400 | <25 | <25 | <25 | <25 |
| | SBLTR | [240] | <25 | <25 | <25 | <25 |
| Louella Avenue & Midland Avenue | WBLR | 1000+ | <25 | <25 | <25 | <25 |
| | SBL | 400 | <25 | <25 | <25 | <25 |

*Base = No-Build scenario, Proj. = Build scenario,*
*1 = With Site-Related Recommendations*
*[Storage to next study area intersection]*

Queue analysis worksheets are included with the capacity analysis worksheets provided in the **Appendix H.**

# AUXILIARY TURN LANE ANALYSIS

## Methodology

TPD evaluated auxiliary turn lane warrants at the Proposed Full-Access Driveways. The warrant analysis methodology contained within Chapter 11 of PennDOT's *Publication 46*, Section 11.17 and Strike-Off Letter 470-08-07 was utilized for this evaluation.

### *Findings*

**Table 19** summarizes the results of the auxiliary turn lane analysis at the site access intersections.

TABLE 19
AUXILIARY TURN LANE ANALYSIS SUMMARY

| Intersection | Auxiliary Lane | Warrant Satisfied? | Required Lane Length | Proposed Lane Length |
|---|---|---|---|---|
| Proposed Full-Access Lancaster Avenue Driveway | WB Left-Turn Lane | Yes | 75' | None |
| | EB Right-Turn Lane | Yes | 75' | None |
| Proposed Aberdeen Avenue Driveway | SB Left-Turn Lane | No | -- | -- |
| | NB Right-Turn Lane | No | -- | -- |

***As shown in Table 17, left and right-turn lane warrants are satisfied at the Proposed Full-Access Driveway on Lancaster Avenue (S.R. 0030). However, limited ROW is available and left-turn lanes are not currently provided along this area of the Lancaster Avenue corridor due to the location of existing access, parking and businesses located in close proximity to the roadway. It should also be noted that, based on a review of the existing operations along the Lancaster Avenue (S.R. 0030) site frontage, the inside WB lane was being utilized for left-turn movements into the Existing Sunoco, the Existing BP, and onto SB Aberdeen Avenue. Additionally, there was only one crash involving a left-turning vehicle over the five year period, and it was caused by an improper/careless turn and***

***proceeding without clearance. Therefore, it is TPD's opinion that the provision of left and right turn lanes are not practical/necessary.***

The calculations for the auxiliary turn lane warrants are included in **Appendix J**.

## GAP ANALYSIS

TPD performed a Gap Study at the Proposed Full-Access Driveway locations during the respective peak hours at the adjacent signalized intersection, utilizing MIOVISION Video Technology. The number and duration of gaps available for these movements were documented. The duration of gaps in traffic directly relates to the capacity (number of vehicles) that can make the identified movements. In order for a vehicle to make the identified movements at these locations, a large enough gap in traffic must be present for those movements to occur. TPD determined the necessary Critical Gap and Follow-Up Gap needed for the evaluated movements based on values contained in Exhibit 10-11 and Exhibit 10-12 of PennDOT Pub 46, and PA Default Values. Based on this, the following peak hours and gaps were utilized:

- Weekday A.M. – 7:45-8:45 A.M.
- Weekday P.M. – 4:45-5:45 P.M.
- SAT Midday – 11:15 A.M.-12:15 P.M.
- Left-Turn Egress – Lancaster Avenue - Critical Gap of 7.7 seconds and Follow-Up Gap of 2.8 seconds
- Left-Turn Egress – Aberdeen Avenue - Critical Gap of 6.4 seconds and Follow-Up Gap of 3.0 seconds

The number and time duration of gaps counted during the peak hours were compared to the standards outlined above, in order to determine the total number of vehicles that can be served during the peak hours. It should be noted that, since the gap counts were performed during existing conditions, the results account for queuing from adjacent signals. The Sunday peak hour gaps were not analyzed, as the volumes as vehicular volumes along Lancaster Avenue are lower than during the other peak periods.

Gap Study Data (Existing Conditions) are included in **Appendix K.**

TPD then compared the following:
- Total existing capacity calculated based on the field gap counts (**Appendix K**)
- Total future capacity calculated based on projection of future growth.
- Projected vehicle demand (left-turn egress).

**Table 20** shows this comparison.

TABLE 20
GAP ANALYSIS – LEFT-TURN EGRESS

| Intersection | Peak Hour | Egress Movement[1] | 2018 Existing[2] | Existing Gap Capacity[3] | 2025 Projected[2] | Reduction Factor[4] | Future Gap Capacity[5] |
|---|---|---|---|---|---|---|---|
| Lancaster Avenue (S.R. 0030) Full-Access Driveway | A.M. | 20 | 1949 | 72 | 1997 | 0.976 | 70 |
| | P.M. | 17 | 1986 | 75 | 2028 | 0.979 | 73 |
| | SAT | 15 | 1737 | 102 | 1772 | 0.980 | 99 |
| Aberdeen Avenue Full-Access Driveway | A.M. | 9 | 335 | 482 | 361 | 0.928 | 447 |
| | P.M. | 11 | 268 | 636 | 294 | 0.912 | 580 |
| | SAT | 9 | 284 | 491 | 309 | 0.919 | 451 |

*[1]Left-Turn Egress, [2]Conflicting Vehicles on Respective Main Street, [3]Appendix J*
*[4]2018 Existing/2025 Projected, [5]Existing Gap Capacity * Reduction Factor*

As shown in **Table 18**, sufficient gaps will exist to serve the anticipated number of left-turn egress vehicles in both existing and future gap scenarios.

## RECOMMENDATIONS

TPD has made the following recommendations in relation to the Proposed WAWA in Radnor Township, as outlined in **Table 21**:

TABLE 21
RECOMMENDATIONS

| Intersection | Recommendation |
|---|---|
| Lancaster Avenue (S.R. 0030) & Aberdeen Avenue | Although not needed to mitigate the impact of the Proposed Site, as requested by PennDOT, provide a northbound right turn (NBR) lane on Aberdeen Avenue |
| | Optimize signal timings and provide for Traffic Adaptive Signal Equipment |
| | Work with PennDOT and Radnor Township to provide/upgrade Pedestrian/ADA facilities at this intersection, to the extent feasible |
| Lancaster Avenue (S.R. 0030) & Proposed Driveway | Provide adequate ingress/egress radii to facilitate access to/from the site |
| | Provide a "STOP"-sign on the NB egress approach of the driveway |
| | Work with PennDOT and Radnor Township to provide/upgrade Pedestrian/ADA facilities at this intersection, to the extent feasible |
| Aberdeen Avenue & Proposed Driveway | Provide adequate ingress/egress radii to facilitate access to/from the site |
| | Provide a "STOP"-sign on the WB egress approach of the driveway |
| | Provide "Do Not Block Intersection" signage on NB Aberdeen Avenue |
| | Work with PennDOT and Radnor Township to provide/upgrade Pedestrian/ADA facilities at this intersection, to the extent feasible |

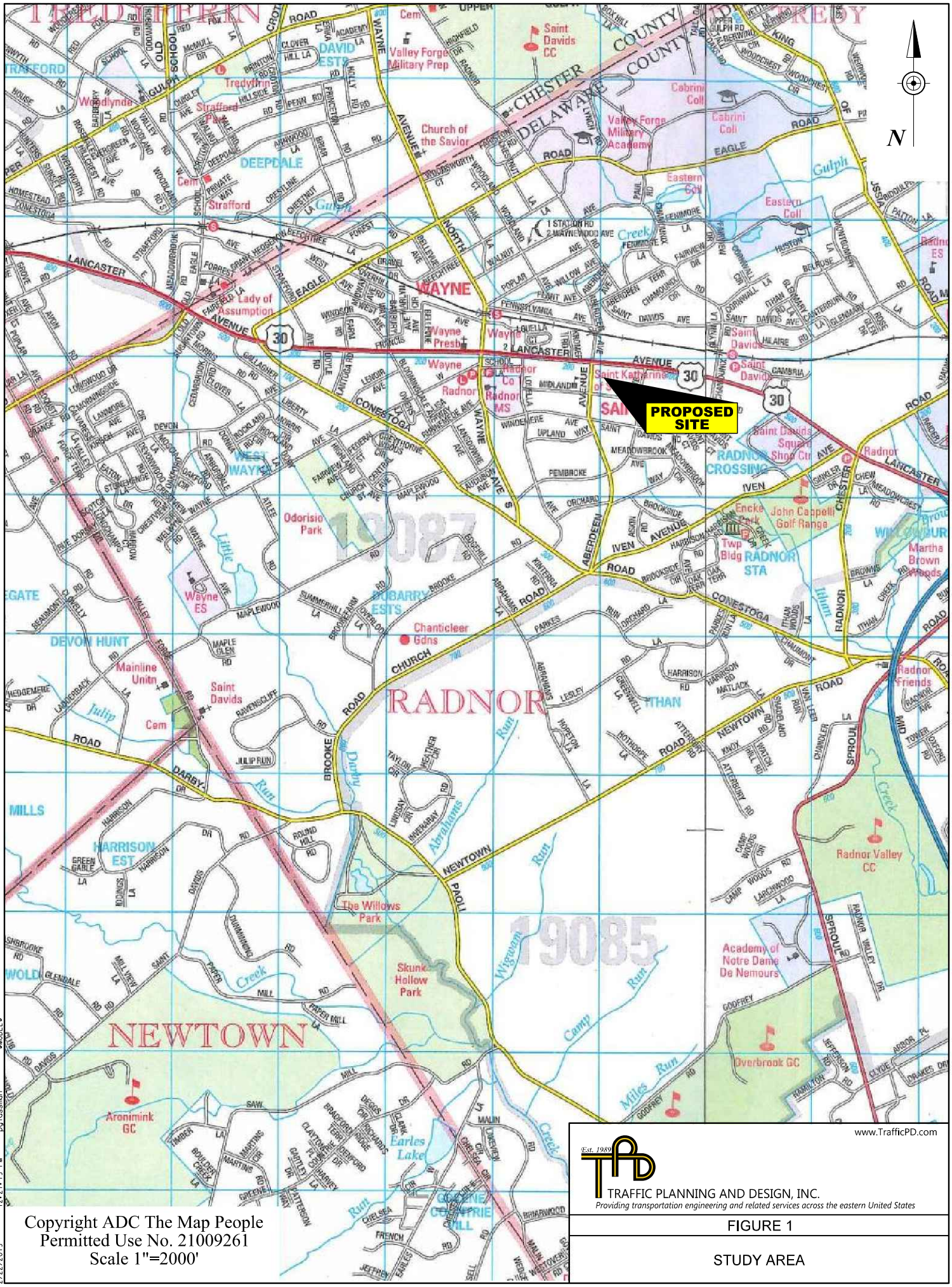
As part of PennDOT's HOP process, the applicant will coordinate and fund the implementation of the recommended roadway improvements. Preliminary construction costs have not been determined at this time.

## CONCLUSIONS

Based on the results of the transportation impact study, TPD offers the following conclusions:

- The project site is located on the southeastern corner of Lancaster Avenue (S.R. 0030) and Aberdeen Avenue. The Existing Site consists of the following uses:
  - Sunoco – Ten (10) Fueling Positions, Four (4) Service Bays;
  - BP - Eight (8) Fueling Positions, One (1) Carwash Tunnel.
- Access to the Existing Site is provided by four (4) curb cuts to Lancaster Avenue (S.R. 0030) and two (2) curb cuts to Aberdeen Avenue.
- The Proposed Site will replace these existing uses with a 4,736 s.f. WAWA Convenience Market with 12 fueling positions.
- Access to the Proposed Site will be provided by:
  - One (1) full-access driveway to Lancaster Avenue (S.R. 0030)
  - One (1) full-access driveway to Aberdeen Avenue.
- The measured sight distances at the site driveways exceed all PennDOT Sight Distance Criteria.

- The Proposed Site will generated 94 new trips during the weekday A.M. peak hour, 94 new trips during the weekday Midday peak hour, 78 new trips during the weekday P.M. peak hour, 102 new trips during the Saturday Midday peak hour, and 102 new trips during the Sunday peak hour.
- Based on the counts conducted at the Existing Site driveways, the Existing Site(s) generate 120 total trips during the weekday A.M. peak hour, 142 total trips during the weekday Midday peak hour, 196 total trips during the weekday P.M. peak hour, 198 total trips during the Saturday Midday peak hour, and 113 total trips during the Sunday peak hour.
- Under all projected (build) conditions with the development of the proposed site and with site-related recommendations outlined in **Table 21** (With and Without the PennDOT-requested northbound right turn (NBR) lane on Aberdeen Avenue), all study area intersections will satisfy PennDOT ILOS Standards.

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Scale 1"=2000'

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FIGURE 1

STUDY AREA

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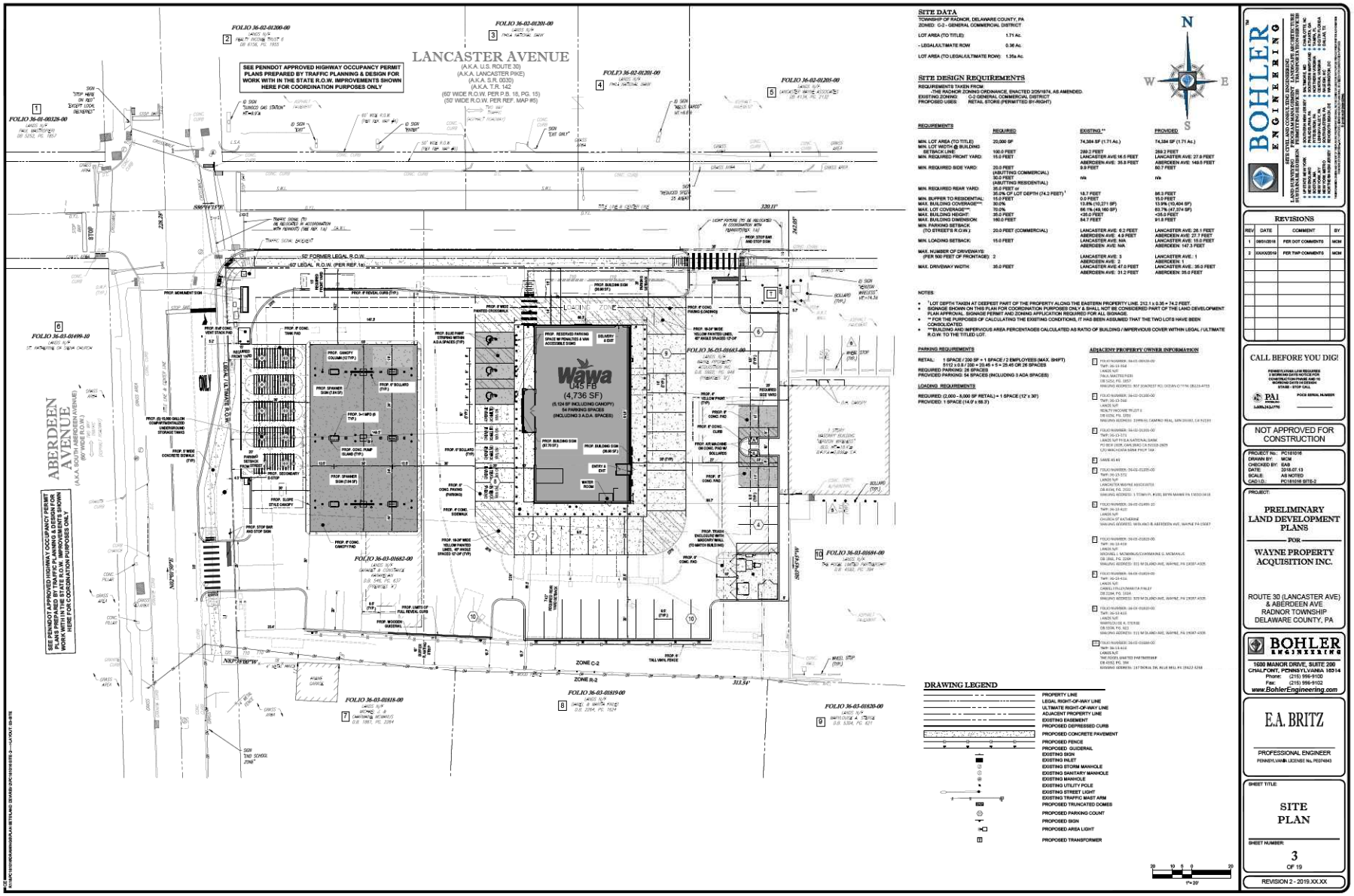
LANCASTER AVENUE
(A.K.A. U.S. ROUTE 30)
(A.K.A. LANCASTER PIKE)
(A.K.A. S.R. 0030)
(A.K.A. T.R. 142)
(60' WIDE R.O.W. PER P.B. 18, PG. 15)
(50' WIDE R.O.W. PER REF. MAP #5)
SEE PENNDOT APPROVED HIGHWAY OCCUPANCY PERMIT PLANS PREPARED BY TRAFFIC PLANNING & DESIGN FOR WORK WITH IN THE STATE R.O.W. IMPROVEMENTS SHOWN HERE FOR COORDINATION PURPOSES ONLY
ABERDEEN AVENUE
(A.K.A. SOUTH ABERDEEN AVENUE)
(60' WIDE R.O.W.)
Wawa
(4,736 SF)
(5,124 SF INCLUDING CANOPY)
54 PARKING SPACES
(INCLUDING 3 A.D.A. SPACES)
PROP. BUILDING SIGN (37.75 SF)
PROP. BUILDING SIGN (36.88 SF)
PROP. RESERVED PARKING SPACE W/ PENALTIES & ADA ACCESSIBLE SIGNS
PROP. 16-24" WIDE YELLOW PAINTED LINES, 45° ANGLE SPACED 12'-0" OFF
PROP. 6" WIDE YELLOW PAINTED LINES, 45° ANGLE SPACED 12'-0" OFF (TYP.)
PROP. 4-MPD (2 TYP.)
PROP. CANOPY COLUMN (TYP.)
PROP. CONC. PUMP ISLAND (TYP.)
PROP. 3-SPANNER SIGN (7.64 SF)
PROP. 3-SPANNER SIGN (3.94 SF)
PROP. 15,000 GALLON COMPARTMENTALIZED UNDERGROUND STORAGE TANKS
PROP. 5' WIDE CONCRETE SIDEWALK (TYP.)
PROP. SLOPE STYLE CANOPY
PROP. STOP BAR AND STOP SIGN
PROP. 6" WIDE SOLID WHITE LINE
PROP. 24" WIDE SOLID WHITE LINE
PROP. 6" WIDE SOLID YELLOW LINE
PROP. 4" WIDE SOLID YELLOW LINE
PROP. 4" WIDE SOLID WHITE LINE
PROP. 12" WIDE SOLID WHITE LINE
PROP. 24" WIDE SOLID WHITE LINE
PROP. 4" WIDE SOLID YELLOW LINE
PROP. 12" WIDE SOLID YELLOW LINE
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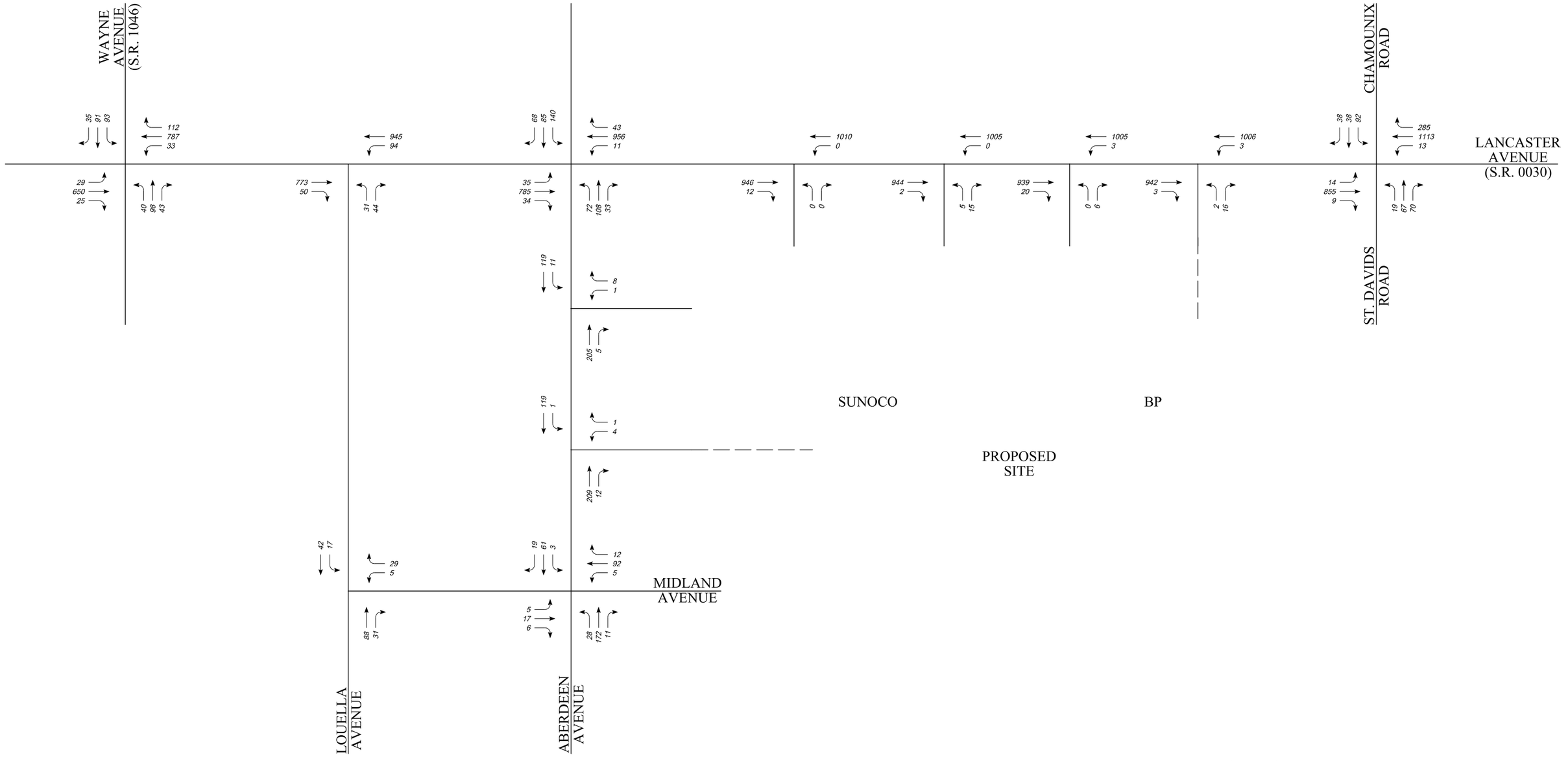
PROP. 24" WIDE SOLID YELLOW LINE
PROP. 4




**KEY:**

**– – – – – – PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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FIGURE 3

2018 EXISTING CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

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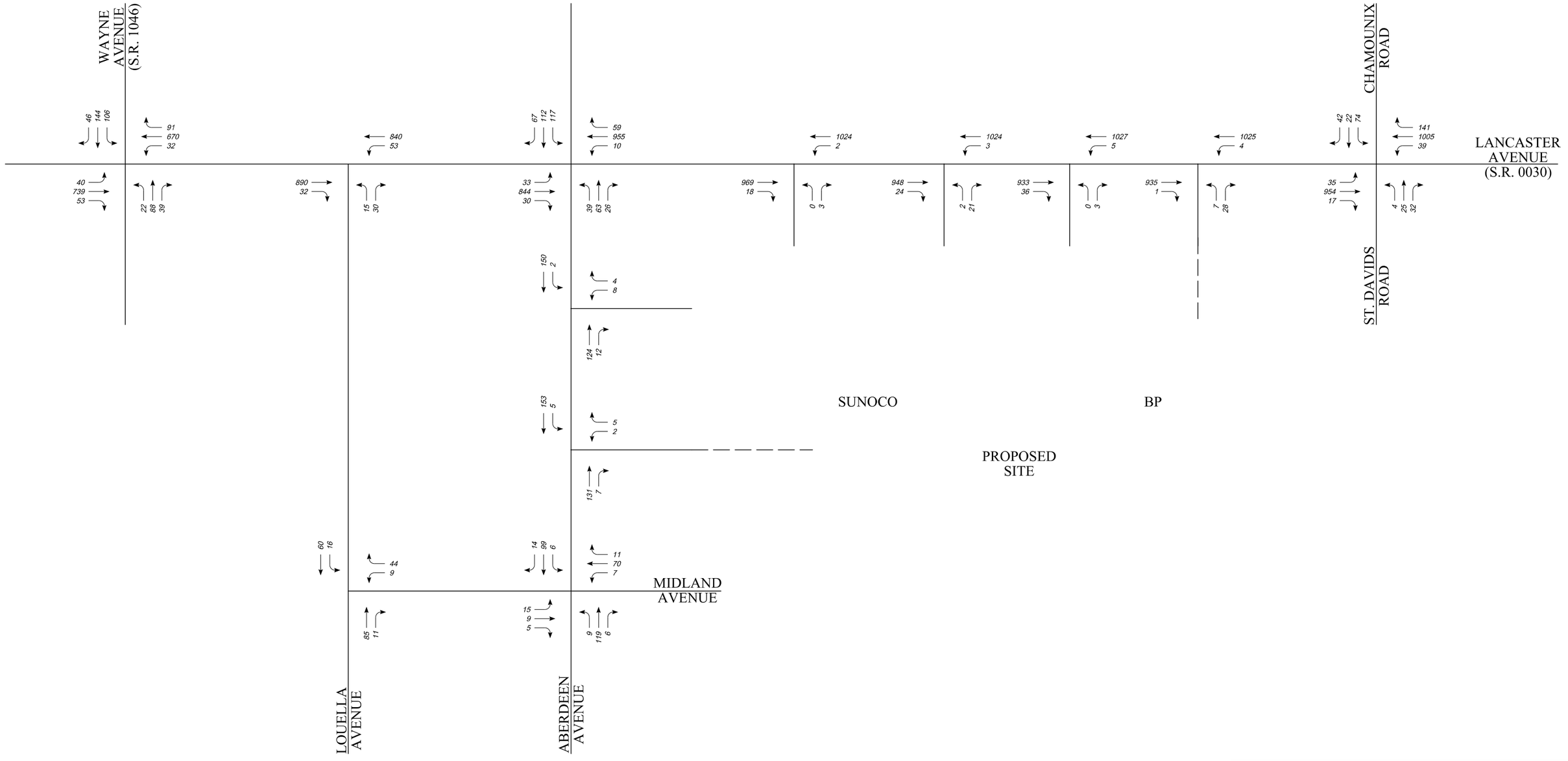


**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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FIGURE 4

2018 EXISTING CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

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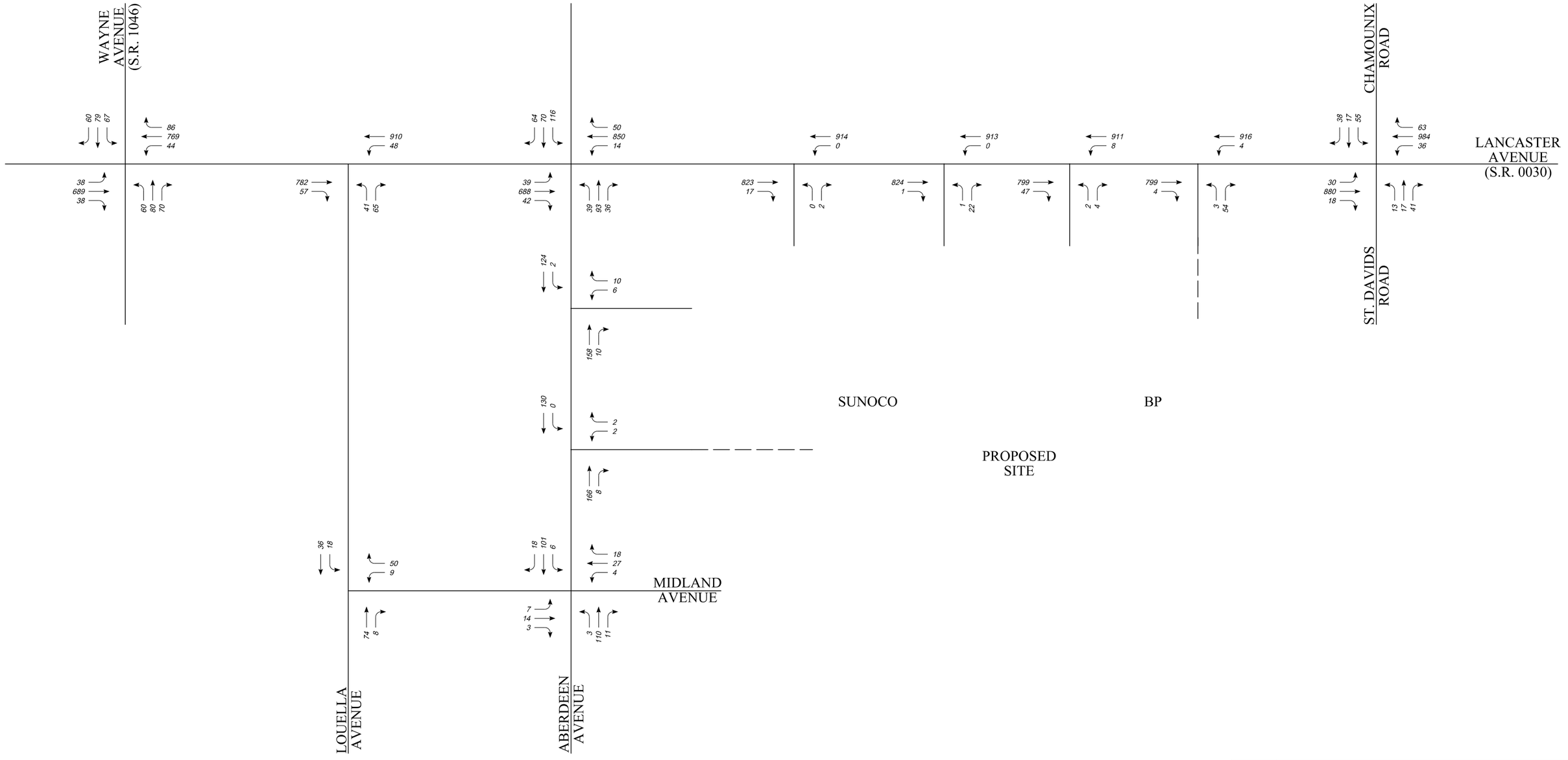


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FIGURE 5

2018 EXISTING CONDITIONS
SATURDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

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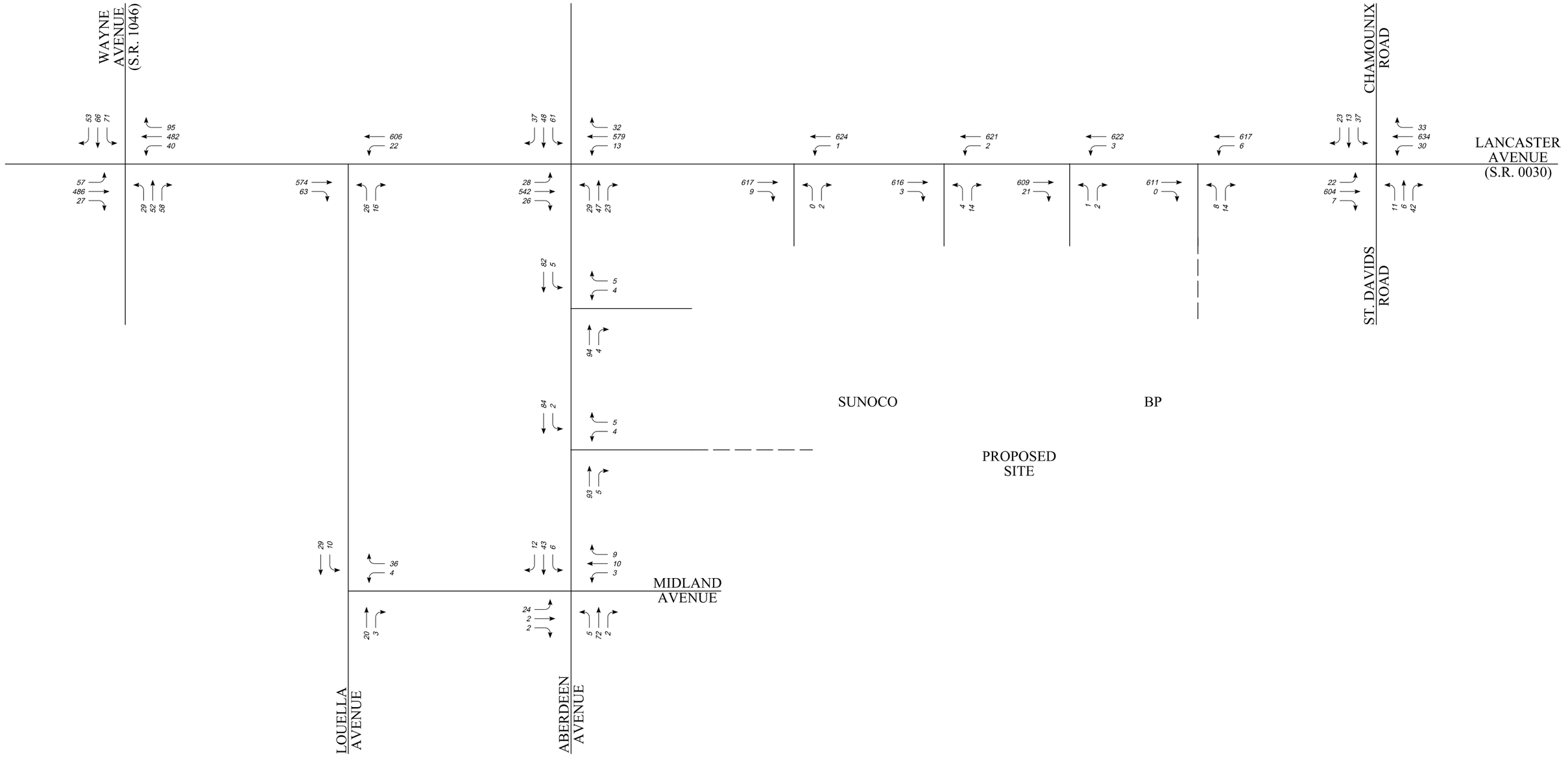


**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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FIGURE 6

2018 EXISTING CONDITIONS
SUNDAY PEAK HOUR
TRAFFIC VOLUMES

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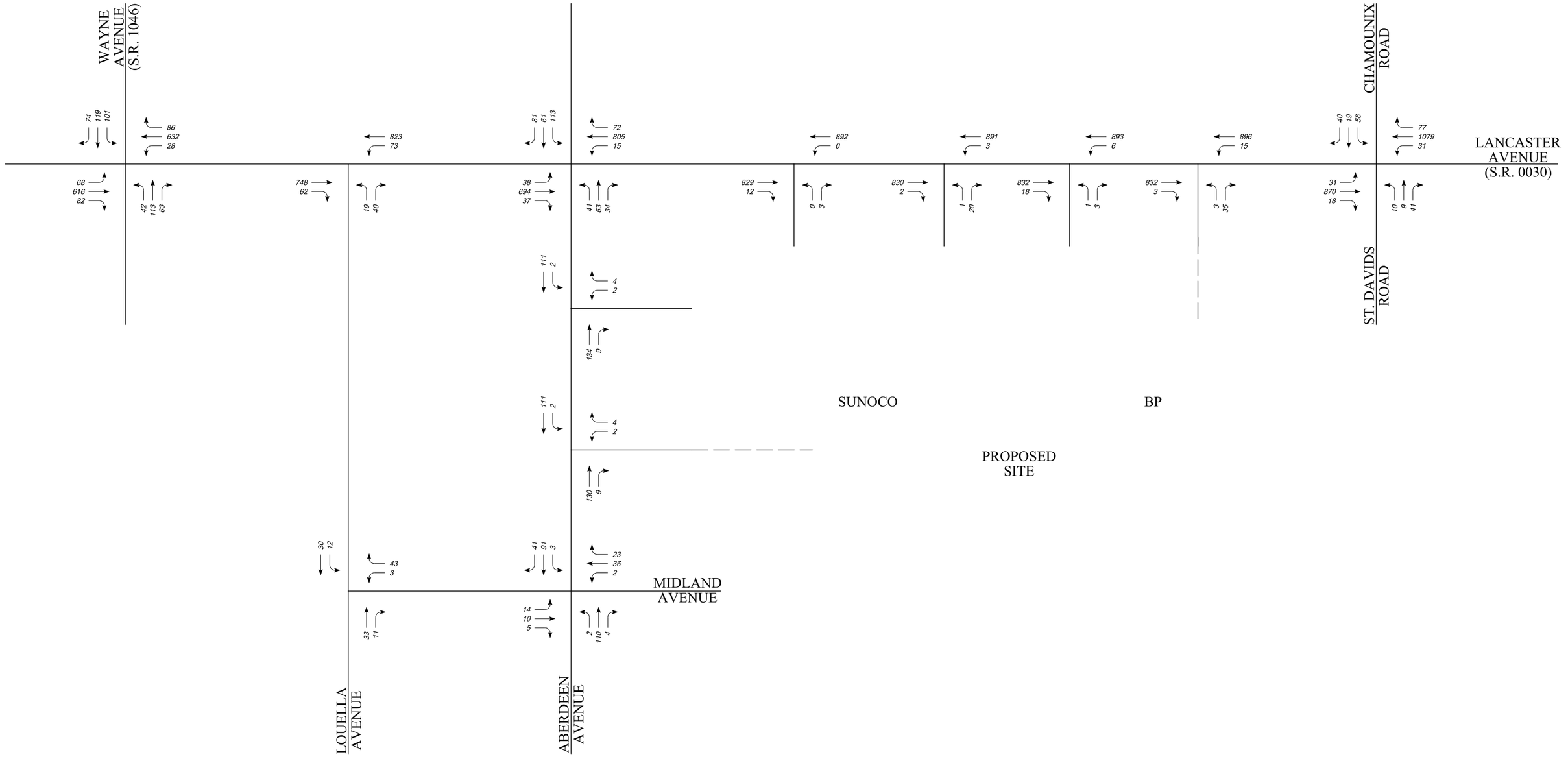


**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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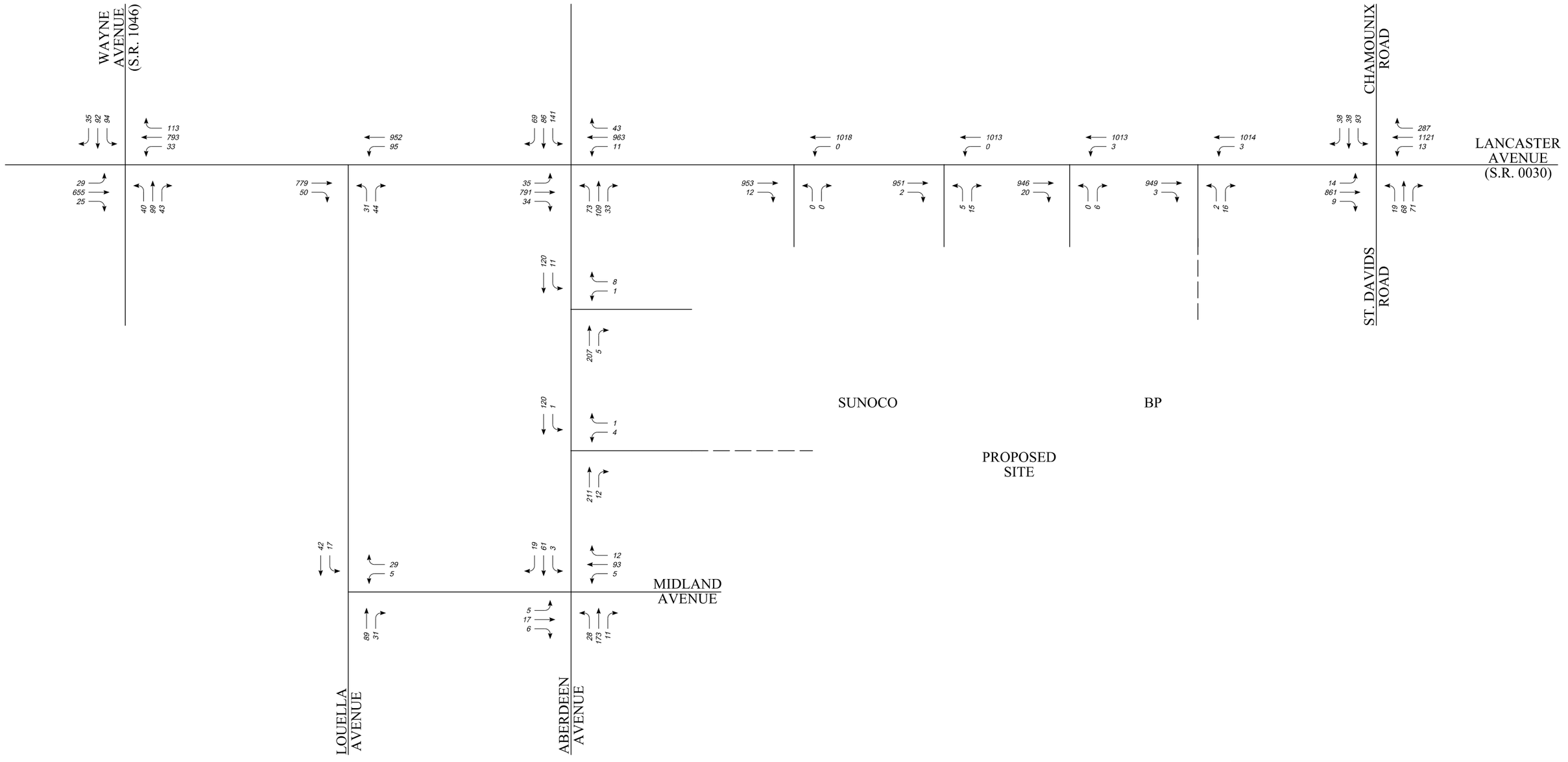
FIGURE 7

2018 EXISTING CONDITIONS
WEEKDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:43 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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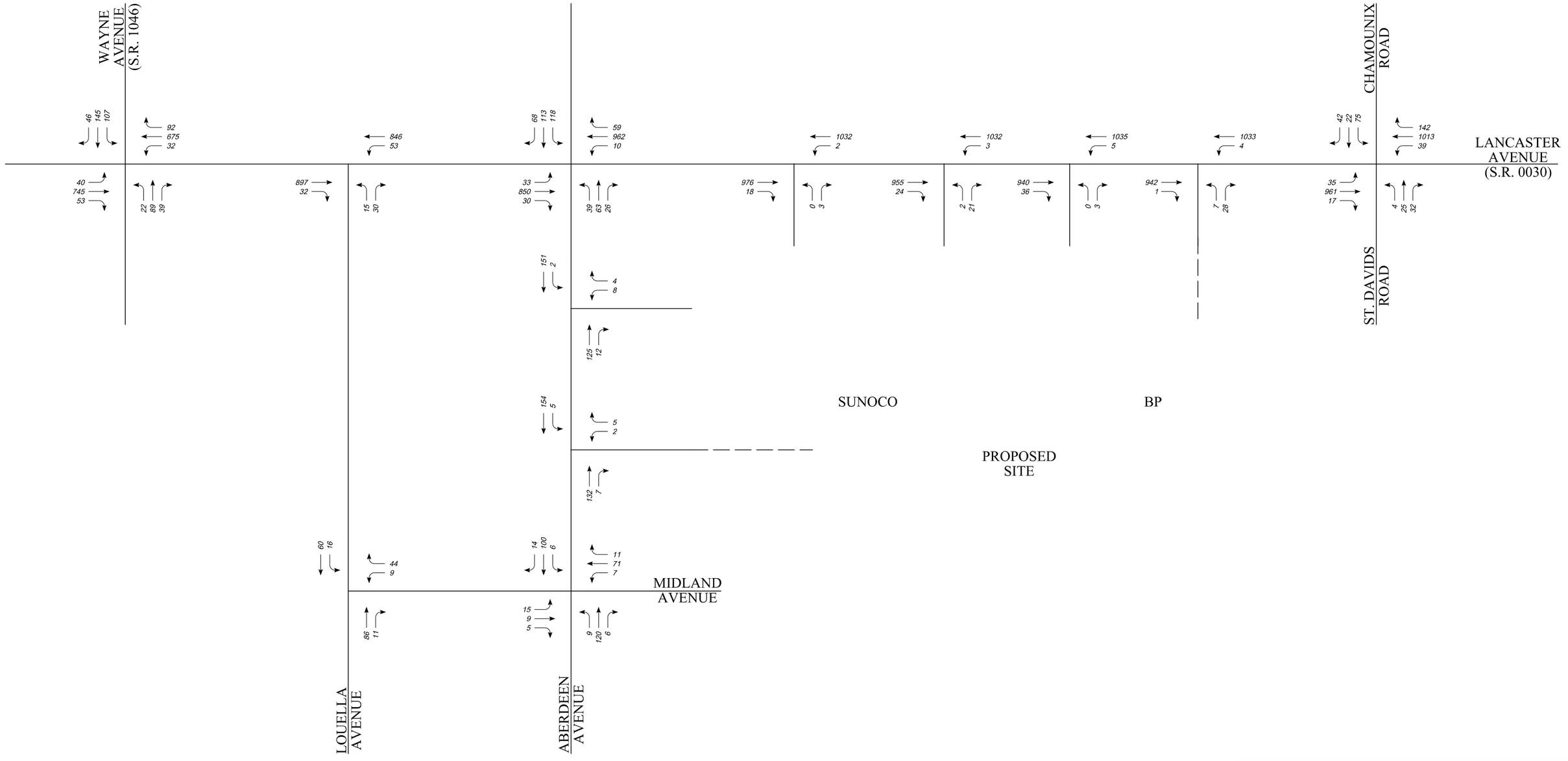
FIGURE 8

2020 BASE (NO-BUILD) CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:44 PM pglassmon $MODEL$




**KEY:**

**– – – – – – PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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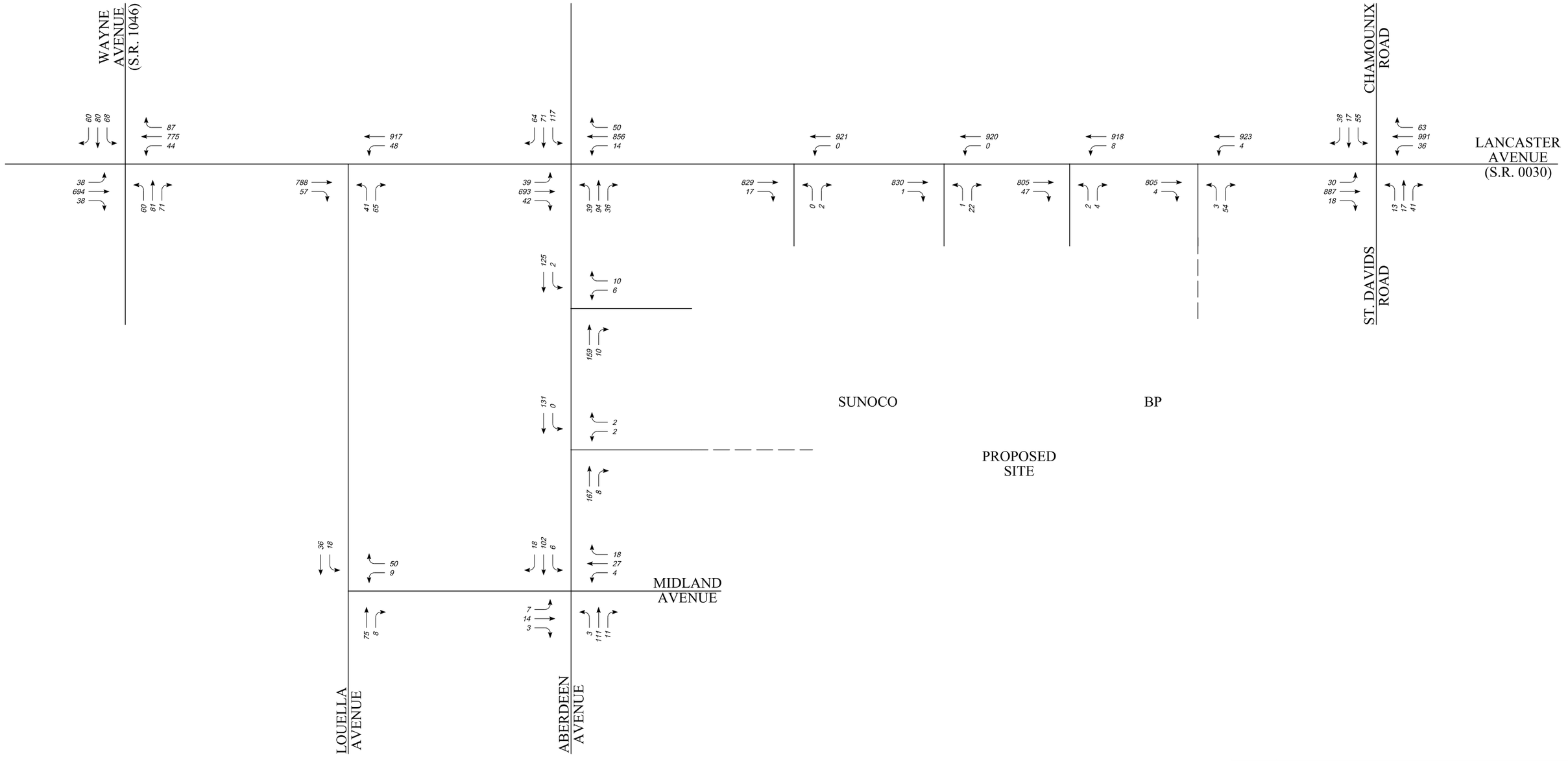
FIGURE 9

2020 BASE (NO-BUILD) CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:45 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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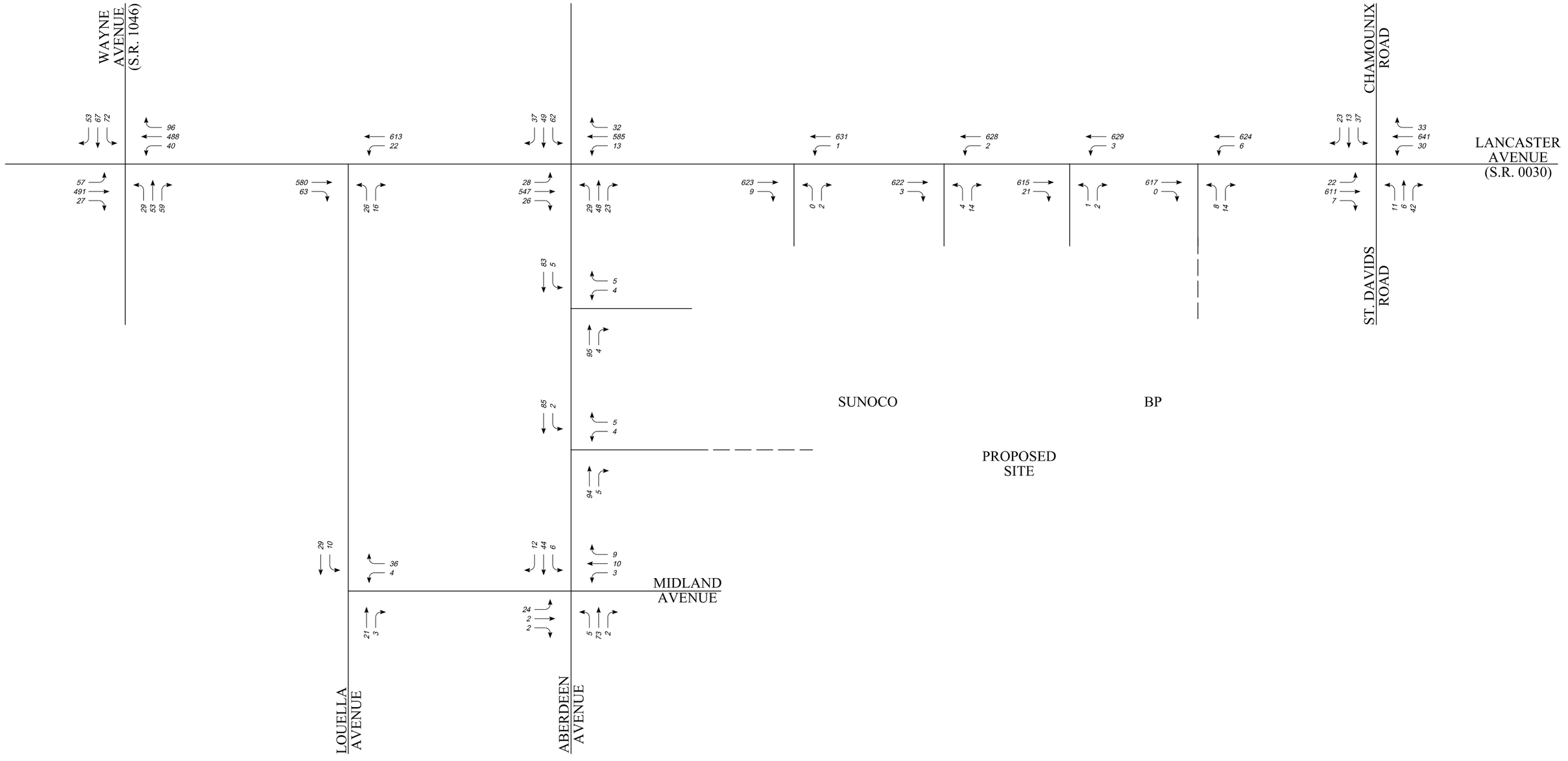
FIGURE 10

2020 BASE (NO-BUILD) CONDITIONS
SATURDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:46 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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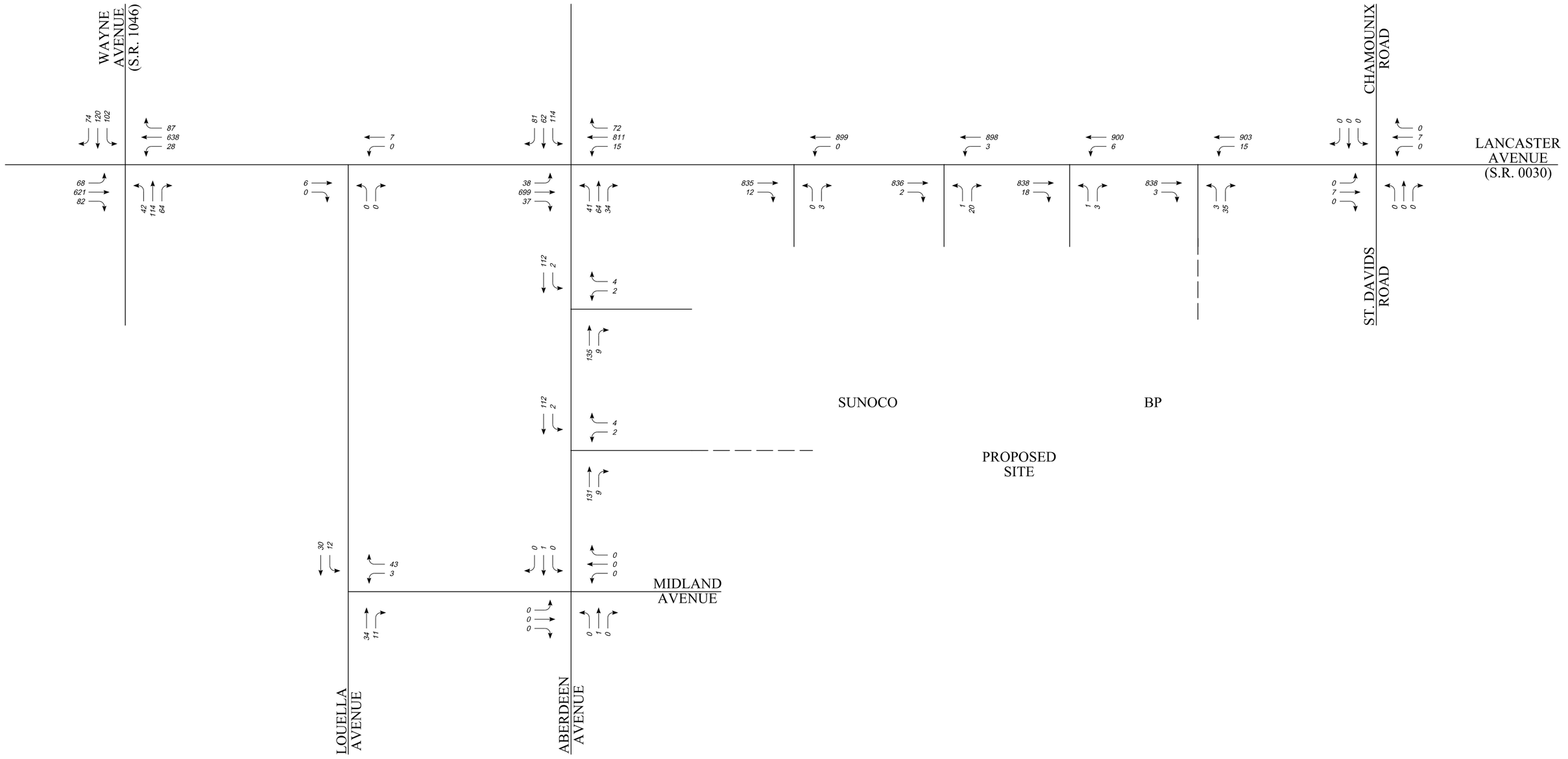
FIGURE 11

2020 BASE (NO-BUILD) CONDITIONS
SUNDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:47 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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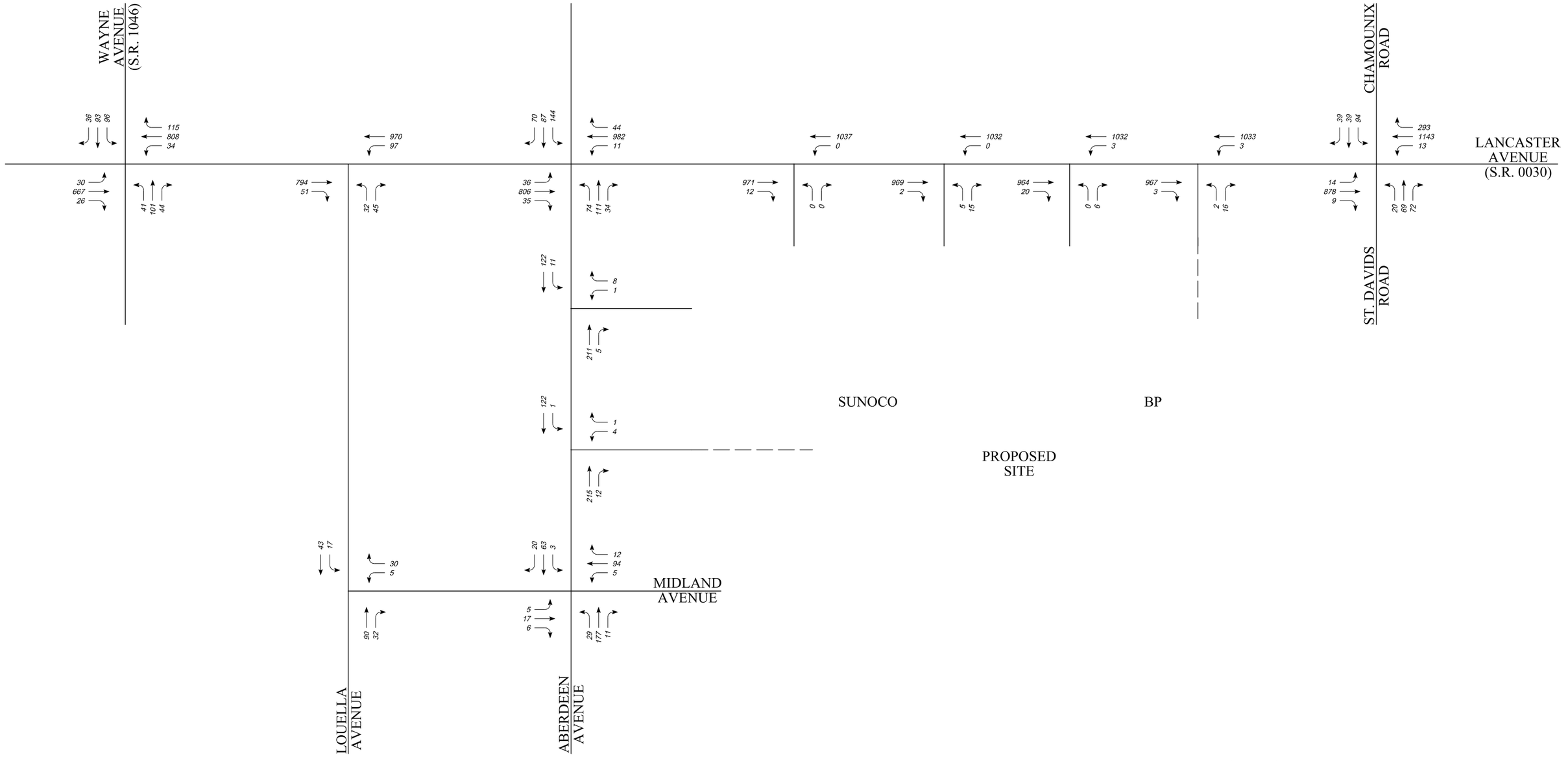
FIGURE 12

2020 BASE (NO-BUILD) CONDITIONS
WEEKDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\ngvproject\sel\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:48 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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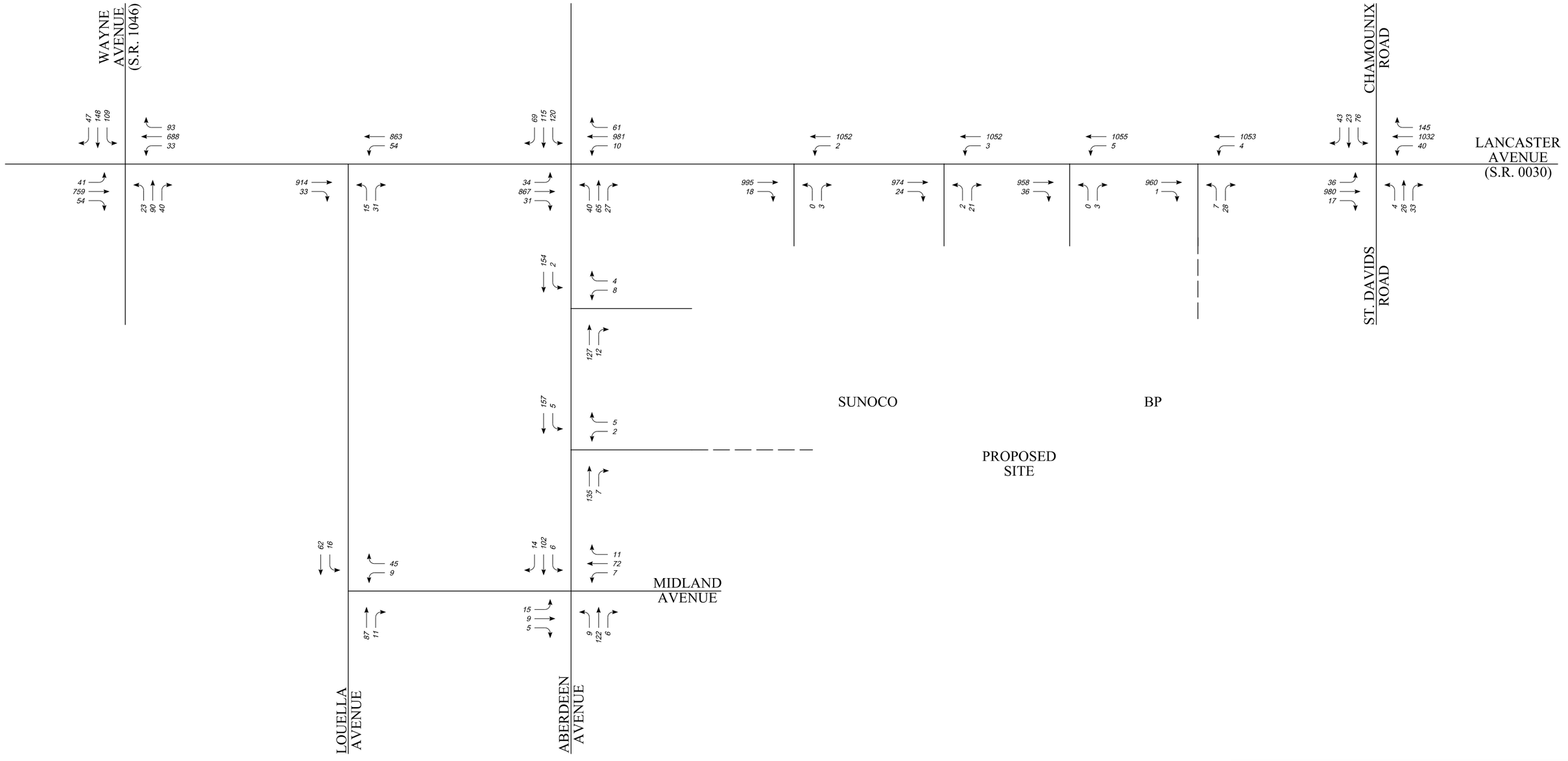
FIGURE 13

2025 BASE (NO-BUILD) CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
pglassmon
12:28:49 PM
2/22/2019
$MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

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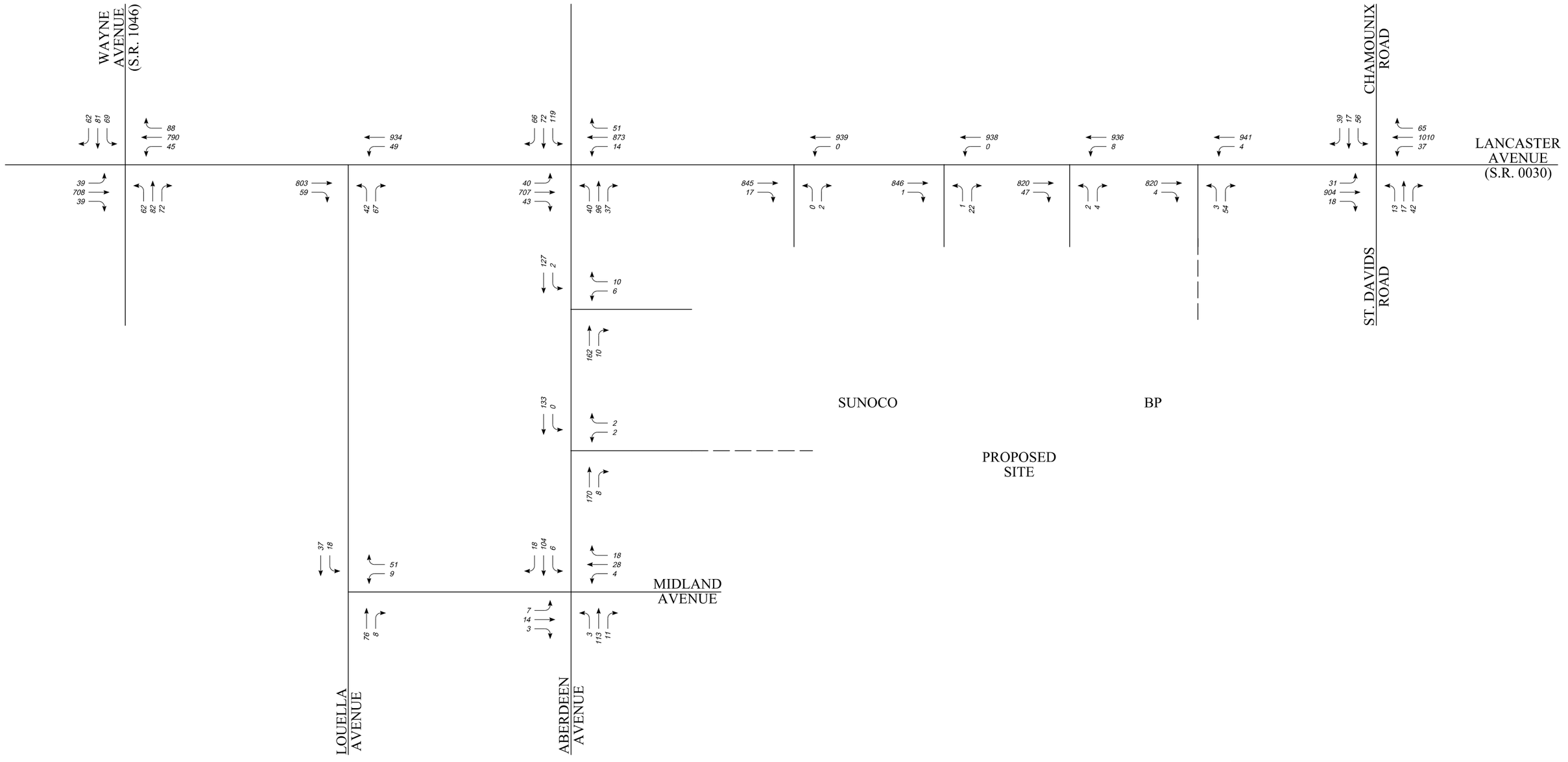
FIGURE 14

2025 BASE (NO-BUILD) CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:50 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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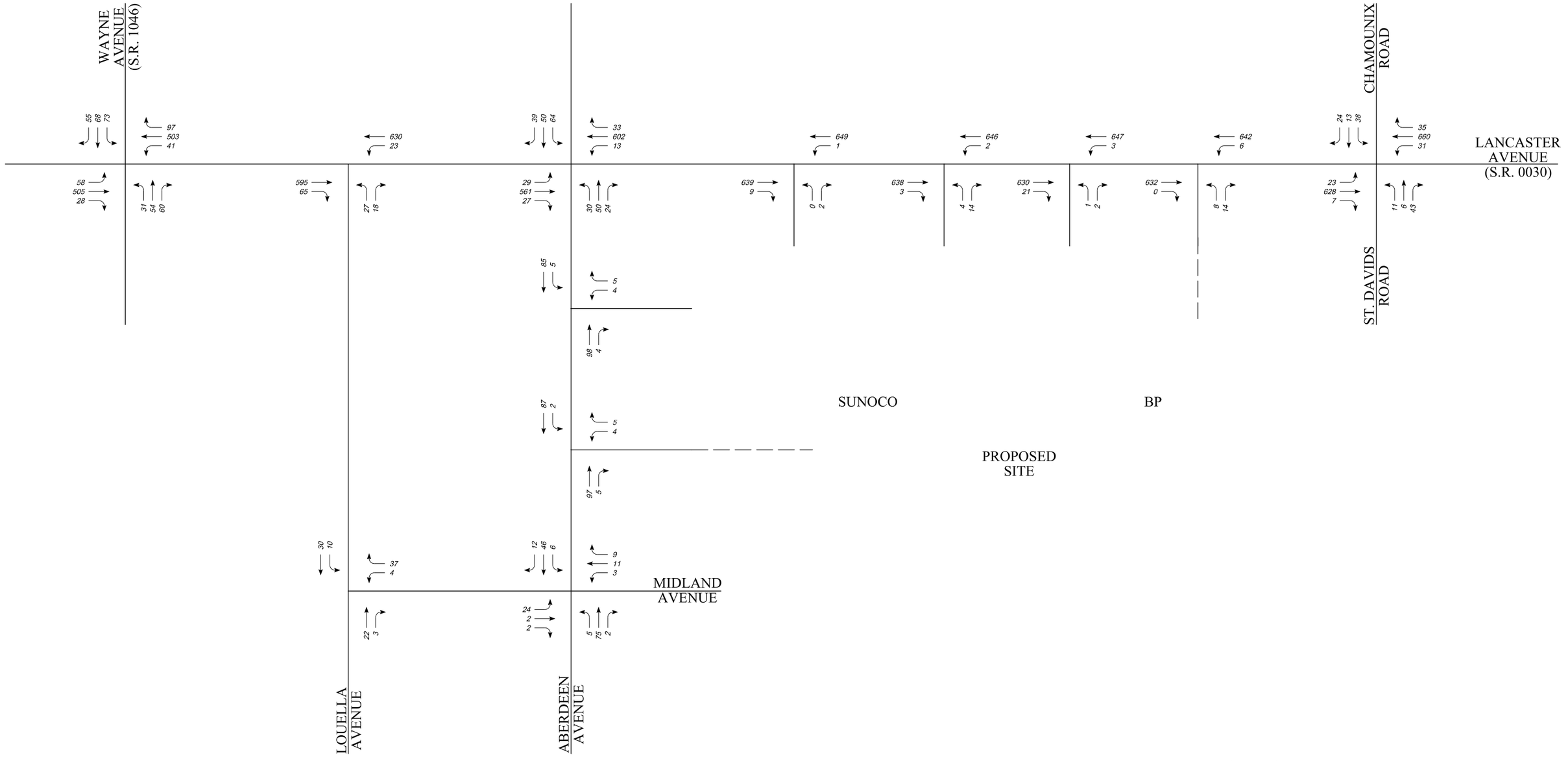
FIGURE 15

2025 BASE (NO-BUILD) CONDITIONS
SATURDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassman\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:51 PM pglassman $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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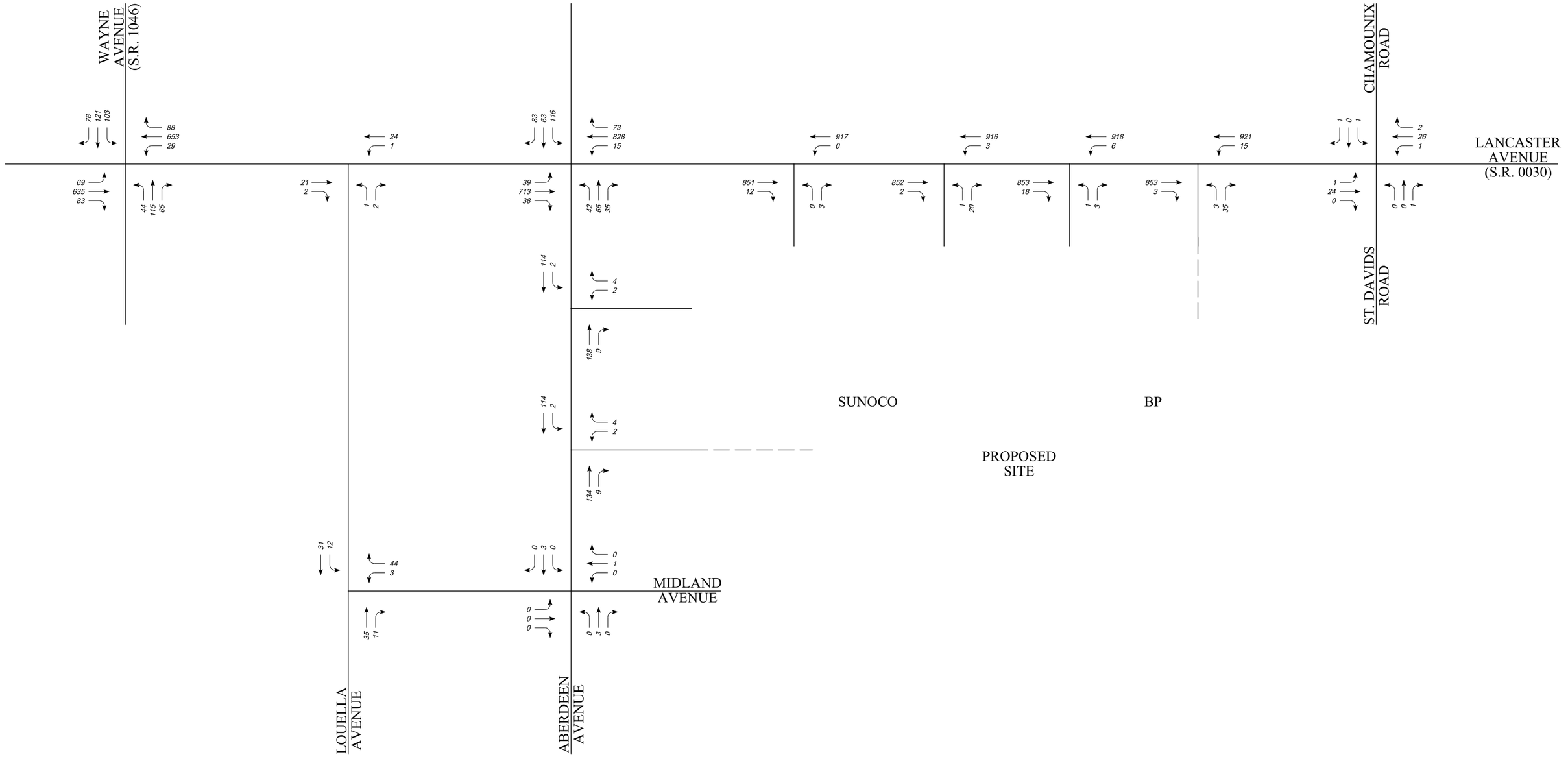
FIGURE 16

2025 BASE (NO-BUILD) CONDITIONS
SUNDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\e\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:51 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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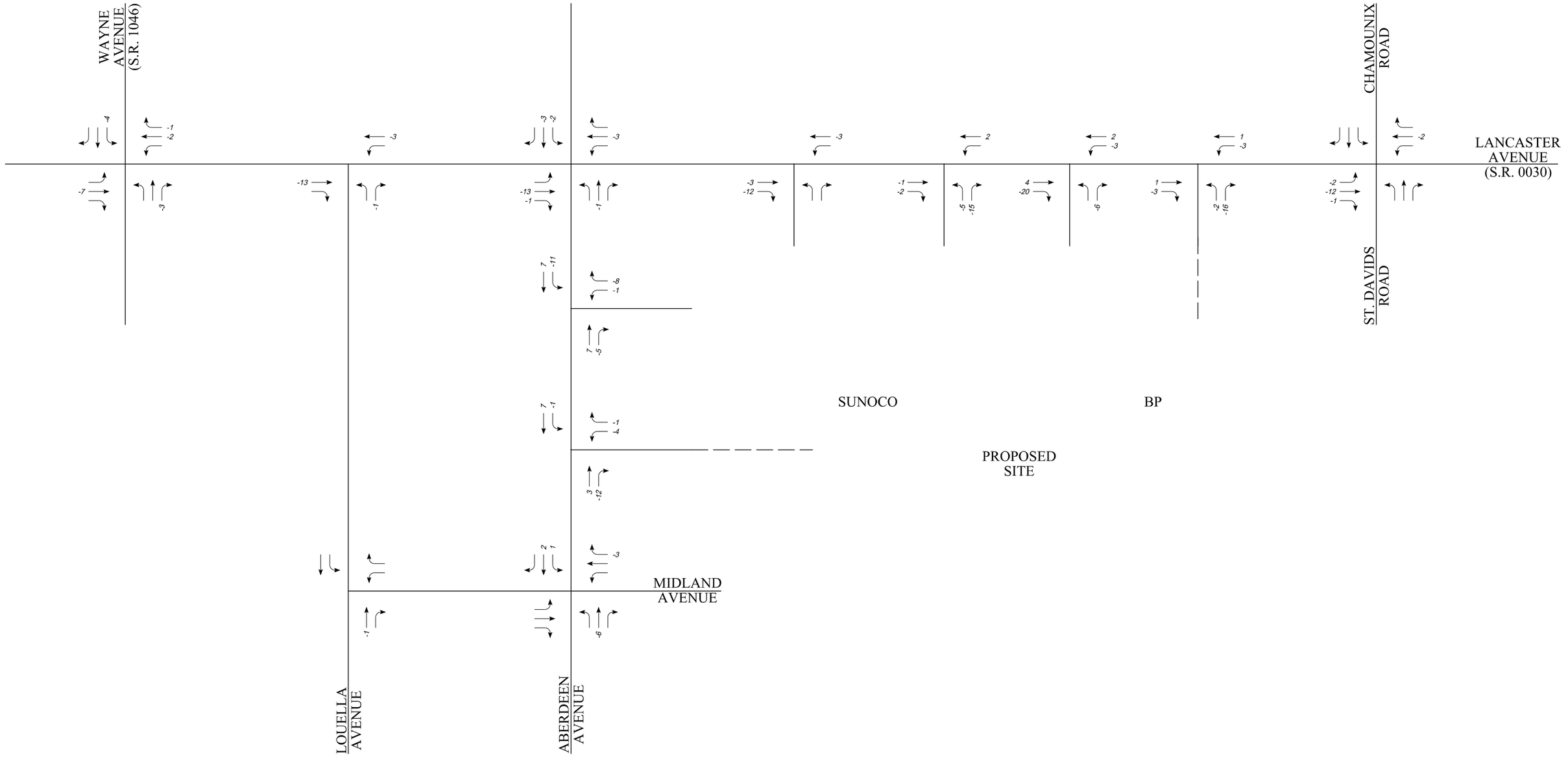
FIGURE 17

2025 BASE (NO-BUILD) CONDITIONS
WEEKDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
pglassmon
12:28:52 PM
2/22/2019
$MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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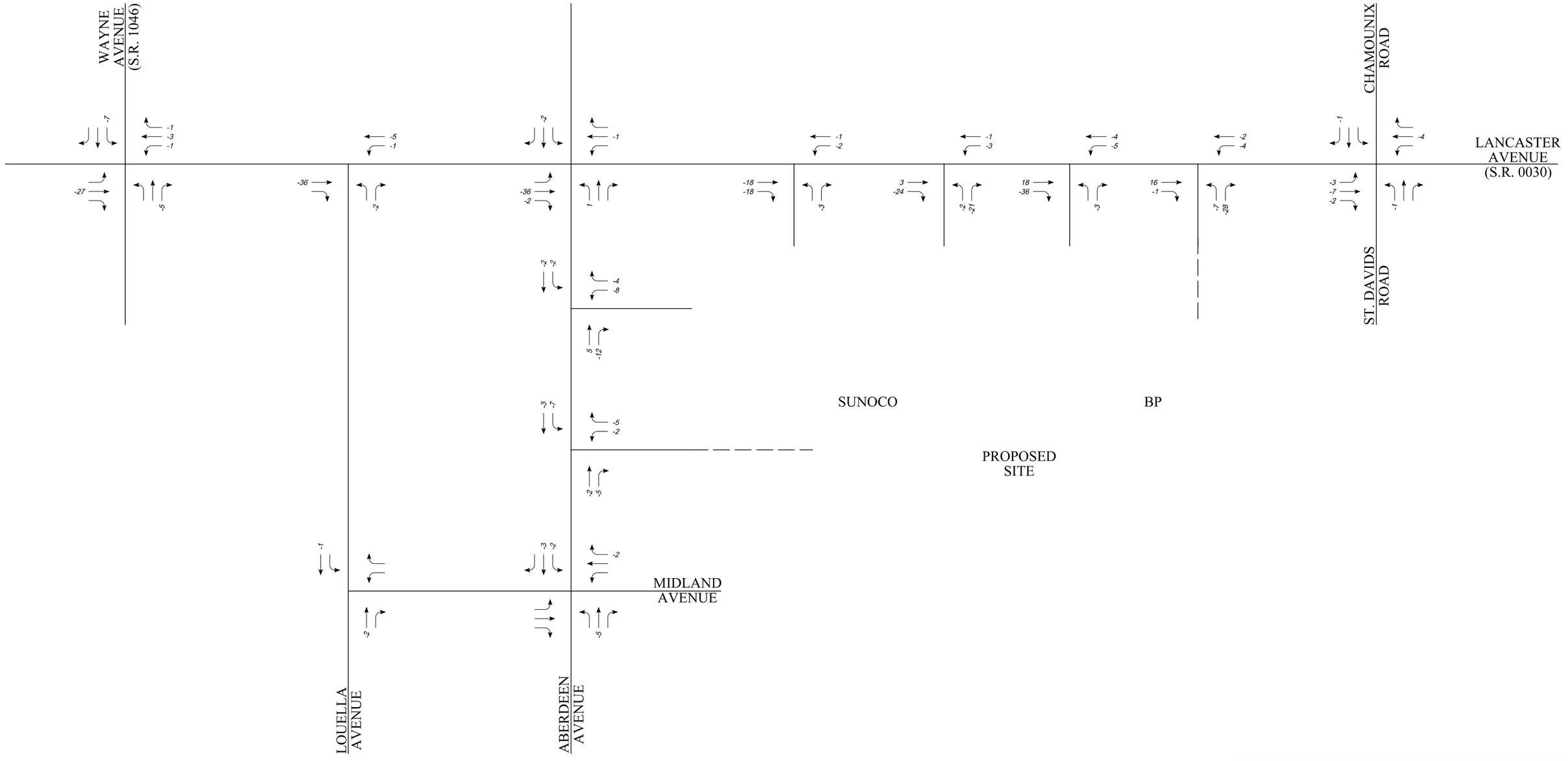
FIGURE 18

BASE REDISTRIBUTIONS
WEEKDAY AM PEAK HOUR

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:53 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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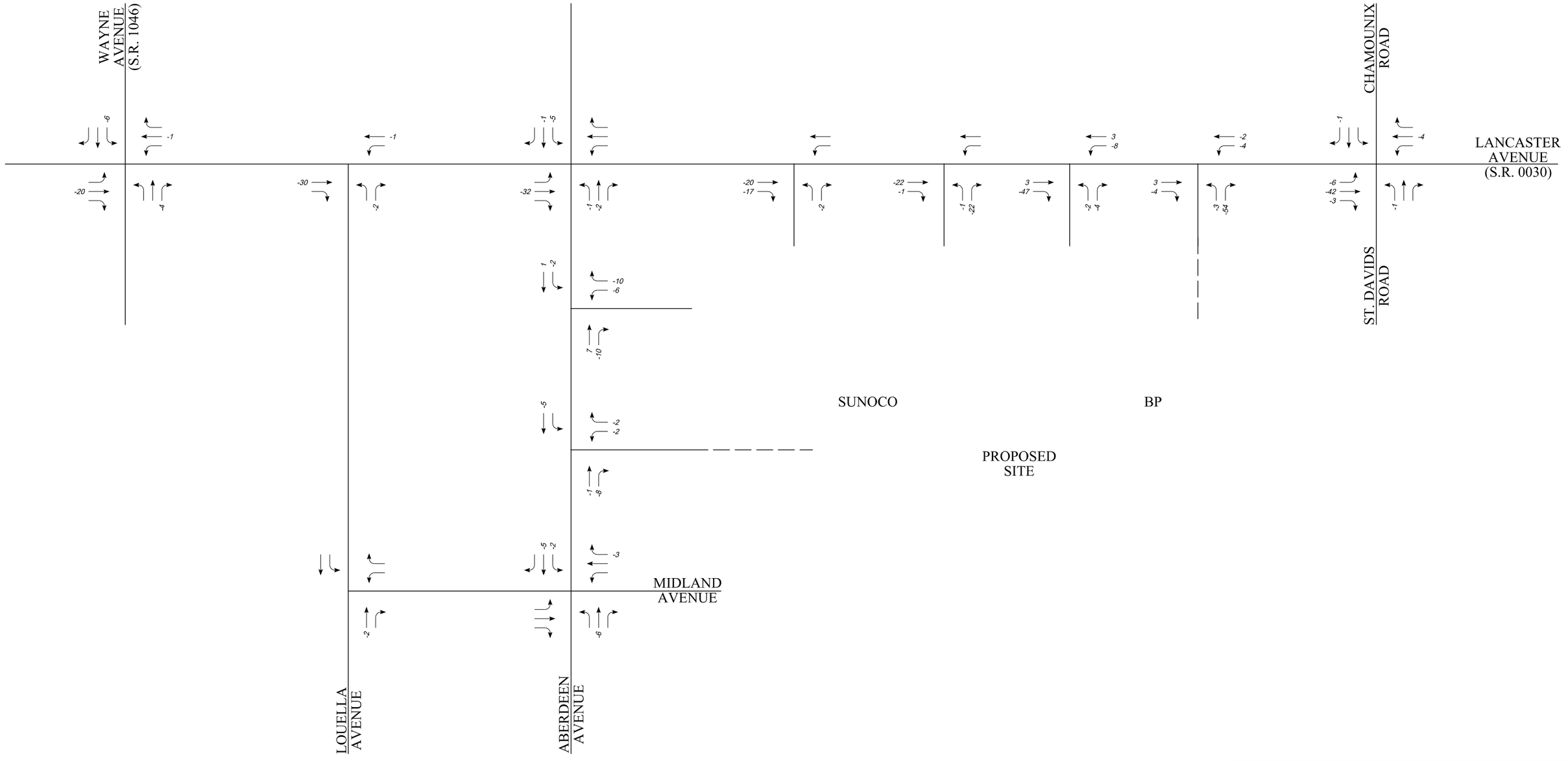
FIGURE 19

BASE REDISTRIBUTIONS
WEEKDAY PM PEAK HOUR

c:\pwworking\projects\pglassman\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:54 PM
pglassman
$MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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FIGURE 20

BASE REDISTRIBUTIONS
SATURDAY MIDDAY PEAK HOUR

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:55 PM
pglassmon
$MODEL$

**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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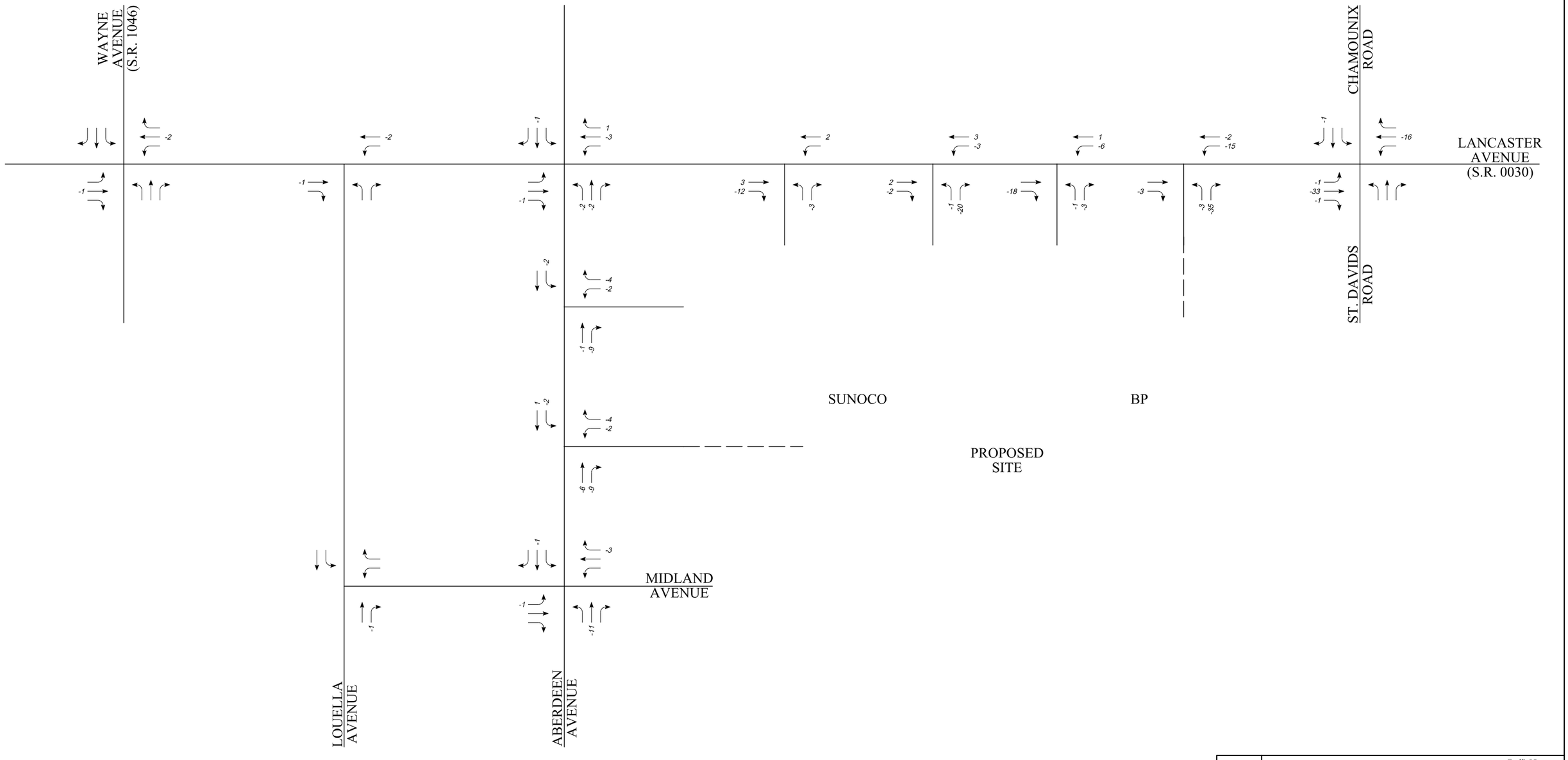
FIGURE 21

BASE REDISTRIBUTIONS
SUNDAY PEAK HOUR

c:\pwwork\hg\projects\e\pglassman\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:56 PM pglassman $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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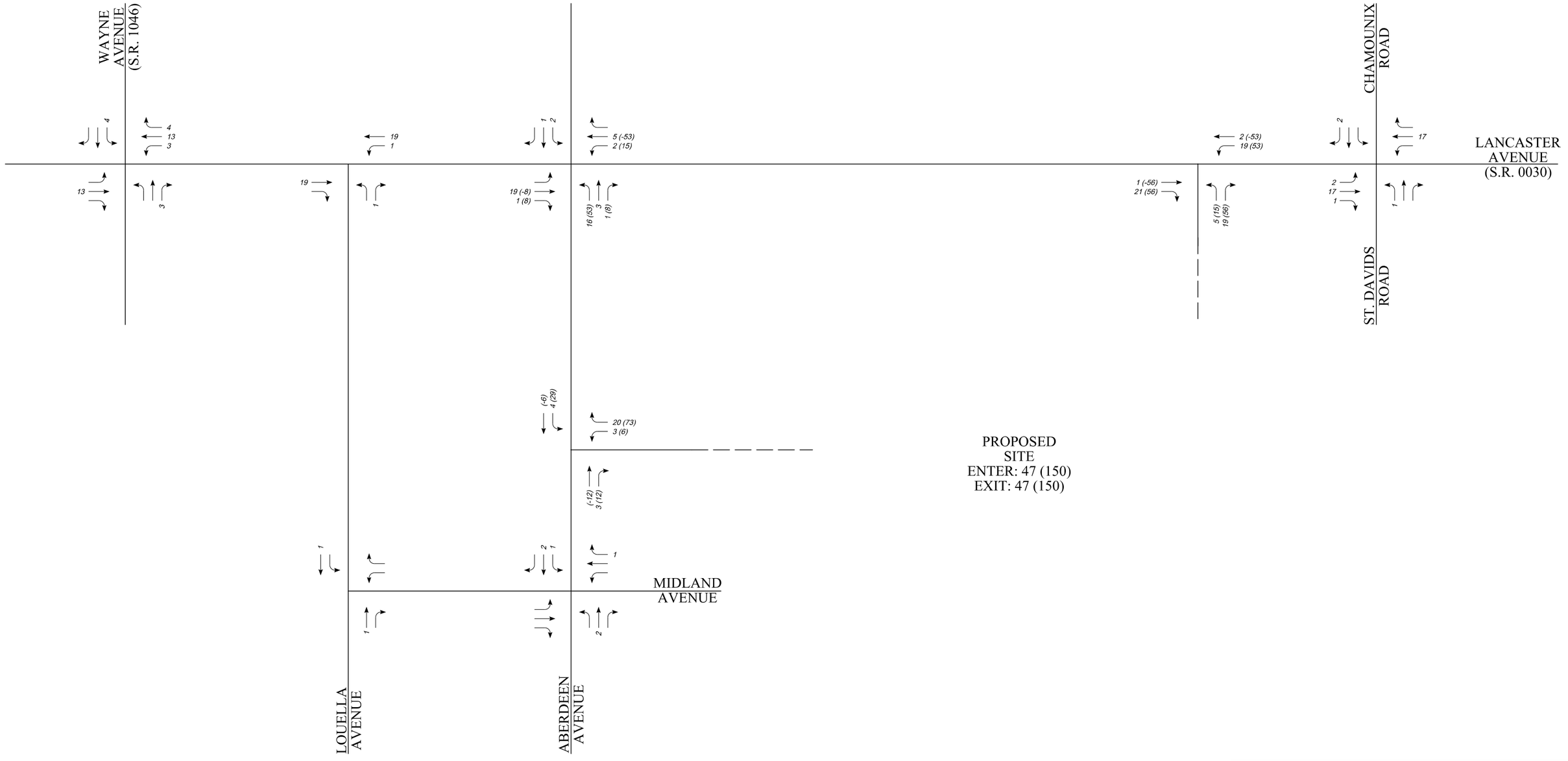
FIGURE 22

BASE REDISTRIBUTIONS
WEEKDAY MIDDAY PEAK HOUR

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
pglassmon
12:28:57 PM
2/22/2019
$MODEL$




**KEY:**

**– – – – – – PROPOSED DRIVEWAY**

**NEW(PASS-BY)TRIPS**

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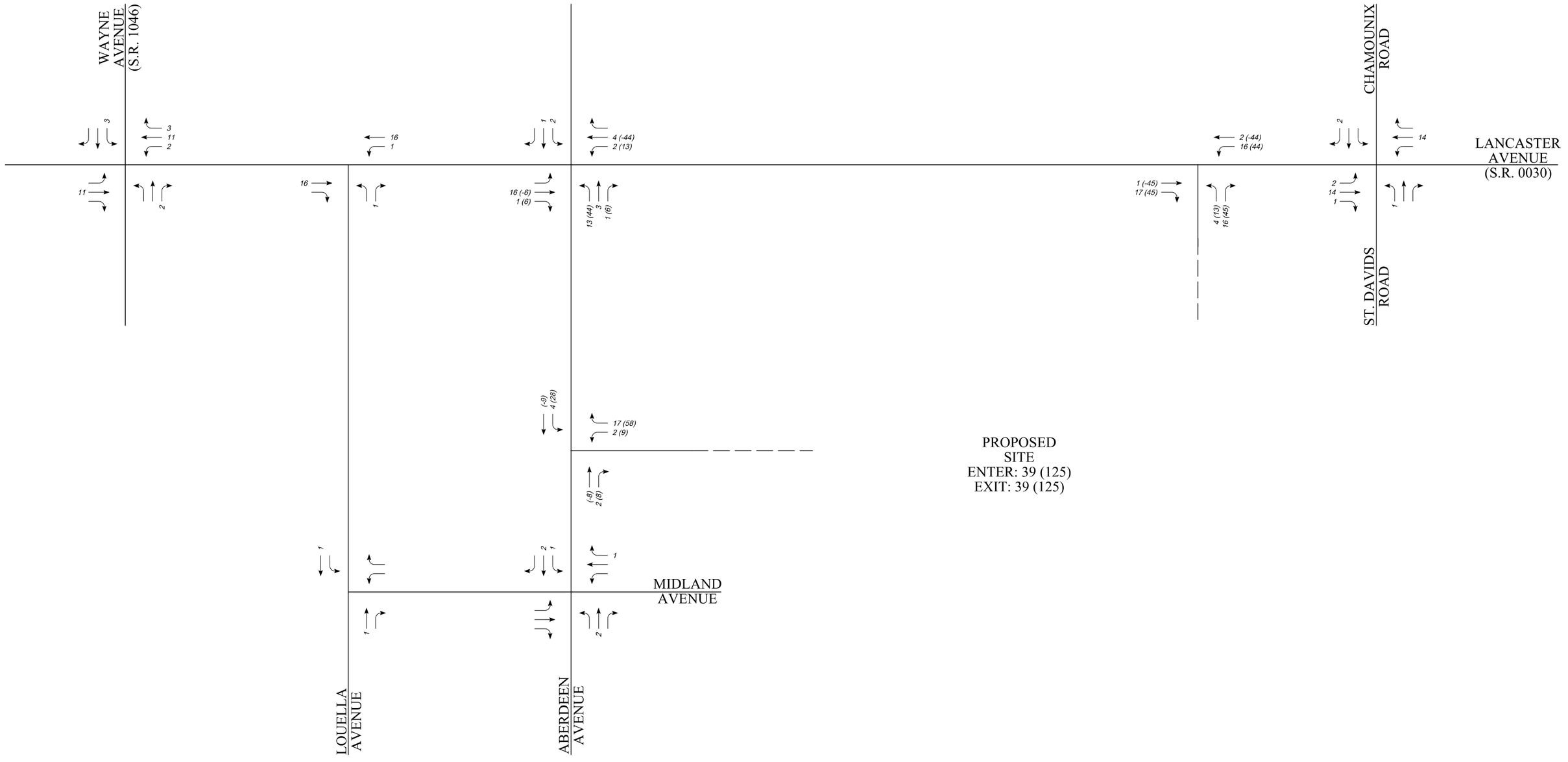
FIGURE 23

TRIP DISTRIBUTIONS
WEEKDAY AM PEAK HOUR

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:58 PM pglassmon $MODEL$




**KEY:**

**– – – – – – PROPOSED DRIVEWAY**

**NEW(PASS-BY)TRIPS**

**SCHEMATIC DRAWING:NOT TO SCALE**

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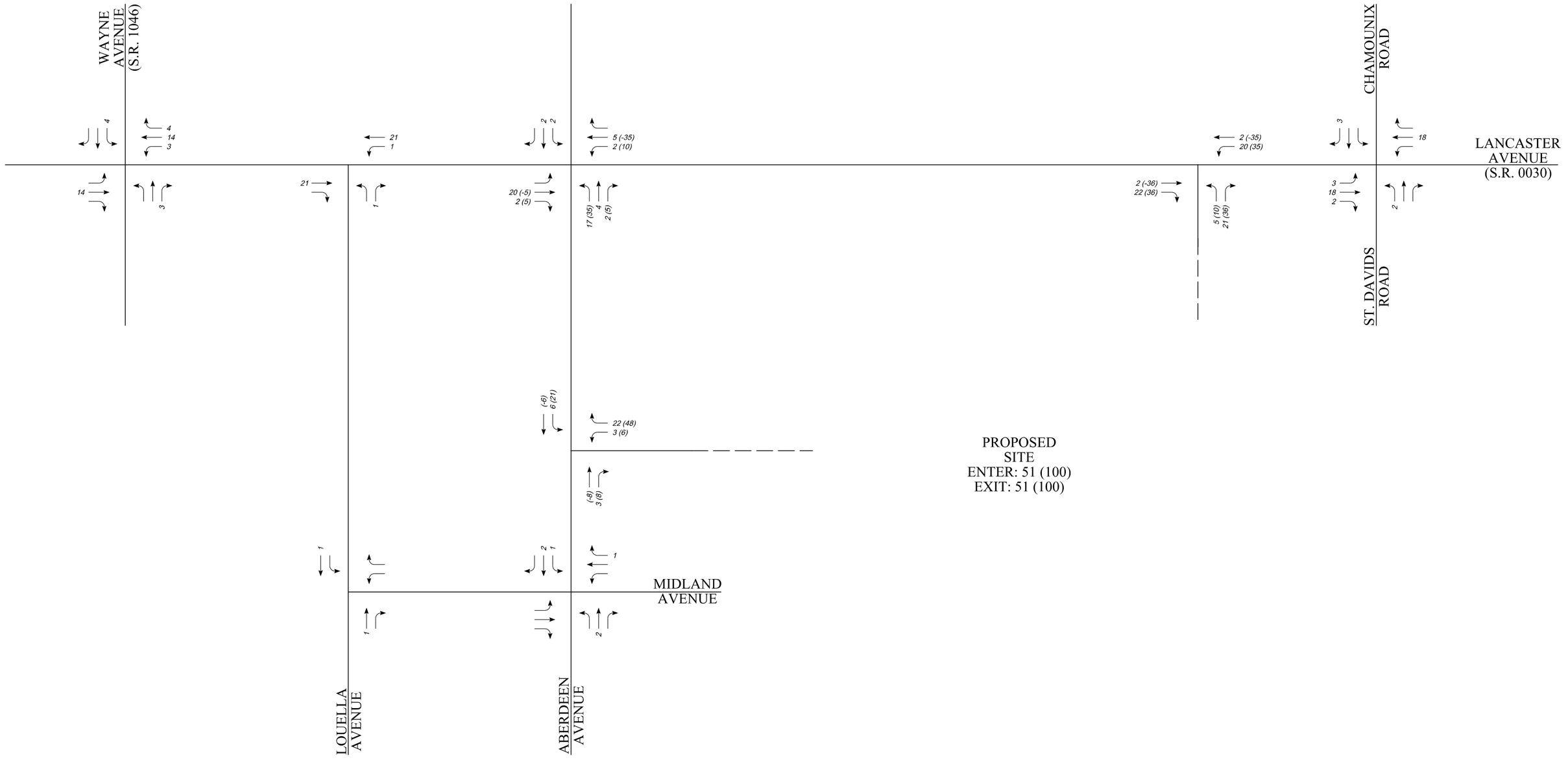
FIGURE 24

TRIP DISTRIBUTIONS
WEEKDAY PM PEAK HOUR

c:\pwwork\rg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:28:59 PM
pglassmon
$MODEL$




**KEY:**

**– – – – – – PROPOSED DRIVEWAY**

**NEW(PASS-BY)TRIPS**

**SCHEMATIC DRAWING:NOT TO SCALE**

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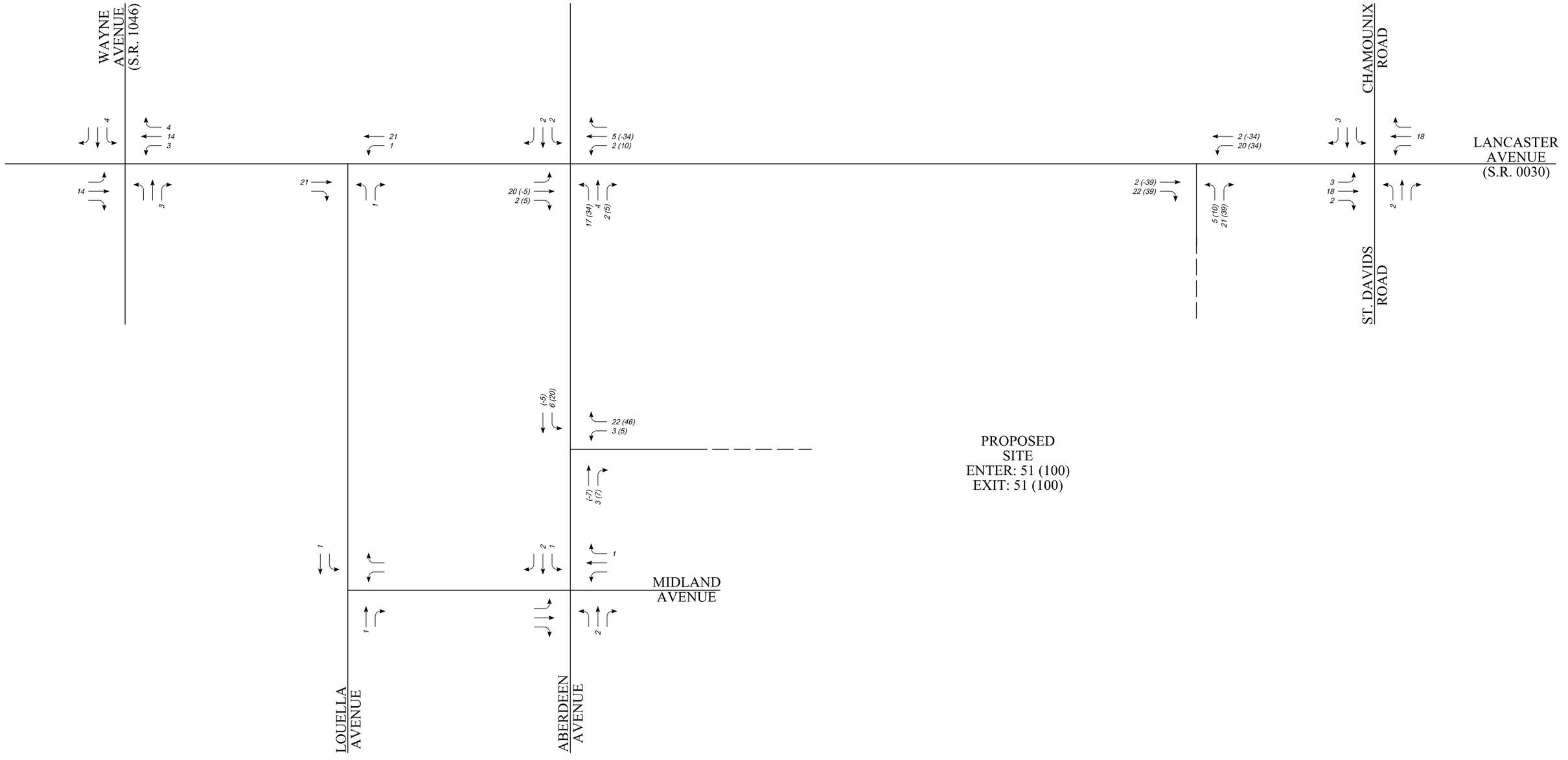
FIGURE 25

TRIP DISTRIBUTIONS
SATURDAY MIDDAY PEAK HOUR

c:\pwwork\rg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:00 PM pglassmon $MODEL$




**KEY:**

**– – – – – – PROPOSED DRIVEWAY**

**NEW(PASS-BY)TRIPS**

**SCHEMATIC DRAWING:NOT TO SCALE**

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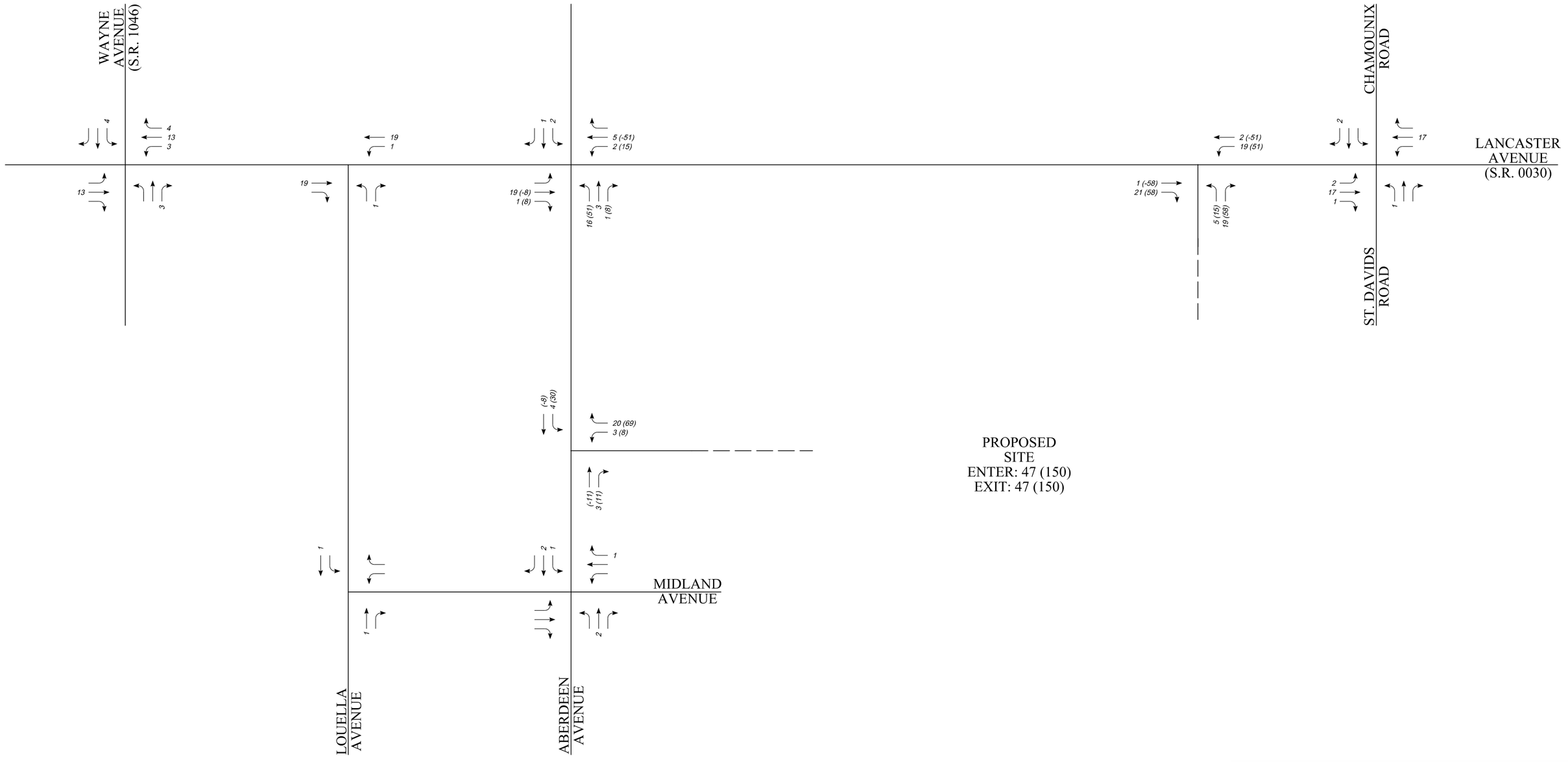
FIGURE 26

TRIP DISTRIBUTIONS
SUNDAY PEAK HOUR

c:\pwwork\rg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:01 PM pglassmon $MODEL$




**KEY:**

**– – – – – – PROPOSED DRIVEWAY**

**NEW(PASS-BY)TRIPS**

**SCHEMATIC DRAWING:NOT TO SCALE**

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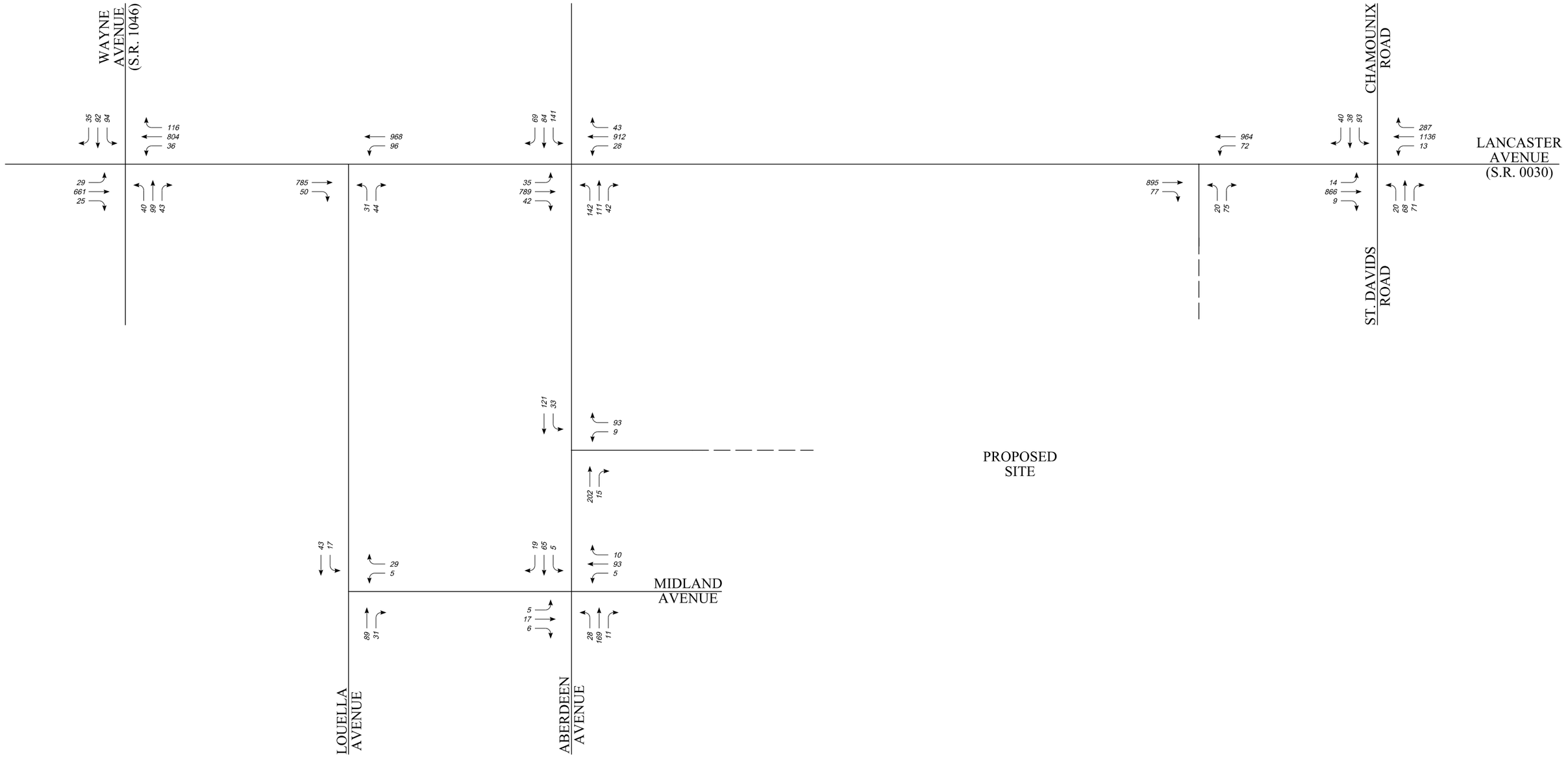
FIGURE 27

TRIP DISTRIBUTIONS
WEEKDAY MIDDAY PEAK HOUR

c:\pwwork\rg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/27/2019 12:29:02 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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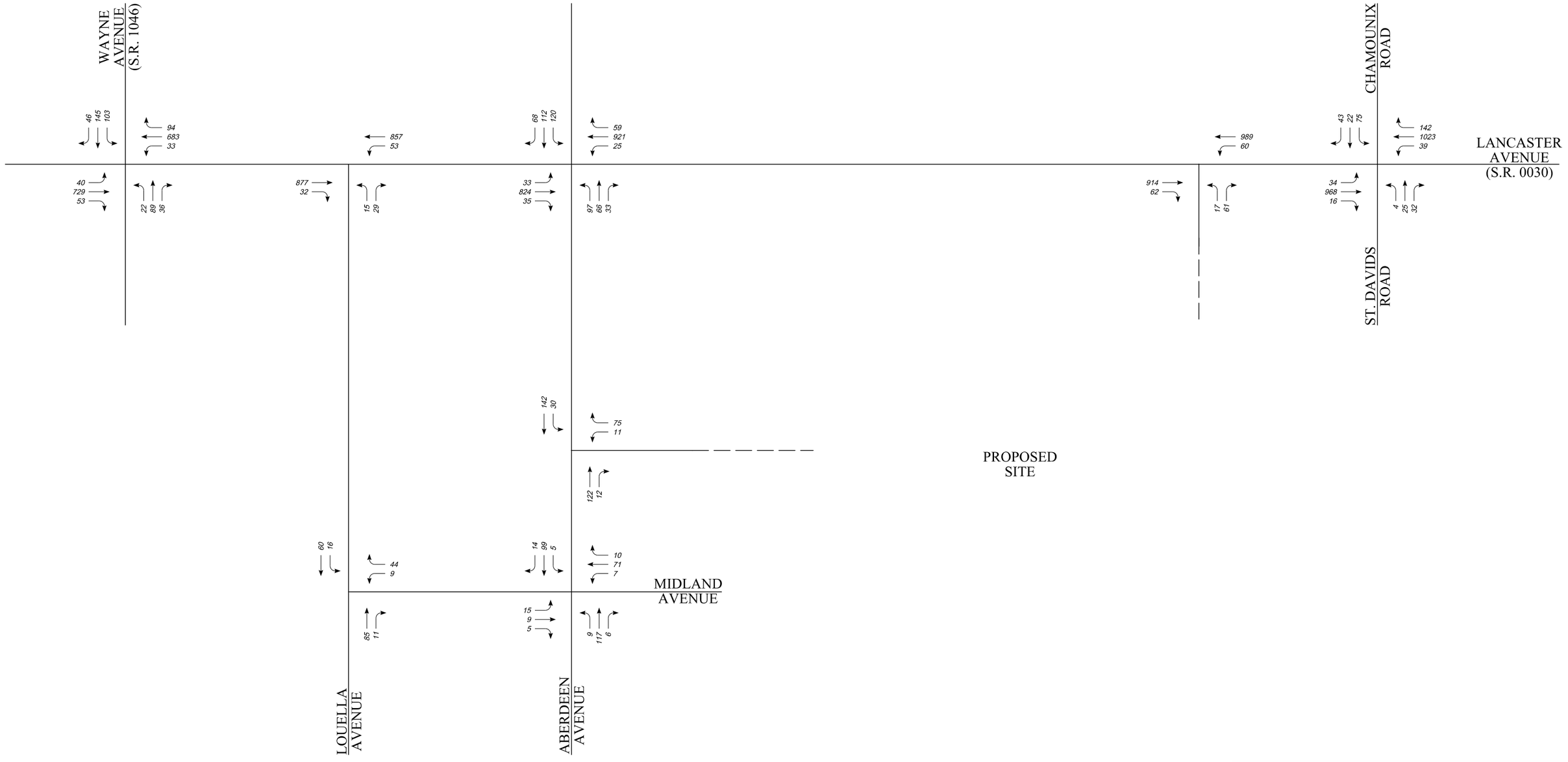
FIGURE 28

2020 PROJECTED (BUILD) CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:03 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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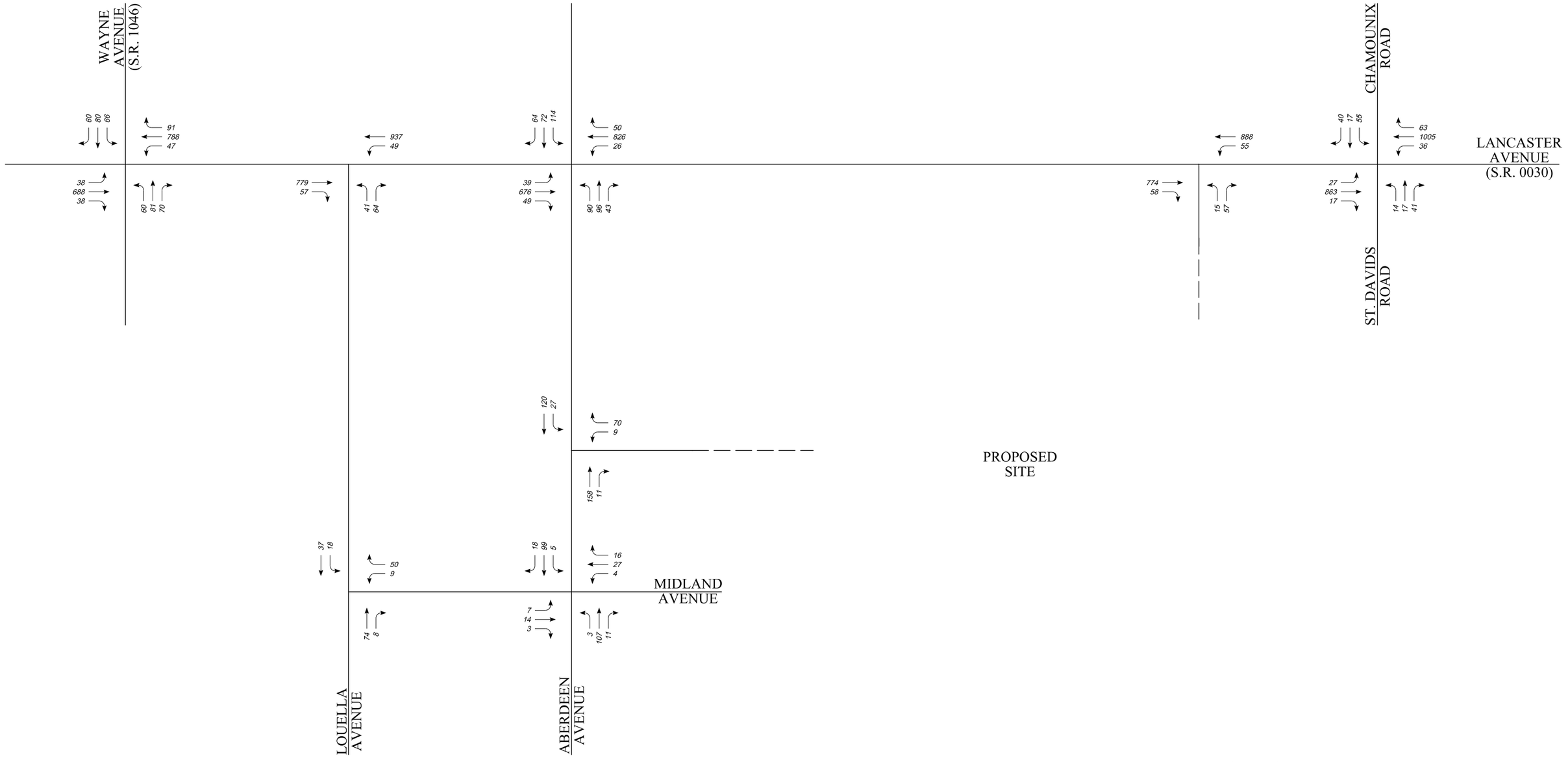
FIGURE 29

2020 PROJECTED (BUILD) CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:04 PM pglassmon
$MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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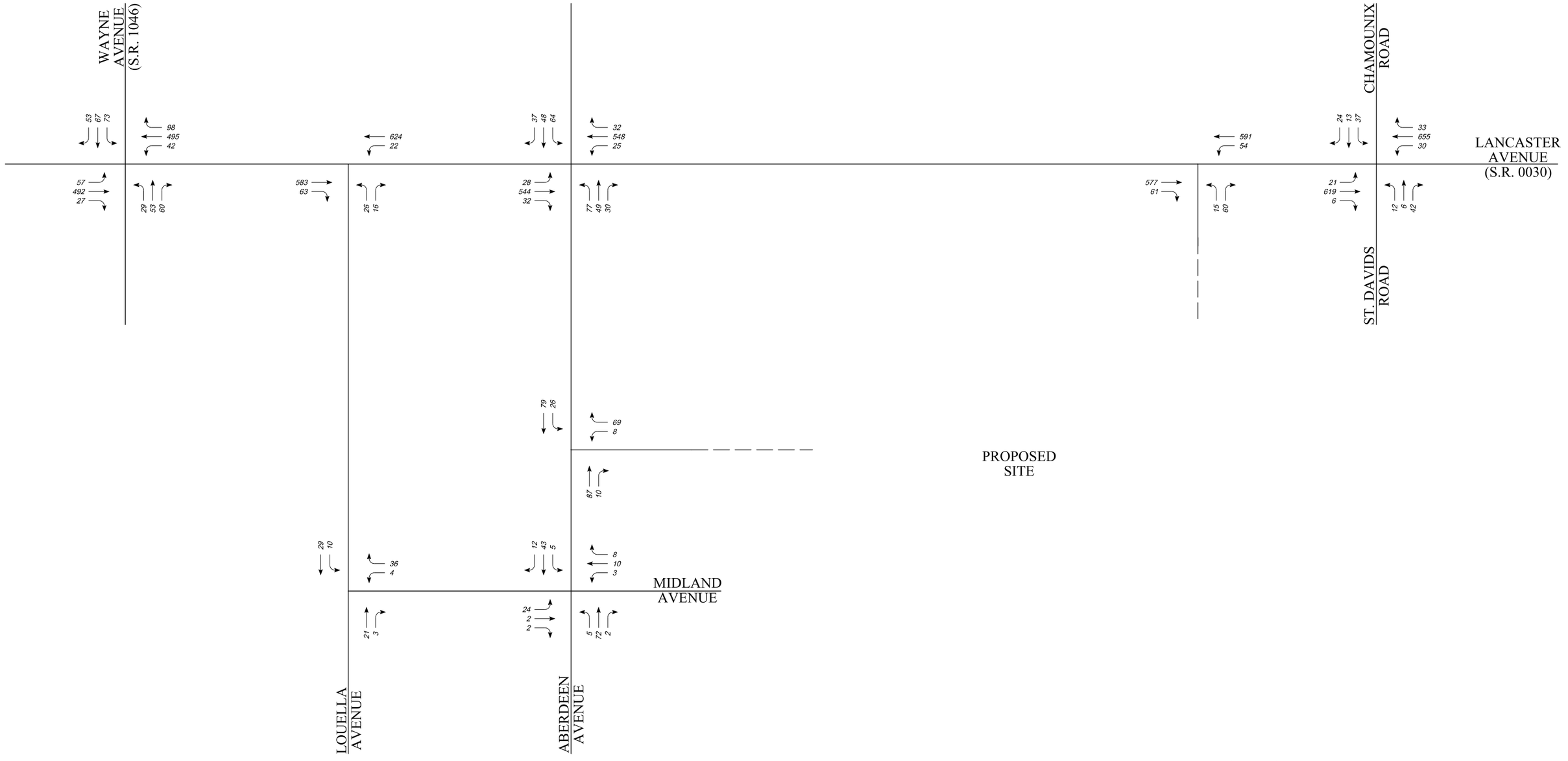
FIGURE 30

2020 PROJECTED (BUILD) CONDITIONS
SATURDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:05 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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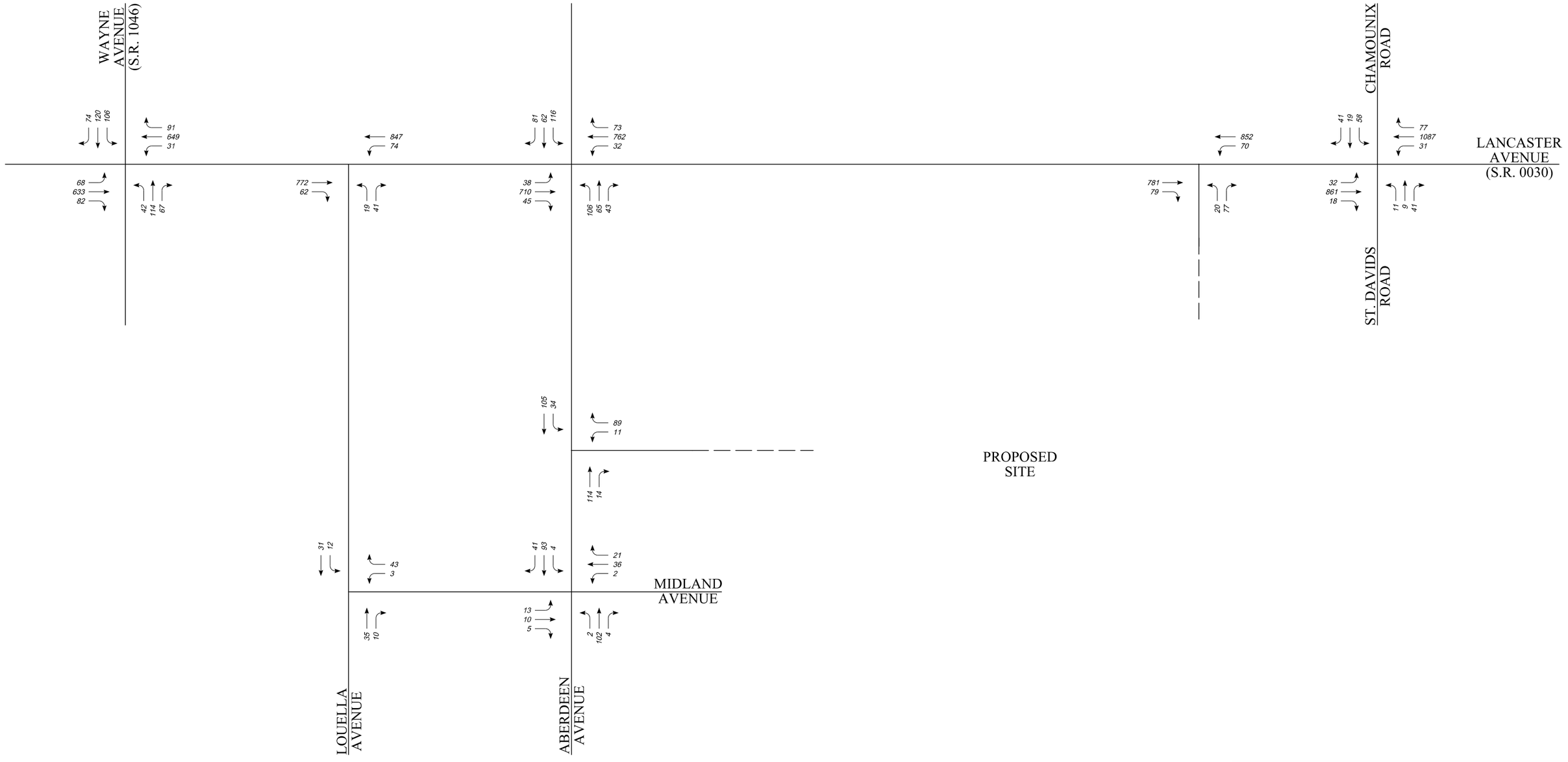
FIGURE 31

2020 PROJECTED (BUILD) CONDITIONS
SUNDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:06 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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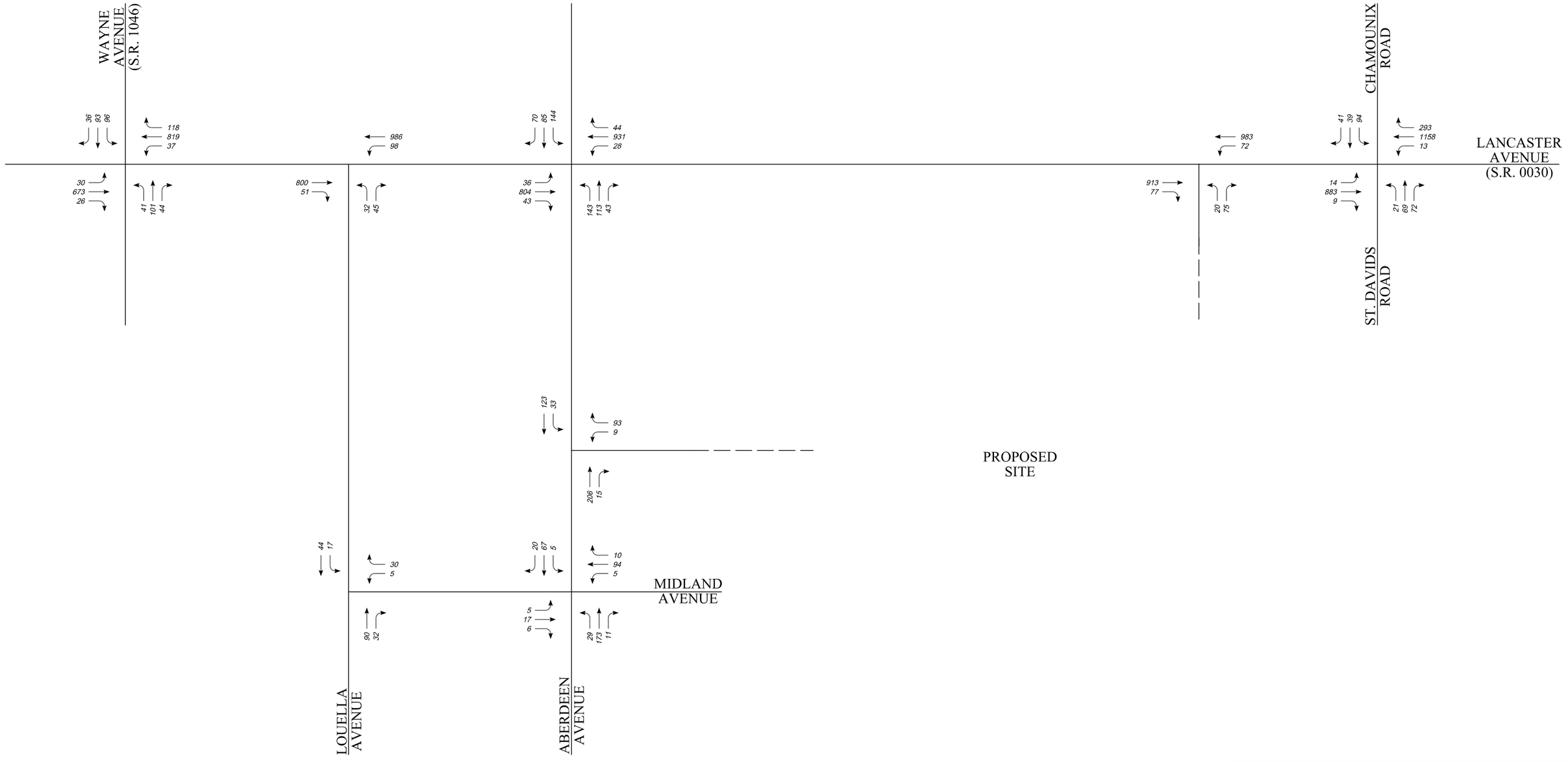
FIGURE 32

2020 PROJECTED (BUILD) CONDITIONS
WEEKDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:07 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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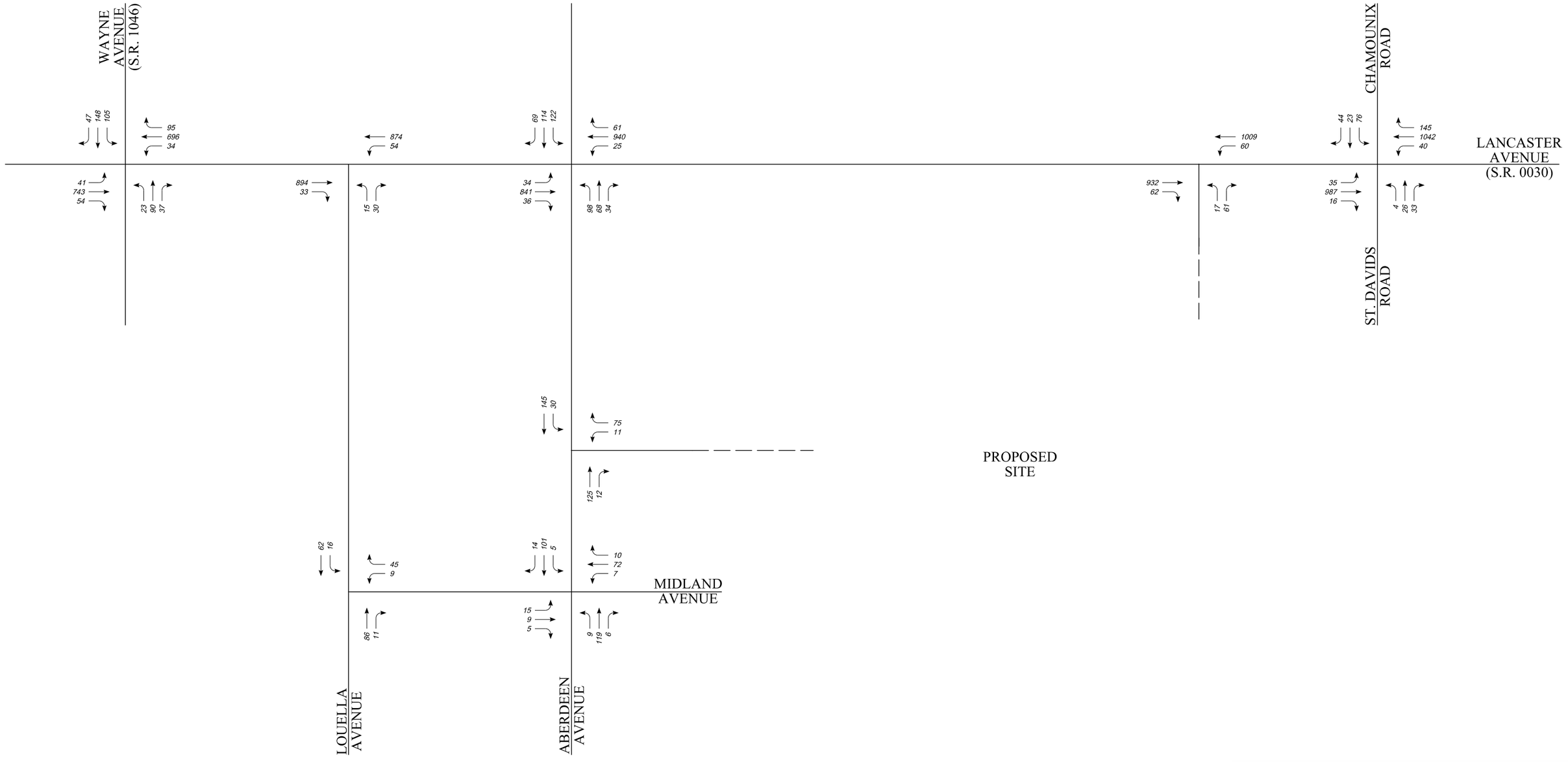
FIGURE 33

2025 PROJECTED (BUILD) CONDITIONS
WEEKDAY AM PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\e\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:07 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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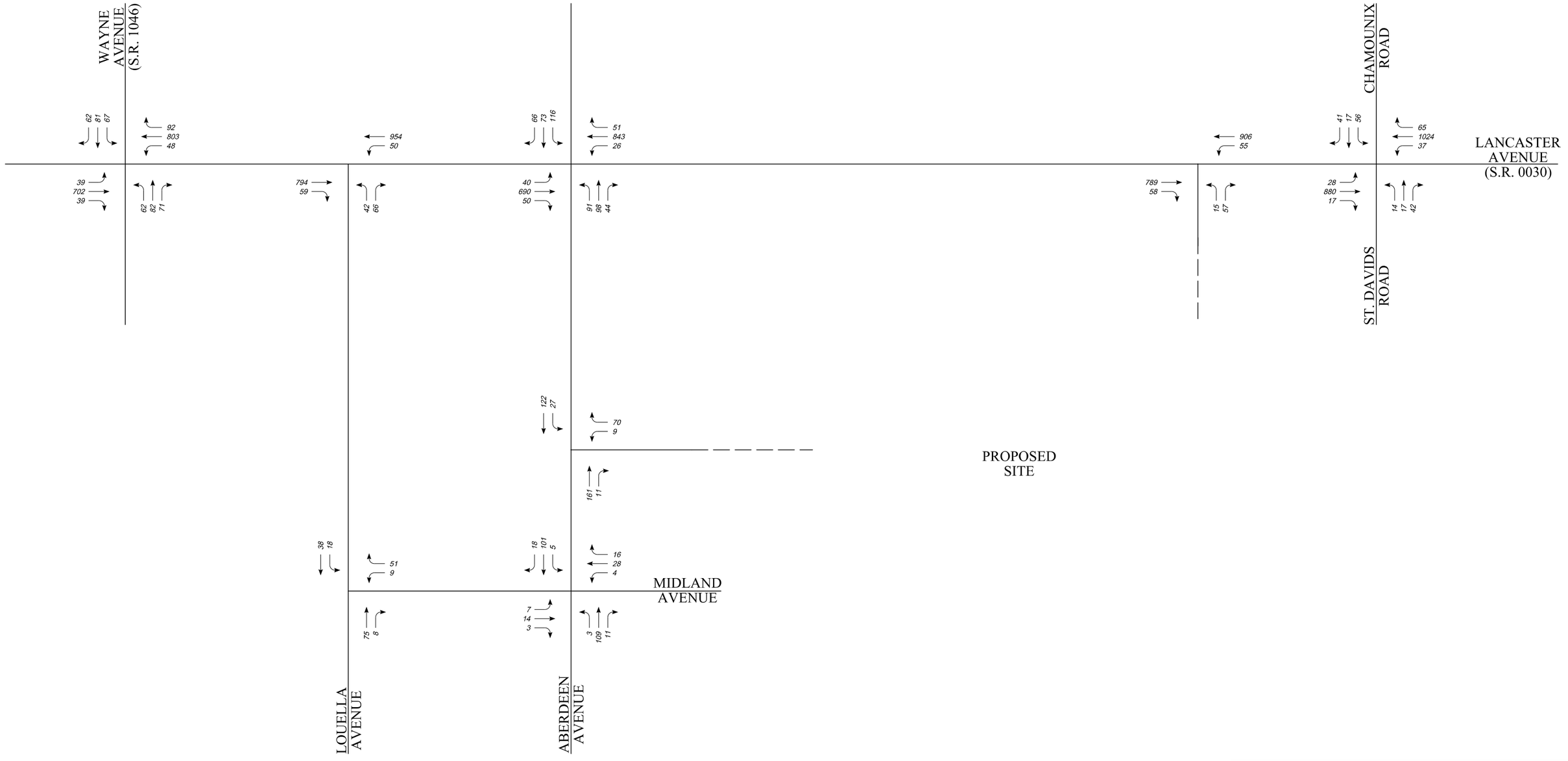
FIGURE 34

2025 PROJECTED (BUILD) CONDITIONS
WEEKDAY PM PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:08 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

N

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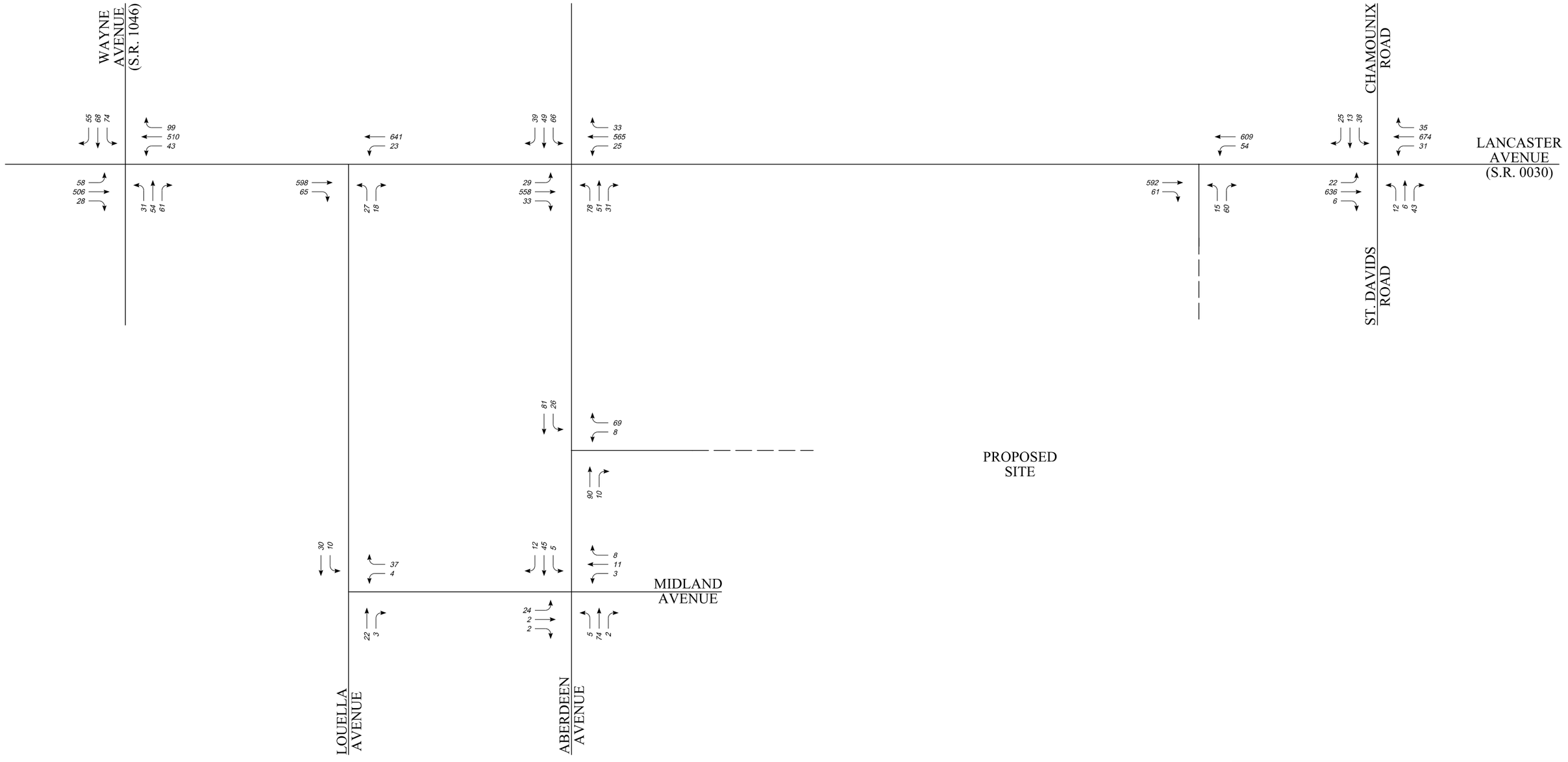
*Providing transportation engineering and related services across the eastern United States*

FIGURE 35

2025 PROJECTED (BUILD) CONDITIONS
SATURDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:09 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

N

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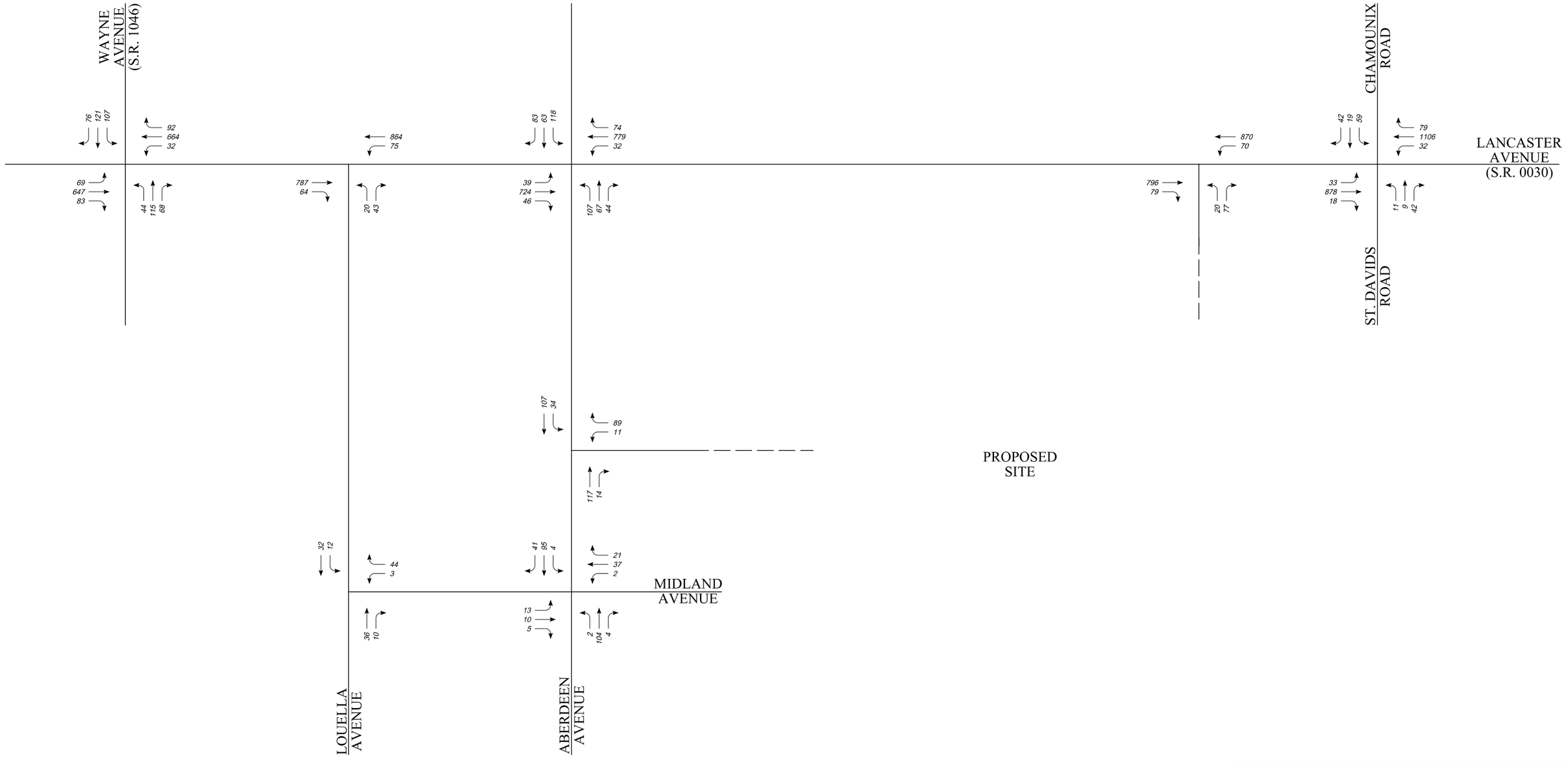
TRAFFIC PLANNING AND DESIGN, INC.

*Providing transportation engineering and related services across the eastern United States*

FIGURE 36

2025 PROJECTED (BUILD) CONDITIONS
SUNDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\e\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:10 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

N

www.TrafficPD.com

Est. 1989

TRAFFIC PLANNING AND DESIGN, INC.

*Providing transportation engineering and related services across the eastern United States*

FIGURE 37

2025 PROJECTED (BUILD) CONDITIONS
WEEKDAY MIDDAY PEAK HOUR
TRAFFIC VOLUMES

c:\pwwork\hg\projects\e\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:11 PM pglassmon $MODEL$

# APPENDIX A

## *PROJECT CORRESPONDENCE*

pennsylvania
DEPARTMENT OF TRANSPORTATION

**Date:** 11/08/2018

**Subject:** Highway Occupancy Permit Application No. 171544, Cycle No.1 - Returned For Revisions

**To:** Wayne Property Acquisitions, Inc.
1747 Spring House Road
Chester Springs, PA 19425

**From:** PennDOT Engineering District 6-0
7000 Geerdes Boulevard
King of Prussia, PA 19406

Dear Applicant,

PennDOT has reviewed your application for completeness, consistency and compliance with applicable Department Regulations. This review has identified issues that must be addressed in order for our review to continue.

The Department's review comments are attached.

Once the comments have been addressed, please resubmit the application and associated material for further review.

Upon resubmission, the applicant's engineer should put together a letter that describes how each comment has been addressed and where each can be found. This will help expedite the review. For guidance on HOP applications refer to 67 PA Code, Chapter 441, Chapter 459 and PennDOT Publication 282, "Highway Occupancy Permit Guidelines". Additional comments may follow upon review of the resubmitted application.

If you have any questions regarding this matter, you may contact Jason A Cowen PM (484) 580-8085 c-jcowen@pa.gov.

pennsylvania
DEPARTMENT OF TRANSPORTATION

**Response Comments**
**Date:** 11/08/2018
**Application Number:** 171544, Cycle No.1

**Transportation Impact Study/Transportation Impact Assessment**

(1) WB left turn lane on Lancaster Ave for Proposed full access driveway is shown to be warranted. Please evaluate the crash data along the segment to justify the conclusion of not providing the left turn lane.
(2) In Table 5 Trip Generation Data Proposed Site, the table indicates that the equation for weekday AM resulted in larger trips than the rate for the 4,736 square foot market. Verify results.
(3) In Appendix H Capacity Analysis, the provided Synchro printouts are blurry and are not easily readable. Please provide clearer printouts.
(4) In Appendix I PennDOT Signal Diagrams, the provided signal plans are not easily readable. Please provide clearer printouts.
(5) It is unclear how the new trips were calculated in Table 2, based off the rates and/or equations provided in the Trip Generation Manual, 10th Edition and in Table 1. Verify the trip generation in Table 2.
(6) Provide a section in the Study on why the AM southbound movement at Lancaster and Aberdeen degrades from a D to a F in the projected scenario. The PM does not appear to be as drastically affected for the southbound movement.
(7) Revise the western access on Lancaster Avenue to eliminate the right-out.

**Signal Section (Publication 46, 148 And 149)**

(1) 1.As mentioned by the Township, upgrade pushbuttons to current Accessible Pedestrian Signal standards.
2.Ensure that each pushbutton is in a compliant location. This may require additional pushbutton posts in several corners.
3.In the northeast corner, investigate if modification can be made to the ADA ramps to remove the cheek walls in the northeast corner.
4.Move the No Turn on Red sign for the southbound approach next to the right-most signal head.
5.Replace existing No Turn on Red signal for the eastbound and westbound approaches.
6.For the proposed system near the I-476 ramps, the manufacturer of the adaptive equipment is unknown at this time. In addition, adaptive equipment would currently not be compatible with existing equipment at adjacent intersection for purposes of coordination. Therefore, perhaps an alternative can be found in the interim.

***MEMORANDUM***

---

**Date:** October 26, 2018

**To**: Steve F. Norcini, P.E.
Radnor Township Engineer

**From:** Amy Kaminski, P.E., PTOE
Gilmore & Associates, Inc.

**cc:** Superintendent Christopher Flanagan, Radnor Township Police Department
Kevin Kochanski, ASLA, R.L.A., Director of Community Development
John Rice, Esq. – Grim, Biehn & Thatcher
Roger Phillips, P.E., Senior Associate, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.
Leslie A. Salsbury, E.I.T., Gilmore & Associates, Inc.

**Reference:** Wawa – 302-306 E. Lancaster Avenue (S.R. 0030) & Aberdeen Avenue
Radnor Township Escrow No. 2018-D-04
Transportation Impact Study Review 1
Radnor Township, Delaware County, PA
G&A No. 18-06057

---

We have reviewed the Preliminary Land Development submission prepared for Wayne Property Acquisitions, Inc., and offer the following comments for your consideration:

## I. BACKGROUND

The subject properties are situated in the C-2 Commercial Zoning District operating under the permitted By-Right retail use. The parcels are located along the south side of Lancaster Avenue, east of Aberdeen Avenue at 302 E. Lancaster Avenue and 306 E. Lancaster Avenue. The parcel located at 302 E. Lancaster Avenue currently operates as a retail gasoline station with a full-service motor vehicle repair shop and the parcel located at 306 E. Lancaster Avenue operates as a gas station with a car wash. The Applicant proposes consolidating the two parcels, demolishing the existing structures and constructing a new retail convenience store of 4,736 SF, with 55 parking spaces and retail gasoline station with 12 gas pumps.

## II. DOCUMENTS REVIEWED

1. Transportation Impact Study prepared for Wawa Lancaster Avenue & Aberdeen Avenue, prepared by Traffic Planning and Design, Inc., dated October 9, 2018.


65 E. Butler Avenue | Suite 100 | New Britain, PA 18901
Phone: 215-345-4330 | Fax: 215-345-8606

www.gilmore-assoc.com

2. PennDOT Scoping Application Response Letter addressed to Ms. Susan LaPenta, District Traffic Services Division Manager, prepared by Traffic Planning and Design, Inc., dated October 9, 2018.

3. PennDOT TIS Submission Letter addressed to Mr. Fran Hanney, Traffic Servies Manager, prepared by Traffic Planning and Design, Inc., dated October 9, 2018.

4. TIS Scoping Response Letter addressed to Mr. Steve F. Norcini, P.E., Township Engineer, prepared by Traffic Planning and Design, Inc., dated October 9, 2018.

## III. TRANSPORTATION IMPACT STUDY SUMMARY

1. Based on traffic counts included in the study, the existing site generates 130 Total AM Peak Hour Trips, 202 Total PM Peak Hour Trips, 209 Total Saturday Peak Hour Trips and 124 Total Sunday Peak Hour Trips.

2. The proposed Wawa is anticipated to generate 438 AM Peak Hour Trips (104 **New** AM Peak Hour Trips), 354 PM Peak Hour Trips (84 **New** PM Peak Hour Trips), 331 Saturday Peak Hour Trips (113 **New** Saturday Peak Hour Trips), 331 Sunday Peak Hour Trips (113 **New** Sunday Peak Hour Trips) and a total of 4,282 vehicle trips during an average weekday.

3. Noted Improvements:
    a. Northbound right turn lane on Aberdeen Avenue (PennDOT requested this improvement)
    b. Upgrade Pedestrian Facilities at the intersection of Lancaster Avenue and Aberdeen Avenue.
    c. Optimize intersection signal timings and provide traffic adaptive signal equipment at intersection of Lancaster Avenue and Aberdeen Avenue.

## IV. SUBDIVISION AND LAND DEVELOPMENT ORDINANCE

1. §255-20.B(5) –Based on the requirements of this section of the Township Ordinance, the Applicant shall address the following items in the Transportation Impact Study:
    a. Update Table 1 *Roadway Characteristics Within Study Area* to reflect the collected ADT and 85$^{th}$ percentile speed data for both Lancaster Avenue and Aberdeen Avenue.
    b. The Applicant's engineer's response to our continued comment indicating the distribution and assignment should be similar to the existing site traffic patterns indicates the Applicant intends on treating the proposed site as a new site based on existing street patterns as opposed to our preferred recommendation to base the distribution and assignment on the existing site traffic patterns. While we agree the existing and proposed uses are not identical, the distribution and assignment appears to shift the majority of the exiting traffic from the Wawa site to exit north on Aberdeen Avenue. Reassess the existing driveway volumes against the existing street patterns and provide a more reasonable distribution and assignment.

c. As requested in the Scoping Application review, the study was to include a left turn signal phase analysis for all signalized intersections on all approaches. No left turn phasing analysis was provided for any intersections in this submission, including approaches with dedicated left turn lanes already constructed but without a left turn arrow phase. Given the anticipated queues and additional delay predicted with the construction of the northbound right turn lane on Aberdeen Avenue at Lancaster Avenue, investigate altering the northbound approach to include a dedicated left turn lane and a combined through/right lane with a mirrored lane assignment on the opposing northern leg of Aberdeen Avenue at Lancaster Avenue. Also, include a left turn analysis for all signalized approaches that currently include a dedicated left turn lane but no left turn arrow phase.

d. The site trip generation (Table 6) does not match the identified equations or the scoping application. The site trips are higher than calculated by the rates/equations. Although this is a more conservative approach, please provide additional justification or an explanation for the noted difference.

2. §255-20.B(5)(d)[2][a] – This section of the Township Ordinance requires the transportation impact study include a discussion regarding the internal pedestrian circulation. We note several pedestrian generators are located within near proximity of the proposed development: St. Katharine of Siena Parish, St. Mary's Episcopal Church, St. Katharine School (Kindergarten – 8th grade), and Radnor Middle School ($6^{th}$ - $8^{th}$ grade). We recommend the Applicant investigate reversing the site layout to locate the Wawa building to the northeast corner of the site. This would inherently reduce the number of pedestrian and vehicle conflicts attributed to pedestrians crossing the gas pump area in order to access the Wawa market. If the layout remains as currently shown, investigate a safe and convenient pedestrian walkway to provide a direct route from the nearby schools for student access to the retail building.

3. §255-20.B.(5)(d)[4] This section requires calculating the vehicular trip generation utilizing SALDO Attachment 4, *Township of Radnor Trip Generation Rates*. The Applicant has utilized rates obtained from the industry standard Institute of Transportation Engineers Trip Generation $10^{th}$ Edition, 2017, which is more appropriate for this development; therefore, we have no objection to a waiver from this requirement.

## V. GENERAL COMMENTS

1. As was previously noted Radnor Township may want to consider prohibiting left turns out of the access to Aberdeen Avenue through the construction of a channelized island. The Applicant has reasoned the left turn exit to Aberdeen Avenue will negatively impact access for patrons from the neighborhoods, churches, businesses and schools and will create an additional burden on Lancaster Avenue. However, we are more concerned with patrons utilizing Midland Avenue to avoid the congestion on Lancaster Avenue to gain access to and from the proposed Wawa. We recommend continued discussions with Radnor Township regarding the elimination of this movement.

2. The Township is intending on installing a Traffic Adaptive System along Lancaster Avenue that will extend from the Radnor Township municipal line beginning at County Line Road and continuing west and including all signalized intersections to the Radnor Financial Center/St. David's Square Shopping Center intersection on Lancaster Avenue. St. Davids Road/Chamounix Road, Aberdeen Avenue, Louella Avenue and Wayne Avenue are the next logical intersections to be included in the Traffic Adaptive System. The study notes an improvement to include providing traffic adaptive equipment at the intersection of Lancaster Avenue and Aberdeen Avenue; however, the equipment would not provide a benefit without connection to adjacent intersections. We recommend the Applicant continue discussions with the Township on this transportation benefit.

3. Revise Tables 11 and 12 to include the seconds of delay for each movement where there is a drop in LOS in order to clearly identify the increase in delay for each movement.

4. Provide the detailed crash data under separate cover for review directly to the Township Engineer. Provide the safety confidentiality notes recommended by PennDOT as this report is for an engineering safety review only and not for public review.

5. Revise the report to use the latest HCM 6$^{th}$ edition in all capacity analyses, where possible and Identify which signalized intersections are not supported by HCM 6$^{th}$ edition.

6. Provide the HCM 2000 results for the Lancaster Avenue and Wayne Avenue intersection and revise the LOS tables accordingly.

7. Add a discussion in the report regarding any modifications to the parking restrictions along Aberdeen Avenue. Consider relocating parking from the northbound approach to the southbound departure of Aberdeen Avenue south of Lancaster Avenue.

8. As noted in the previous review, the Township is requesting the Applicant fully investigate a shared driveway access with several businesses located along E. Lancaster Avenue to the east (Verizon and CVS). The intent of a shared driveway access is to:

    a. To reduce the number of curb cuts along the south side of E. Lancaster Avenue.

    b. Shift the left turn movements into and out of the proposed Wawa further away from the signalized intersection (further east) and eliminate the need for the “courtesy gap left turn movement”.

    c. Allow internal retail interaction between the three retail sites.

    The Applicant has indicated the CVS driveways are configured currently for an entrance only and a separate exit only driveway and approval will be required to share the access. We understand a shared access will likely result in a

modification to the existing access located between CVS and Verizon; however, this would be a benefit for all parties for the reasons listed above.

9. We remind the Applicant the above comments are in addition to our Preliminary Land Development review dated September 24, 2018.

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TRAFFIC PLANNING AND DESIGN, INC.
WWW.TRAFFICPD.COM

October 9, 2018

Mr. Steve F. Norcini, P.E.
Radnor Township Engineer
301 Iven Avenue
Wayne, PA 19087-5297

**RE: RESPONSE LETTER – TIS SCOPING APPLICATION REVIEW 2**

WAWA – Lancaster Avenue (SR 0030) & Aberdeen Avenue

Traffic Log No. D18-009XP

G&A 18-06057

*Radnor Township, Delaware County*

TPD Job #KARA.00010

Dear Mr. Norcini:

This letter pertains to the Proposed WAWA Convenience Market with Gasoline located at the intersection of Lancaster Avenue (SR 0030) and Aberdeen Avenue in Radnor Township, Delaware County, PA. Traffic Planning and Design, Inc. (TPD) has prepared this response letter to address comments contained the July 31, 2018 Review Letter, prepared by Gilmore and Associates (attached for reference). For the discussion below, the review comments are shown in bold and italic type, with the corresponding TPD response shown in regular type:

***C. TRANSPORTATION COMMENTS***

***We note several traffic and pedestrian generators are located within near proximity of the proposed development: St. Katherine's of Siena Parish, St. Mary's Episcopal Church, St. Katherine's School (Kindergarten – 8th grade), and Radnor Middle School (6th - 8th grade). We recommend the Applicant address the following comments in the impending Transportation Impact Study. If the Applicant is agreeable to the following modifications, we find it unnecessary to schedule a Scoping Application meeting to discuss the project with PennDOT:***

1. ***§255-26 – In addition to the reviewed information proposed by the Applicant in the Transportation Impact Study Scoping Application and based on the requirements of this section of the Township Ordinance, the Applicant shall also address the following items in the Transportation Impact Study:***

   i) ***All traffic counts must be performed while local schools are in session.***

Response: Will Comply

***ii) Pedestrian counts must be obtained for all studied intersections.***

Response: Will Comply

***iii) Weekday traffic counts must capture the morning arrival and afternoon dismissal for both schools. Please contact the identified schools to ensure the count period is extended to include 30 minutes prior to and after the start of school along with 30 minutes prior to and after the afternoon dismissal.***

Response: Will Comply – Based on further discussions/research, the Radnor Middle School day is from 8:00AM to 3:00PM, and the St. Katherine School is from 8:15AM to 2:30PM. Therefore, the 7:00-9:00AM time period is still appropriate. However, the 4:00-6:00PM were extended from 2:00-6:00PM.

***iv) Sunday counts must be obtained; contact both church offices to determine the peak attendance period on Sunday. Obtain vehicular and pedestrian counts 30 minutes prior to and after the noted attendance period.***

Response: Will Comply - Based on coordination with the adjacent churches, TPD counted 9:00-11:30AM on Sunday to capture the busiest service as well as the overlap between that service and 11:30 A.M. service.

***v) Expand the study area to include the following additional intersections:***

- ***Lancaster Avenue & Wayne Avenue***
- ***Lancaster Avenue & Louella Avenue***
- ***Lancaster Avenue & St. Davids Road/Chamounix Road***
- ***Aberdeen Avenue and Midland Avenue***
- ***Midland Avenue & Louella Avenue***

Response: Will Comply

***vi) Include the 24 hour ADT volumes and speed data for the following roadway segments:***

- ***Lancaster Avenue***
- ***Aberdeen Avenue***

Response: Will Comply – See Appendix C.

***vii) Verify the size of the proposed building. The scoping application notes the retail building as 4,736 SF in size while the provided concept plan notes the retail building as 5,112 SF in size***

Response: Will Comply**.**

***viii) The Scoping Application indicates the distribution and assignment will be based on the existing traffic patterns, roadways surrounding the site and the proposed site driveway location and configuration. We would prefer the Distribution and Assignment more heavily favor the existing site distribution because we anticipate the traffic associated with future retail use will behave similar to the current retail use.***

Response: The existing use is technically different from the proposed use as it contains automobile service and less associated pass-by traffic. The existing access is different than the proposed access as there will be less access points, more turning restrictions, and no cross-access between the two existing sites. Therefore, it is TPD's opinion that the new site needs to be treated as a new site based on existing patterns.

***ix) Section 17 Other Needed Analyses; left turn signal phasing analysis shall be prepared for all signalized intersections on all approaches.***

Response: Will Comply as feasible at the adjacent intersection of Lancaster/Aberdeen. It should be noted that, based on TPD's recent experience, left-turn phases will not be permitted by PennDOT without separate lanes.

***D. REVIEW OF PROVIDED CONCEPT PLAN***

***The following comments are based on a sketch plan review of the provided concept plan; any comments identified as a Subdivision and Land Development Ordinance comment (identified by the "§") shall be addressed during the eventual Land Development process or the Applicant will be required to seek a waiver:***

1. ***§255-27.B(3)(b) (Lancaster Avenue) and (d) (Aberdeen Avenue); and §255- 27.C(1) – The Township legal Right-of-Way on Lancaster Avenue (S.R. 0030) is 80'; and on Aberdeen Avenue, the Township legal Right-of-Way is 60'.***

   Response: Bohler to respond under separate cover.

2. ***§255-27.I(2) – Access to parking areas on commercial sites shall be controlled and shall be so located as to provide a minimum of 200 feet between points of access. We recommend eliminating the western-most Lancaster Avenue access.***

   Response: A waiver of this requirement has been requested. Further discussion regarding the westernmost Lancaster Avenue access will take place with the Township and their consultants.

3. ***§255-30.E – We recommend relocating the loading area to a more optimal onsite location; the current location is too close to both proposed driveways to Lancaster Avenue and will likely disrupt onsite circulation.***

   Response: Bohler to respond under separate cover.

4. ***255-37.B. – The Township requires a minimum 4' sidewalk width; in addition, the Township requires a 2' grass verge between the face of curb and the closest edge of the sidewalk. It may be necessary to increase the width of the sidewalk to 5' if traffic counts indicate a significant presence of pedestrian traffic volumes.***

   Response: Bohler to respond under separate cover.

5. ***Radnor Township may want to consider prohibiting left turns out of the access to Aberdeen Avenue through the construction of a channelized island and request the Applicant investigate a dedicated northbound right turn lane on Aberdeen Avenue at Lancaster Avenue.***

   Response: It is TPD's opinion that, based on existing patterns, only 6% of new trips and 4%-7% of pass-by trips attributable to the Proposed Site will travel to the south via Aberdeen Avenue. Therefore, this restriction will only serve to force these vehicles out to Lancaster Avenue via left-turn, and make a left-turn at the signal. Thus impacting multiple additional intersections.

6. ***Radnor Township may want to consider prohibiting on street parking along the northbound approach of the eastern curb line on Aberdeen Avenue; we are concerned with the interaction between turn movements at the proposed site driveway and parking maneuvers into and out the parking spaces. Eliminating the on street parking spaces would also ensure Wawa patrons use the proposed off- street parking spaces: at various existing***

***Wawa's, we have observed large trucks, tractor trailers, and landscaping trucks parking on street in favor of utilizing off- street parking.***

Response: TPD agrees with this comment. This restriction would also help minimize sight distance restrictions caused by parked vehicles along Aberdeen Avenue.

7. ***Given the land development project is located along Aberdeen Avenue and which is included in the Wayne Business Overlay District (WBOD), the Township may want to consider requesting the Applicant include similar site amenities to the standards required in the WBOD, in particular but not limited to street trees, and ornamental lighting.***

   Response: Bohler to respond under separate cover.

8. ***We recommend the Applicant relocate the Air Machine (tire filling station) further away from the proposed driveway access on Aberdeen Avenue and the neighborhood to minimize: the potential conflicts with vehicles utilizing this driveway and the potential noise associated with the machine, respectively.***

   Response: Bohler to respond under separate cover.

9. ***The Township is intending on installing a Traffic Adaptive System along Lancaster Avenue that will extend from the Radnor Township municipal line beginning at County Line Road and continuing west and including all signalized intersections to the Radnor Financial Center/St. David's Square Shopping Center intersection on Lancaster Avenue. St. Davids Road/Chamounix Road, Louella Avenue and Wayne Avenue are the next three logical intersections to be included in the Traffic Adaptive System.***

   Response: So Noted.

10. ***Radnor Township has requested the Applicant provide an updated controller cabinet and a controller capable of Traffic Adaptive. In addition, the intersection of Lancaster Avenue and Aberdeen Avenue should be upgraded to include an Accessible Pedestrian Signal (APS) with audible messaging and a Lead Pedestrian Interval.***

    Response: So Noted.

11. ***The Township is requesting the Applicant fully investigate a shared driveway access with several businesses located along E. Lancaster Avenue to the east (Verizon and CVS). The intent of a shared driveway access is to:***

    i. ***To reduce the number of curb cuts along the south side of E. Lancaster Avenue***
    ii. ***Shift the left turn movements into and out of the proposed Wawa further away from the signalized intersection (further east) and eliminate the need for the "courtesy gap left turn movement".***
    iii. ***Allow internal retail interaction between the three retail sites***

    Response: So Noted – Based on the existing access configuration of the Verizon/CVS site adjacent to the proposed development (entrance only drive on the west side of the site, an exit only drive in the middle of the site, with a full access driveway on the east side of the site), it would require all exiting traffic from the Wawa property to travel adjacent to the CVS drive-thru lane (to the rear of the building) to utilize the full-access driveway on the east side of the site. In addition, this would require the approval of Verizon and CVS in order to provide for a shared driveway concept. It is our opinion that the combination of two (2) sites with six (6) total unrestricted curb cuts, serves this planning intent to limit existing access points along Lancaster Avenue.

We hope that these responses are helpful. If you require additional information please feel free to contact us.

Sincerely,
TRAFFIC PLANNING AND DESIGN, INC.

Matthew I. Hammond, P.E.
*Executive Vice President*

mhammond@trafficpd.com

Attachment: 07/31/2018 Gilmore Scoping Application Review Letter

cc: PennDOT 6-0
Radnor Township
Project Team (via Email)
TPD File

***MEMORANDUM***

---

**Date:** July 31, 2018

**To**: Steve F. Norcini, P.E.
Radnor Township Engineer

**From:** Amy Kaminski, P.E., PTOE
Gilmore & Associates, Inc.

**cc:** Superintendent Christopher Flanagan, Radnor Township Police Department
Kevin Kochanski, ASLA, R.L.A., Director of Community Development
Ken Piree, Radnor Township Police Officer
Roger Phillips, P.E., Senior Associate, Gannett Fleming, Inc.
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.
Leslie A. Salsbury, E.I.T., Gilmore & Associates, Inc.

**Reference:** Wawa – 302-306 E. Lancaster Avenue (S.R. 0030) & Aberdeen Avenue
PennDOT Traffic Log No.: D18-009XP
TIS Scoping Application Review 2
Radnor Township, Delaware County, PA
G&A 18-06057

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We have reviewed the TIS Scoping Application prepared for Wayne Property Acquisitions, Inc., (Wawa near West Lancaster Avenue and Aberdeen Avenue) based on discussion at the recent Radnor Community Development Meeting Committee meeting held on Tuesday, July 17, 2018 and offer the following comments for your consideration:

## A. BACKGROUND

The subject properties are situation in the C-2 Commercial Zoning District operating under the permitted By-Right retail use. The parcels are located along the south side of Lancaster Avenue, east of Aberdeen Avenue at 302 E. Lancaster Avenue and 306 E. Lancaster Avenue. The parcel located at 302 E. Lancaster Avenue currently operates as a full-service motor vehicle repair shop along with the retail sale of gasoline and the parcel located at 306 E. Lancaster Avenue operates as a car wash and includes the retail sale of gasoline. The Applicant proposes consolidating the two parcels, demolishing the existing structures and constructing a new retail convenience store of 5,112 SF, with 55 parking spaces and offer the retail sale of gasoline at 12 retail gas pumps.

## B. DOCUMENTS REVIEWED

1. Zoning Opinion letter issued by Kevin Kochanski, RLA, CZO, Radnor Township Director of Community Development; addressed to Nick Caniglia, Esq., of Pierce, Caniglia & Taylor, dated April 27, 2018.


65 E. Butler Avenue | Suite 100 | New Britain, PA 18901
Phone: 215-345-4330 | Fax: 215-345-8606

www.gilmore-assoc.com

2. Transportation Impact Study (TIS) Scoping Application, prepared for Wawa – Lancaster Avenue & Aberdeen Avenue, prepared by Traffic Planning and Design, dated June 13, 2018.

3. Concept Plan, prepared for Wayne Property Acquisition, Inc., prepared by Bohler Engineering, dated April 9, 2018.

4. PennDOT Scoping Application Review, prepared by PennDOT, addressed to Matthew I. Hammond, P.E., Traffic Planning and Design, dated July 12, 2018.

**C. TRANSPORTATION COMMENTS**

We note several traffic and pedestrian generators are located within near proximity of the proposed development: St. Katherines of Siena Parish, St. Mary's Episcopal Church, St. Katherines School (Kindergarten – 8th grade), and Radnor Middle School ($6^{th}$ - $8^{th}$ grade). We recommend the Applicant address the following comments in the impending Transportation Impact Study. If the Applicant is agreeable to the following modifications, we find it unnecessary to schedule a Scoping Application meeting to discuss the project with PennDOT:

1. §255-26 – In addition to the reviewed information proposed by the Applicant in the Transportation Impact Study Scoping Application and based on the requirements of this section of the Township Ordinance, the Applicant shall also address the following items in the Transportation Impact Study:

   i) All traffic counts must be performed while local schools are in session.

   ii) Pedestrian counts must be obtained for all studied intersections.

   iii) Weekday traffic counts must capture the morning arrival and afternoon dismissal for both schools. Please contact the identified schools to ensure the count period is extended to include 30 minutes prior to and after the start of school along with 30 minutes prior to and after the afternoon dismissal.

   iv) Sunday counts must be obtained; contact both church offices to determine the peak attendance period on Sunday. Obtain vehicular and pedestrian counts 30 minutes prior to and after the noted attendance period.

   v) Expand the study area to include the following additional intersections:

      - Lancaster Avenue & Wayne Avenue
      - Lancaster Avenue & Louella Avenue
      - Lancaster Avenue & St. Davids Road/Chamounix Road
      - Aberdeen Avenue and Midland Avenue
      - Midland Avenue & Louella Avenue

   vi) Include the 24 hour ADT volumes and speed data for the following roadway segments:

- Lancaster Avenue
- Aberdeen Avenue

vii) Verify the size of the proposed building. The scoping application notes the retail building as 4,736 SF in size while the provided concept plan notes the retail building as 5,112 SF in size.

viii) The Scoping Application indicates the distribution and assignment will be based on the existing traffic patterns, roadways surrounding the site and the proposed site driveway location and configuration. We would prefer the Distribution and Assignment more heavily favor the existing site distribution because we anticipate the traffic associated with future retail use will behave similar to the current retail use.

ix) Section 17 *Other Needed Analyses;* left turn signal phasing analysis shall be prepared for all signalized intersections on all approaches.

**D. REVIEW OF PROVIDED CONCEPT PLAN**

The following comments are based on a sketch plan review of the provided concept plan; any comments identified as a Subdivision and Land Development Ordinance comment (identified by the "**§"**) shall be addressed during the eventual Land Development process or the Applicant will be required to seek a waiver.

1. §255-27.B(3)(b) (Lancaster Avenue) and (d) (Aberdeen Avenue); and §255-27.C(1) – The Township legal Right-of-Way on Lancaster Avenue (S.R. 0030) is 80'; and on Aberdeen Avenue, the Township legal Right-of-Way is 60'.

2. §255-27.I(2) – Access to parking areas on commercial sites shall be controlled and shall be so located as to provide a minimum of 200 feet between points of access. We recommend eliminating the western-most Lancaster Avenue access.

3. §255-30.E – We recommend relocating the loading area to a more optimal onsite location; the current location is too close to both proposed driveways to Lancaster Avenue and will likely disrupt onsite circulation.

4. 255-37.B. – The Township requires a minimum 4' sidewalk width; in addition, the Township requires a 2' grass verge between the face of curb and the closest edge of the sidewalk. It may be necessary to increase the width of the sidewalk to 5' if traffic counts indicate a significant presence of pedestrian traffic volumes.

5. Radnor Township may want to consider prohibiting left turns out of the access to Aberdeen Avenue through the construction of a channelized island and request the Applicant investigate a dedicated northbound right turn lane on Aberdeen Avenue at Lancaster Avenue.

6. Radnor Township may want to consider prohibiting onstreet parking along the northbound approach of the eastern curbline on Aberdeen Avenue; we are concerned with the interaction between turn movements at the proposed site driveway and parking maneuvers into and out the parking spaces. Eliminating the onstreet parking spaces would also ensure Wawa patrons use the proposed off-street parking spaces: at various existing Wawas, we have observed large trucks,

tractor-trailers, and landscaping trucks parking onstreet in favor of utilizing off-street parking.

7. Given the land development project is located along Aberdeen Avenue and which is included in the Wayne Business Overlay District (WBOD), the Township may want to consider requesting the Applicant include similar site amenities to the standards required in the WBOD, in particular but not limited to street trees, and ornamental lighting.

8. We recommend the Applicant relocate the Air Machine (tire filling station) further away from the proposed driveway access on Aberdeen Avenue and the neighborhood to minimize: the potential conflicts with vehicles utilizing this driveway and the potential noise associated with the machine, respectively .

9. The Township is intending on installing a Traffic Adaptive System along Lancaster Avenue that will extend from the Radnor Township municipal line beginning at County Line Road and continuing west and including all signalized intersections to the Radnor Financial Center/St. David's Square Shopping Center intersection on Lancaster Avenue. St. Davids Road/Chamounix Road, Louella Avenue and Wayne Avenue are the next three logical intersections to be included in the Traffic Adaptive System.

10. Radnor Township has requested the Applicant provide an updated controller cabinet and a controller capable of Traffic Adaptive. In addition, the intersection of Lancaster Avenue and Aberdeen Avenue should be upgraded to include an Accessible Pedestrian Signal (APS) with audible messaging and a Lead Pedestrian Interval.

11. The Township is requesting the Applicant fully investigate a shared driveway access with several businesses located along E. Lancaster Avenue to the east (Verizon and CVS). The intent of a shared driveway access is to:

    i) To reduce the number of curb cuts along the south side of E. Lancaster Avenue

    ii) Shift the left turn movements into and out of the proposed Wawa further away from the signalized intersection (further east) and eliminate the need for the “courtesy gap left turn movement”.

    iii) Allow internal retail interaction between the three retail sites

TRAFFIC PLANNING AND DESIGN, INC.

WWW.TRAFFICPD.COM

October 9, 2018

Ms. Susan LaPenta
District Traffic Services Division Manager
Engineering District 6-0
7000 Geerdes Boulevard
King of Prussia, PA 19406-1525

**RE: RESPONSE LETTER – SCOPING APPLICATION REVIEW**

WAWA – Lancaster Avenue (SR 0030) & Aberdeen Avenue

Traffic Log No. D18-009XP

*Radnor Township, Delaware County*

TPD Job #KARA.00010

Dear Ms. LaPenta:

This letter pertains to the Proposed WAWA Convenience Market with Gasoline located at the intersection of Lancaster Avenue (SR 0030) and Aberdeen Avenue in Radnor Township, Delaware County, PA. Traffic Planning and Design, Inc. (TPD) has prepared this response letter to address the TIS Scoping Application comments contained the July 12, 2018 Review Letter, prepared by PennDOT (attached for reference). For the discussion below, the review comments are shown in bold and italic type, with the corresponding TPD response shown in regular type:

**SCOPING COMMENTS**

1. ***The PennDOT project number for this preliminary review, D18-009XP, must be referenced in EPS when the formal Highway Occupancy Permit (HOP) application is submitted.***

   Response: So Noted/Will Comply.

2. ***The western site access driveway along Lancaster Avenue (SR 0030) must be reduced in width and reconfigured as a right-in driveway.***

   Response: This driveway was revised from a full-access driveway to a right-in/right-out to provide a balance between the PennDOT requested changes and efficient site circulation. The results of the traffic study show this driveway, as a right-in/right-out, will operate at ILOS A during all peak hours analyzed.

3. ***A right turn lane must be provided on the northbound approach of Aberdeen Avenue. The right turn lane will improve capacity at the intersection.***

   Response: Will Comply – This improvement has been added to the recommended roadway improvements within the TIS. However, it should be noted that the provision of this northbound right turn lane degrades the ILOS at the intersection during the A.M. peak hour in projected

conditions beyond the PennDOT allowable standards.

4. ***A formal Transportation Impact Study (TIS) will be required for this site. Please note that District 6-0 is accepting Transportation Impact Study (TIS) submissions via EPS. This will provide a more efficient and timely review of the submissions for the applicants while also assisting the Department with document management. Note that utilizing EPS will require a formal permit application be made for the access; therefore, submissions should be sure to include:***

    a. ***A transmittal letter including responses to Scoping comments or comments from previous reviews***
    b. ***Scoping Meeting Request Form***
    c. ***Minutes of the Scoping meeting or any previous minutes (as appropriate)***
    d. ***Forms M950-MPC and M950-AA (as appropriate)***
    e. ***Previously completed municipal reviews (if any)***
    f. ***Electronic copies of capacity analysis files (e.g. HCS or Synchro)***

    Response: So Noted/Will Comply as part of initial HOP EPS Submission.

5. ***A left turn in at the eastern site access along Lancaster Avenue (SR 0030) may impact traffic at the adjacent intersection of Lancaster Avenue (SR 0030) / Aberdeen Avenue by blocking through movements in the left lane. The TIA must evaluate the existing lane utilization at this intersection and analyze the traffic signal using appropriate adjustments to the lane utilization factor. The assumptions and process must be documented in the text TIS.***

    Response: Will Comply.

6. ***The traffic signal at the Lancaster Avenue (SR 0030) / Aberdeen Avenue intersection is part of the Lancaster Avenue (I-0013) system with a master controller at the Radnor Township Maintenance Building. Any significant revisions to the signal timings, or significant changes to the Lancaster Avenue (SR 0030) / Aberdeen Avenue intersection will require optimized system timings and an update of the System Permit Plan.***

    Response: So Noted.

7. ***Site trip distribution should be determined utilizing the new turning movement counts collected at the existing site access driveways.***

    Response: Since the two existing sites are being combined into one site with improved access, TPD determined the trip distribution based on existing traffic patterns in the Study Area, using cordon line for the new trips, and directional patterns for pass-by trips.

8. ***The application of a Trip Credit for the existing Sunoco site will be acceptable based on new traffic counts collected at each existing site access driveway.***

    Response: So noted. To be conservative, TPD accounted for a portion of the existing site trip generation being pass-by in nature. Therefore, not all existing trip generation was subtracted from adjacent intersections.

9. ***Coordinate with Radnor Township to determine any other projects within the study area to be added to the base traffic.***

    Response: Radnor Township was copied on this Scoping Application. No additional nearby developments were provided by Radnor Township at the time the TIS was completed.

10. ***The Growth Rate assumption of 0.38% is acceptable***

    Response: So Noted.

11. ***The scoping application identifies three low volume driveways. Ensure the EPS application reports the driveway classification based on the total site volume.***

    Response: Will Comply.

12. ***With respect to the formal permit application, please ensure that the following items are addressed:***
    a. ***Please be advised that pursuant to and in accordance with Title 67, Chapter 441.8(h)(2)(iv) of the code, the Safe Stopping Sight Distance is the absolute minimum acceptable sight distance for driveways. It is the designer's responsibility to ensure that this minimum requirement is satisfied. Furthermore, it should also be understood that any comments made (or guidance given) in this correspondence are preliminary in name and the Department reserves the right to change, alter, withdraw, or amend them as it deems necessary in the future.***
    b. ***It should be understood that in accordance with PennDOT Strike-Off Letter 470-10-03 and pursuant to section 421 of the State Highway Law (36 P.S. § 670-421) the installation of drainage facilities within the Legal Right-of-Way may necessitate additional permitting requirements, including, but not limited to, a separate Highway Occupancy Permit from the Municipality for the future maintenance of the new drainage facilities.***
    c. ***ADA compliance within the limits of work (along the access frontage at a minimum) must be evaluated in the final design (i.e. new/modified facilities, impact to SEPTA bus stops, etc.). Ensure that all pedestrian improvements along the site frontages, at all site access points, and all study area signalized intersections are ADA compliant.***
    d. ***Department records indicate that PennDOT Fiber Optic facilities are present within the proposed limits of work and may be impacted by the anticipated improvements. Be advised that if fiber optic facilities are affected, the applicant is responsible for the relocation of the fiber, testing of the fiber communications both during construction and after the relocation of the fiber indicated on the approved plans, and the associated costs. Any relocation will need to be performed by a communications contractor that is acceptable to the District Traffic Unit and the Highway Occupancy Permit will not be issued until the fiber optic impact has been reviewed and the relocation scheme ultimately approved by the Department.***
    e. ***Consistent with current Department Policy, applicants for Highway Occupancy Permits must apply for an EPS Business Partner ID (BPID). The BPID is to be used in the establishment of a billing account for the invoicing of inspection costs. For information on obtaining a BPID, you may visit:***

       ***https://www.dot14.state.pa.us/EPS/home/manageBPRegistration.isp***

       ***[Please make sure that you follow the instructions that are in the "PINK" area].***

       ***After a BPID is obtained and activated by the system administrator, please provide the following information in the applicant contact information tab***

***under "Applicant Team":***

i. ***BPID (please ensure that the BPID is searchable through the "looking glass" feature)***
ii. ***Contact information (name/tit1e/phone/email) for a "general" contact person (person that typically deals with the Highway Occupancy Permit application process)***
iii. ***Contact information (name/title/phone/email) for a "billing" contact person (person that typically deals with the Highway Occupancy Permit invoicing process)***

Response: So Noted/Will Comply as part of initial HOP EPS Submission.

We hope that these responses are helpful. If you require additional information please feel free to contact us.

Sincerely,
TRAFFIC PLANNING AND DESIGN, INC.

Matthew I. Hammond, P.E.
*Executive Vice President*

mhammond@trafficpd.com

Attachment: 07/12/2018 TIA Scoping Application Review Letter

cc: PennDOT 6-0
Radnor Township
Project Team (via Email)
TPD File

OS-2C (12-15)

pennsylvania
DEPARTMENT OF TRANSPORTATION

July 12, 2018

RADNOR TOWNSHIP, DELAWARE COUNTY
WAYNE PROPERTY ACQUISITION, INC.
HIGHWAY OCCUPANCY PERMIT APPLICATION NO. PRE1532
WAWA – LANCASTER AVE (SR 0030) & ABERDEEN AVENUE
TRAFFIC LOG NO.: D18-009XP
**SCOPING APPLICATION REVIEW**

Matthew I. Hammond, P.E.
Traffic Planning and Design, Inc.
812 W. Hamilton Street, Suite 402
Allentown, PA 18018

Dear Mr. Hammond:

The Department has reviewed the Scoping Application submission for compliance with applicable Department Regulations. This preliminary review has identified deficiencies that must be addressed in order for your application submission to be processed as efficiently as possible. Please be advised, our comments below are intended to gather the pertinent information needed in order to determine the scope of improvements that will be necessary to mitigate the traffic impacts of this development. Please note that further analysis of the amended information along with an evaluation of the physical characteristics of the area may identify further improvements.

The Department understands that the provided analysis is preliminary in nature. As such, the Department reserves the right to make future additional comments based on the formal submission in EPS.

Our comments on your scoping submission are as follows:

**SCOPING COMMENTS**

1. The PennDOT project number for this preliminary review, D18-009XP, must be referenced in EPS when the formal Highway Occupancy Permit (HOP) application is submitted.
2. The western site access driveway along Lancaster Avenue (SR 0030) must be reduced in width and reconfigured as a right-in driveway.
3. A right turn lane must be provided on the northbound approach of Aberdeen Avenue. The right turn lane will improve capacity at the intersection.
4. A formal Transportation Impact Study (TIS) will be required for this site. Please note that District 6-0 is accepting Transportation Impact Study (TIS) submissions via EPS. This will provide a more efficient and timely review of the submissions for the applicants while also assisting the Department with document management. Note that utilizing EPS will require a formal permit application be made for the access; therefore, submissions should be sure to include:

a. A transmittal letter including responses to Scoping comments or comments from previous reviews

b. Scoping Meeting Request Form

c. Minutes of the Scoping meeting or any previous minutes (as appropriate)

d. Forms M950-MPC and M950-AA (as appropriate)

e. Previously completed municipal reviews (if any)

f. Electronic copies of capacity analysis files (e.g. HCS or Synchro)

5. A left turn in at the eastern site access along Lancaster Avenue (SR 0030) may impact traffic at the adjacent intersection of Lancaster Avenue (SR 0030) / Aberdeen Avenue by blocking through movements in the left lane. The TIA must evaluate the existing lane utilization at this intersection and analyze the traffic signal using appropriate adjustments to the lane utilization factor. The assumptions and process must be documented in the text TIS.

6. The traffic signal at the Lancaster Avenue (SR 0030) / Aberdeen Avenue intersection is part of the Lancaster Avenue (I-0013) system with a master controller at the Radnor Township Maintenance Building. Any significant revisions to the signal timings, or significant changes to the Lancaster Avenue (SR 0030) / Aberdeen Avenue intersection will require optimized system timings and an update of the System Permit Plan.

7. Site trip distribution should be determined utilizing the new turning movement counts collected at the existing site access driveways.

8. The application of a Trip Credit for the existing Sunoco site will be acceptable based on new traffic counts collected at each existing site access driveway.

9. Coordinate with Radnor Township to determine any other projects within the study area to be added to the base traffic.

10. The Growth Rate assumption of 0.38% is acceptable.

11. The scoping application identifies three low volume driveways. Ensure the EPS application reports the driveway classification based on the total site volume.

12. With respect to the formal permit application, please ensure that the following items are addressed:

a. Please be advised that pursuant to and in accordance with Title 67, Chapter 441.8(h)(2)(iv) of the code, the Safe Stopping Sight Distance is the absolute minimum acceptable sight distance for driveways. It is the designer's responsibility to ensure that this minimum requirement is satisfied. Furthermore, it should also be understood that any comments made (or guidance given) in this correspondence are preliminary in nature and the Department reserves the right to change, alter, withdraw, or amend them as it deems necessary in the future.

b. It should be understood that in accordance with PennDOT Strike-Off Letter 470-10-03 and pursuant to section 421 of the State Highway Law (36 P.S. § 670-421) the installation of drainage facilities within the Legal Right-of-Way may necessitate additional permitting requirements, including, but not limited to, a separate Highway Occupancy Permit from the Municipality for the future maintenance of the new drainage facilities.

c. ADA compliance within the limits of work (along the access frontage at a minimum) must be evaluated in the final design (i.e. new/modified facilities, impact to SEPTA bus stops, etc.).

Ensure that all pedestrian improvements along the site frontages, at all site access points, and all study area signalized intersections are ADA compliant.

d. Department records indicate that PennDOT Fiber Optic facilities are present within the proposed limits of work and may be impacted by the anticipated improvements. Be advised that if fiber optic facilities are affected, the applicant is responsible for the relocation of the fiber, testing of the fiber communications both during construction and after the relocation of the fiber indicated on the approved plans, and the associated costs. Any relocation will need to be performed by a communications contractor that is acceptable to the District Traffic Unit and the Highway Occupancy Permit will not be issued until the fiber optic impact has been reviewed and the relocation scheme ultimately approved by the Department.

e. Consistent with current Department Policy, applicants for Highway Occupancy Permits must apply for an EPS Business Partner ID (BPID). The BPID is to be used in the establishment of a billing account for the invoicing of inspection costs. For information on obtaining a BPID, you may visit:

**https://www.dot14.state.pa.us/EPS/home/manageBPRegistration.jsp**

*[Please make sure that you follow the instructions that are in the "PINK" area].* After a BPID is obtained and activated by the system administrator, please provide the following information in the applicant contact information tab under "Applicant Team":

i) BPID (please ensure that the BPID is searchable through the "looking glass" feature)

ii) Contact information (name/title/phone/email) for a "general" contact person (person that typically deals with the Highway Occupancy Permit application process)

iii) Contact information (name/title/phone/email) for a "billing" contact person (person that typically deals with the Highway Occupancy Permit invoicing process)

The Department has performed this preliminary review based only on the limited information provided. We reserve the right to make future, additional, detailed comments based on subsequent submissions. If you have any questions pertaining to the technical aspects of this review, please contact Scott Bechard, AICP of Dawood Engineering, Inc. at sbechard@dawood.cc or 717.732.8576.

Respectfully,

Susan La Penta

Susan LaPenta
District Traffic Services Division Manager
Engineering District 6-0

cc: F. Hanney
A. Patel, P.E.
A. Antonelli
Traffic Services File
Radnor Township
Delaware County Planning Commission.

## Glassman, Paige

**From:** Hans Brouwers <hbrouwers@stkatharineofsiena.org>
**Sent:** Thursday, August 02, 2018 5:07 PM
**To:** Bressler, Matt
**Subject:** Radnor traffic study

**Follow Up Flag:** Follow up
**Flag Status:** Flagged

Dear Matthew,

Thank you for contacting Barbara Lombardi, our parish secretary, regarding the traffic study that your firm is performing in Radnor Township; allow me to respond to your questions. As you noted, we have three Sunday services. You may know that we, like all other parishes in the Archdiocese of Philadelphia, take a count of our Sunday attendance for entire month of October; we then report that to the appropriate office at the Archdiocese. So, I can provide you with rather accurate figures of average attendance for these services: 8:00am - 140; 9:30am - 350; 11:30am - 225. I hope that information is helpful.

Feel free to contact me if you have any further questions or concerns. Msgr. Brouwers

--
Reverend Monsignor Hans A. L. Brouwers
St. Katharine of Siena Rectory
104 S. Aberdeen Avenue
Wayne, PA 19087
USA

TRAFFIC PLANNING AND DESIGN, INC.

WWW.TRAFFICPD.COM

**June 13, 2018**

Mr. Francis J. Hanney
Traffic Services Manager
PennDOT District 6-0
7000 Geerdes Boulevard
King of Prussia, PA 19406

**RE: TRANSPORTATION IMPACT STUDY (TIS) SCOPING APPLICATION**

WAWA – Lancaster Avenue (S.R. 0030) & Aberdeen Avenue

*Radnor Township, Delaware County*

TPD No. KARA.00010

Dear Mr. Hanney:

On behalf of Wayne Property Acquisition, Inc., Traffic Planning and Design, Inc. (TPD) has prepared the following TIA Scoping Meeting Application for the above referenced project. This scoping application has been prepared in accordance with the application procedures outlined in PennDOT's Publication 282, Appendix A, dated July, 2017.

*Scoping Meeting Date:* TBD
*Applicant:* Wayne Property Acquisition, Inc.
*Applicant's Consultant:* Traffic Planning and Design, Inc. (TPD) – Matthew Hammond
*Applicant's Primary Contact:* Peter Karakelian

1. *LOCATION OF PROPOSED DEVELOPMENT:*
   PennDOT Engineering Dist: 6-0 County: Delaware
   Municipality: Radnor Township
   State Route(s) (SR): Lancaster Avenue (S.R. 0030)
   Segment(s): 0040 Offset(s): 0000 to 0300

   Are 102" wide combinations (w/trailer lengths greater than 28') allowed access to SR in accordance with 75 PA. C.S. (4908): Yes

   Please refer to the attached **Figure 1** which shows the project location. The proposed site plan is **attached**.

2. *DESCRIPTION OF PROPOSED DEVELOPMENT:*
   - Existing Land Use: The existing site contains the following:
     - Sunoco – Convenience Store, Ten (10) Fueling Positions, Four (4) Service Bays
     - BP - Convenience Store, Eight (8) Fueling Positions, One (1) Carwash Tunnel.

- Existing Site Access: The existing site is served by four (4) driveway locations to Lancaster Avenue (S.R. 0030) and two (2) driveway locations to Aberdeen Avenue
- Proposed Land Use: A 4.736 ksf WAWA Convenience Market with twelve (12) fueling positions
- Proposed Site Access: The site will be served by two (2) driveway locations to Lancaster Avenue (S.R. 0030) and one (1) driveway location to Aberdeen Avenue
- Community Linkages (access to neighboring properties, cross easements, pedestrian and transit accommodations): N/A

3. *DEVELOPMENT SCHEDULE AND STAGING:*
   - Anticipated Opening Date: 2020
   - Design Year: 2025
   - Describe Proposed Development/Staging: N/A

4. *TRIP GENERATION:*

   Trip generation for the proposed development will be based on:

   ☒ ITE Trip Generation Manual (10th Edition).
   - Super Convenience Market/Gas Station (ITE #960)

   ☐ Other independent surveys.

TABLE 1
TRIP GENERATION DATA – PROPOSED SITE

| Land Use (ITE #) | Time Period | Size (X) | Rate | Enter % | Pass-By % |
|---|---|---|---|---|---|
| Super Convenience Market/ Gas Station (#960) | Average Weekday | 4.736 ksf | ***T = 837.58*(X)*** | 50% | N/A |
| | Weekday AM Peak Hour | | ***T = 83.14*(X)*** | 50% | 76% |
| | | | T = 137.38*(X) – 264.53 | | |
| | Weekday PM Peak Hour | | ***T = 69.28*(X)*** | 50% | 76% |
| | Saturday Midday Peak Hour | | ***T = 63.80*(X)*** | 50% | 66%[1] |
| | | | T = 104.71*(X) – 204.23 | | |
| | Average Weekday | 12 fp | T = 230.52*(X) | 50% | N/A |
| | Weekday AM Peak Hour | | T = 28.08*(X) | 50% | 76% |
| | Weekday PM Peak Hour | | T = 22.96*(X) | 50% | 76% |
| | Saturday Midday Peak Hour | | T = 23.26*(X) | 50% | 66%[1] |

*T = Total Trips; X = Independent Variable, ksf = 1000 sf, fp = fueling position*
*[1]No data available, used 10% less than P.M. peak hour.*
***Bold/Italics = Higher Generation Utilized***

The results of the trip generation calculations are summarized in **Table 2**.

TABLE 2
TRIP GENERATION – PROPOSED DEVELOPMENT

| Peak Hour | Land use Code | Size | Total | Pass-By Trips | | | New Trips | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | Enter | Exit | Total | Enter | Exit |
| Average Weekday | #960 | 4.736 ksf | 3968 | N/A | N/A | N/A | 3968 | 1984 | 1984 |
| Weekday A.M. | | | 394 | 300 | 150 | 150 | 94 | 47 | 47 |
| Weekday P.M. | | | 328 | 250 | 125 | 125 | 78 | 39 | 39 |
| SAT Midday | | | 302 | 200 | 100 | 100 | 102 | 51 | 51 |

***As noted above, the Proposed WAWA will replace two (2) existing convenience market/gas station uses. Therefore, a large portion of the trip generation shown above already exists in the Study Area. Counts will be performed at the existing driveways to quantify the increase in traffic due to the Proposed Site. Also, the trip generation shown above represents a conservative estimate.***

5. *ESTIMATED DAILY TRIP GENERATION/DRIVEWAY CLASSIFICATION:*
   a. Estimated Daily Trip Generation of Proposed Development: 3968 trips/day or 1984 vehicles/day (not including a credit for the existing uses)
   b. Driveway Classification Based on Trip Generation: Three (3) Low Volume Driveways = 25-750 vehicles/day

6. *TRANSPORTATION IMPACT STUDY REQUIRED?*
   ☐ No
   ☒ Yes, based on:
      ☒ 3,000 or more vehicle trips/day generated (before accounting for existing site uses)
      ☐ During any one-hour time period, 100 or more new (added) vehicle trips generated entering or 100 or more new (added) vehicle trips generated exiting development.
      ☐ Other considerations as described below:

7. *TRAFFIC IMPACT ASSESSMENT REQUIRED?* ☒ **No** ☐ **Yes**

8. *TIS STUDY AREA:*
   - Roadway and Study Intersections
      - Lancaster Avenue (S.R. 0030) & Aberdeen Avenue (Signalized)
      - Lancaster Avenue (S.R. 0030) & Existing Driveways (4)
      - Aberdeen Avenue & Existing Driveways (2)
   - Land use context (Refer to Smart Transportation Handbook)
      - Suburban center
   - Known Congestion Areas
      - TBD
   - Known Safety Concerns
      - TBD
   - Known Environmental Constraints
      - TBD
   - Pedestrian/Bike Review (Community Centers, Parks, Schools, etc.)
      - Will be addressed in the TIA
   - Transit Review (Current routes/stops)
      - Will be addressed in the TIA

9. *STUDY AREA TYPE:*
   Urban ☒ Rural ☐

Per PennDOT's Functional Classification Map, Lancaster Avenue (S.R. 0030) is defined as an Urban Principal Arterial.

10. *TIS ANALYSIS PERIOD AND TIMES:*
   - Weekday A.M. peak hour (peak hour within the 7:00-9:00 A.M. peak period);
   - Weekday P.M. peak hour (peak hour within the 4:00-6:00 P.M. peak period);
   - SAT Midday peak hour (peak hour within the 11:00 A.M.-1:00 P.M. peak period).

   **Study Years to be evaluated:**
   - 2018 Existing Conditions

- 2020 Opening/Buildout Year
- 2025 Design Year

11. *TRAFFIC ADJUSTMENT FACTORS:*
    a. Seasonal Adjustment: (Identify counts requiring adjustment and methodology): None
    b. Annual Base Traffic Growth: 0.00%/year based on PennDOT Bureau of Planning and Research (BPR) data pertaining to urban non-interstate roadways in Delaware County. Will assume 0.38%/year growth to be consistent with previous version of PennDOT BPR Data.
    c. Pass-By Trips: See Tables 1-2 Above
    d. Captured Trips for Multi-Use Sites: None
    e. Modal Split Reductions: None
    f. Other Reduction: Trip Generation Credit for Existing Site(s) based on driveway counts

12. *OTHER PROJECTS WITHIN STUDY AREA TO BE ADDED TO BASE TRAFFIC:*
    - To be determined through the scoping process.

13. *TRIP DISTRIBUTION AND ASSIGNMENT:*

    TPD recommends distributing and assigning trips to the surrounding roadways based upon an evaluation of the following: (1) existing traffic patterns, (2) roadways surrounding the site, and (3) the proposed site driveway location and configuration.

14. *APPROVAL OF DATA COLLECTION ELEMENTS AND METHODOLOGIES:*

| Location | Time Period | Count Type |
|---|---|---|
| All Existing "Roadway and Study Intersections" noted in #8 above | Weekday A.M. Peak Hour | Manual Turning Movement Count |
| | Weekday P.M. Peak Hour | |
| | SAT Midday Peak Hour | |
| Proposed Driveways | Weekday A.M. Peak Hour | Gap Study |
| | Weekday P.M. Peak Hour | |
| | SAT Midday Peak Hour | |

15. *CAPACITY/LOS ANALYSIS:*
    Capacity analyses to be conducted at the study area intersections for the peak hours and study years to be evaluated according to the methodologies contained in the 2010 HCM (where applicable), utilizing SYNCHRO 10 software. In addition, capacity analyses will be conducted at the proposed site driveway intersection under opening year conditions.

16. *ROADWAY IMPROVEMENTS/MODIFICATIONS BY OTHERS TO BE INCLUDED:*
    None Found

17. *OTHER NEEDED ANALYSES:*
    a. Sight Distance Analysis: Yes
    b. Signal Warrant Analysis: No
    c. Required Signal Phasing/Timing Modifications: As Needed
    d. Traffic Signal Corridor/Network Analysis: N/A
    e. Analysis of the Need for Turning Lanes: Yes
    f. Turning Lane Lengths: Utilizing Pub. 46, Chapter 11
    g. Left Turn Signal Phasing Analysis: As Needed

h. Queuing Analysis: Utilizing SYNCHRO 95th percentile queues
i. Gap Studies: Yes
j. Crash Analysis: Yes
k. Weaving Analysis: N/A
l. Other Required Studies: As Needed

18. *ADDITIONAL COMMENTS OR RECOMMENDATIONS RELATIVE TO THE SCOPE OF THE TIS:*

TBD

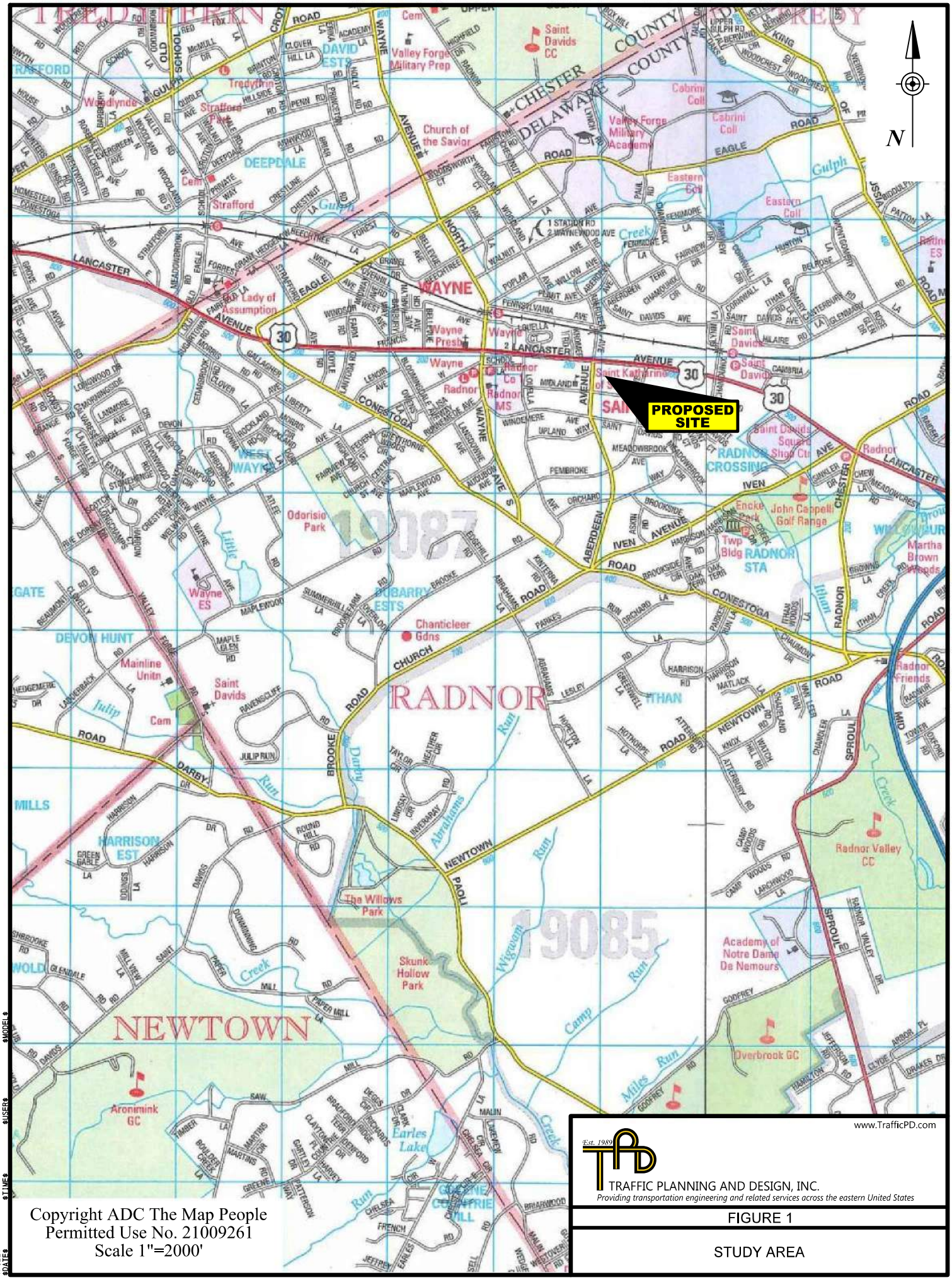
TRAFFIC PLANNING AND DESIGN, INC.

Matthew I. Hammond, P.E.
*Executive Vice President*

mhammond@TrafficPD.com

Attachments: Figure 1 – Study Area
Proposed Site Plan
PennDOT iTMS Data

cc: Radnor Township
Peter Karakelian, Wayne Property Acquisition, Inc.
Project Team
TPD File


PROPOSED SITE
N
RADNOR
NEWTOWN
WAYNE
DEVON HUNT
HARRISON EST
DAVID ESTS
DEEPDALE
WEST WAYNE
RADNOR CROSSING
Valley Forge Military Prep
Valley Forge Military Academy
Cabrini Coll
Eastern Coll
Saint Davids CC
Church of the Savior
Lady of Assumption
Wayne Presb
Radnor Co
Radnor MS
Wayne ES
Odorisio Park
Chanticleer Gdns
Mainline Unitn
Saint Davids
Julip Run
Darby Run
Ithan Run
Crossgates
Radnor Friends
Encke Park
John Cappelli Golf Range
Twp Bldg
Martha Brown Woods
Radnor Valley CC
Academy of Notre Dame De Nemours
Overbrook GC
The Willows Park
Skunk Hollow Park
Aronimink GC
Earles Lake
Crieff Hill
Briarwood
Gulph Creek
Camp Run
Miles Run
Wigwam Run
Abrahams Run
Paper Mill Creek
Meadowbrook
Pembroke
Upland Way
Windemere
Brookside Ave
Orchard
Iven
Ithan
Conestoga
Lancaster Ave
Eagle Road
Church Road
Newtown Road
Darby Road
Brooke Road
Aberdeen Ave
Wayne Ave
Radnor Road
Chester Road
Gulph Road
Valley Road
Old School Road
Strafford
Tredyffrin
Woodlynde
Mills
Chester County
Delaware County
1 Station Rd
2 Waynewood Ave
Copyright ADC The Map People
Permitted Use No. 21009261
Scale 1"=2000'
www.TrafficPD.com
Est. 1989
TRAFFIC PLANNING AND DESIGN, INC.
Providing transportation engineering and related services across the eastern United States
FIGURE 1
STUDY AREA
$MODEL$
$USER$
$TIME$
$FILE$
$DATE$

# TMS Site 24557: Traffic Monitoring Report

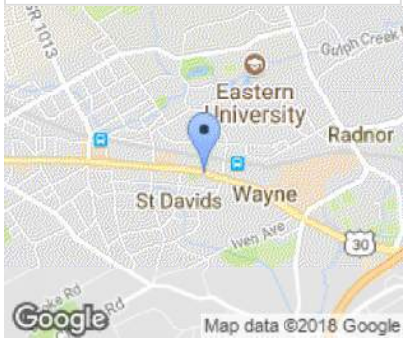
## Traffic Report Summary

**Location Description:** Btwn Pembroke Ave & Saint Davids Rd.

| Details | |
|---|---|
| **Type of Count** | MACHINE CLASS |
| **Type of Site** | Portable |
| **Schedule** | 1 TIME/YR |
| **Duration** | 24 HRS |
| **Frequency Cycle** | 03 |
| **Cycle Year** | 01 |

| Location | |
|---|---|
| **County** | DELAWARE (23) |
| **Route** | 0030 |
| **Segment** | 0040 |
| **Offset** | 1500 |
| **Latitude** | 40.04318 |
| **Longitude** | -75.37598 |

**Map**




**Traffic Data**

| Date | Volume | Truck Volume | Truck % | Volume Graph |
|---|---|---|---|---|
| **Aug 19, 1993** | 24,248 | | | |
| **Aug 03, 1999** | 29,953 | | | |
| **Oct 22, 2002** | 28,331 | | | |
| **Jan 04, 2006** | 26,750 | | | |
| **Oct 15, 2008** | 28,779 | | | |
| **Oct 18, 2011** | 13,465 | 558 | 4.1 | |
| **Oct 28, 2014** | 28,086 | | | |

# TMS Site 24557: Traffic Monitoring Report

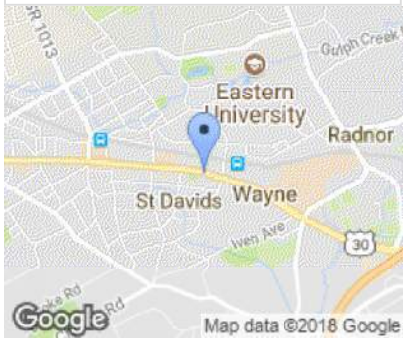
## Traffic Report Summary

**Location Description:** Btwn Pembroke Ave & Saint Davids Rd.

| Details | |
|---|---|
| **Type of Count** | MACHINE CLASS |
| **Type of Site** | Portable |
| **Schedule** | 1 TIME/YR |
| **Duration** | 24 HRS |
| **Frequency Cycle** | 03 |
| **Cycle Year** | 01 |

| Location | |
|---|---|
| **County** | DELAWARE (23) |
| **Route** | 0030 |
| **Segment** | 0040 |
| **Offset** | 1500 |
| **Latitude** | 40.04318 |
| **Longitude** | -75.37598 |

**Map**




**Traffic Data**

| Date | Volume | Truck Volume | Truck % | Volume Graph |
|---|---|---|---|---|
| **Aug 19, 1993** | 24,248 | | | |
| **Aug 03, 1999** | 29,953 | | | |
| **Oct 22, 2002** | 28,331 | | | |
| **Jan 04, 2006** | 26,750 | | | |
| **Oct 15, 2008** | 28,779 | | | |
| **Oct 18, 2011** | 13,465 | 558 | 4.1 | |
| **Oct 28, 2014** | 28,086 | | | |

# APPENDIX B

## *STUDY AREA PHOTOGRAPHS*

*Job #:* KARA.00010 *Date Taken:* June, 2018 *Intersection Of:* Lancaster Avenue (SR 0030) and Aberdeen Avenue

**Direction / Road:** EB Lancaster Avenue (SR 0030)
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** EB Lancaster Avenue (SR 0030)
**Approach / Departure:** Departure
**Distance:**

*Job #:* KARA.00010 *Date Taken:* June, 2018 *Intersection Of:* Lancaster Avenue (SR 0030) and Aberdeen Avenue

**Direction / Road:** WB Lancaster Avenue (SR 0030)
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** WB Lancaster Avenue (SR 0030)
**Approach / Departure:** Departure
**Distance:**

*Job #:* KARA.00010 *Date Taken:* June, 2018 *Intersection Of:* Lancaster Avenue (SR 0030) and Aberdeen Avenue

**Direction / Road:** NB S. Aberdeen Avenue
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** NB N. Aberdeen Avenue
**Approach / Departure:** Departure
**Distance:**

*Job #:* KARA.00010 *Date Taken:* June, 2018 *Intersection Of:* Lancaster Avenue (SR 0030) and Aberdeen Avenue

**Direction / Road:** SB N. Aberdeen Avenue
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** SB S. Aberdeen Avenue
**Approach / Departure:** Departure
**Distance:**

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Wayne Ave & Lancaster Ave

**Direction / Road:** NB Wayne Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** NB Wayne Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* *KARA.00010* *Date Taken:* *08/17/2018* *Intersection Of:* *Wayne Ave & Lancaster Ave*

**Direction / Road:** NB Wayne Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** NB Wayne Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Wayne Ave & Lancaster Ave

**Direction / Road:** SB Wayne Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** SB Wayne Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Wayne Ave & Lancaster Ave

**Direction / Road:** SB Wayne Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** SB Wayne Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Wayne Ave & Lancaster Ave

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Wayne Ave & Lancaster Ave

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 50 Feet

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* *KARA.00010* *Date Taken:* *08/17/2018* *Intersection Of:* *Wayne Ave & Lancaster Ave*

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Wayne Ave & Lancaster Ave

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Lancaster Ave

**Direction / Road:** NB Louella Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** NB Louella Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Lancaster Ave

**Direction / Road:** SB Louella Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** SB Louella Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Lancaster Ave

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Lancaster Ave

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 50 Feet

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Lancaster Ave

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Lancaster Ave

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Chamounix Rd & Lancaster Ave

**Direction / Road:** NB Chamounix Rd
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** NB Chamounix Rd
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Chamounix Rd & Lancaster Ave

**Direction / Road:** NB Chamounix Rd
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** NB Chamounix Rd
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Chamounix Rd & Lancaster Ave

**Direction / Road:** SB Chamounix Rd
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** SB Chamounix Rd
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Chamounix Rd & Lancaster Ave

**Direction / Road:** SB Chamounix Rd
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** SB Chamounix Rd
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Chamounix Rd & Lancaster Ave

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* *KARA.00010* *Date Taken:* *08/17/2018* *Intersection Of:* *Chamounix Rd & Lancaster Ave*

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 50 Feet

**Direction / Road:** EB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Chamounix Rd & Lancaster Ave

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Chamounix Rd & Lancaster Ave

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** WB Lancaster Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Aberdeen Ave & Midland Ave

**Direction / Road:** NB Aberdeen Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** NB Aberdeen Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Aberdeen Ave & Midland Ave

**Direction / Road:** NB Aberdeen Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** NB Aberdeen Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Aberdeen Ave & Midland Ave

**Direction / Road:** SB Aberdeen Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** SB Aberdeen Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Aberdeen Ave & Midland Ave

**Direction / Road:** SB Aberdeen Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** SB Aberdeen Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Aberdeen Ave & Midland Ave

**Direction / Road:** EB Midland Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** EB Midland Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* *KARA.00010* *Date Taken:* *08/17/2018* *Intersection Of:* *Aberdeen Ave & Midland Ave*

**Direction / Road:** EB Midland Ave
**Approach / Departure:** Departure
**Distance:** 50 Feet

**Direction / Road:** EB Midland Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Aberdeen Ave & Midland Ave

**Direction / Road:** WB Midland Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** WB Midland Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Aberdeen Ave & Midland Ave

**Direction / Road:** WB Midland Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** WB Midland Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Midland Ave

**Direction / Road:** NB Louella Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** NB Louella Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Midland Ave

**Direction / Road:** NB Louella Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** NB Louella Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Midland Ave

**Direction / Road:** SB Louella Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** SB Louella Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Midland Ave

**Direction / Road:** SB Louella Ave
**Approach / Departure:** Departure
**Distance:** 50 feet

**Direction / Road:** SB Louella Ave
**Approach / Departure:** Departure
**Distance:** 200 feet

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Midland Ave

| | |
|---|---|
| **Direction / Road:** | EB Midland Ave |
| **Approach / Departure:** | Departure |
| **Distance:** | 50 Feet |

| | |
|---|---|
| **Direction / Road:** | EB Midland Ave |
| **Approach / Departure:** | Departure |
| **Distance:** | 200 feet |

*Job #:* KARA.00010 *Date Taken:* 08/17/2018 *Intersection Of:* Louella Ave & Midland Ave

**Direction / Road:** WB Midland Ave
**Approach / Departure:** Approach
**Distance:** 50 feet

**Direction / Road:** WB Midland Ave
**Approach / Departure:** Approach
**Distance:** 200 feet

# APPENDIX C

## *MANUAL COUNT PRINTOUTS*

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counter:: MIO
Counted By:: BH
Weather:: Clear

Count Name: Aberdeen Ave and Lancaster Ave
Site Code: 1
Start Date: 05/31/2018

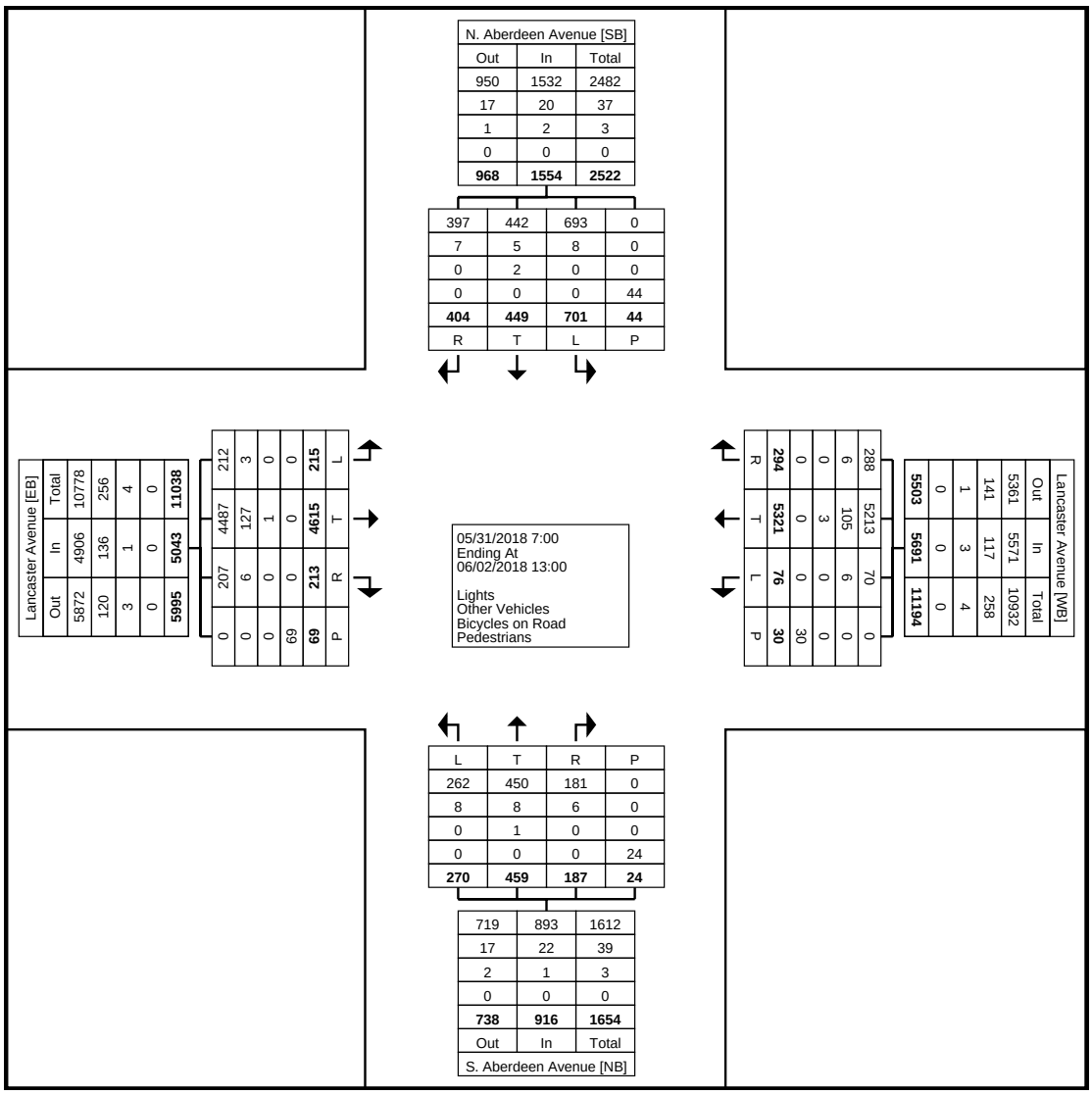

# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | Lancaster Avenue Westbound | | | | | S. Aberdeen Avenue Northbound | | | | | N. Aberdeen Avenue Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 7:00 | 4 | 158 | 6 | 2 | 168 | 1 | 195 | 7 | 0 | 203 | 8 | 11 | 2 | 0 | 21 | 21 | 7 | 6 | 1 | 34 | 426 |
| 7:15 | 7 | 214 | 8 | 0 | 229 | 1 | 215 | 10 | 0 | 226 | 11 | 13 | 2 | 0 | 26 | 20 | 10 | 6 | 1 | 36 | 517 |
| 7:30 | 3 | 206 | 9 | 3 | 218 | 2 | 244 | 14 | 0 | 260 | 7 | 12 | 4 | 0 | 23 | 26 | 17 | 13 | 0 | 56 | 557 |
| 7:45 | 8 | 177 | 10 | 4 | 195 | 4 | 241 | 6 | 3 | 251 | 19 | 31 | 10 | 1 | 60 | 43 | 33 | 24 | 1 | 100 | 606 |
| Hourly Total | 22 | 755 | 33 | 9 | 810 | 8 | 895 | 37 | 3 | 940 | 45 | 67 | 18 | 1 | 130 | 110 | 67 | 49 | 3 | 226 | 2106 |
| 8:00 | 11 | 225 | 8 | 5 | 244 | 3 | 241 | 17 | 0 | 261 | 26 | 27 | 12 | 1 | 65 | 44 | 20 | 12 | 0 | 76 | 646 |
| 8:15 | 7 | 190 | 6 | 1 | 203 | 1 | 243 | 9 | 0 | 253 | 13 | 30 | 6 | 0 | 49 | 23 | 18 | 8 | 0 | 49 | 554 |
| 8:30 | 9 | 193 | 10 | 11 | 212 | 3 | 231 | 11 | 1 | 245 | 14 | 20 | 5 | 2 | 39 | 30 | 14 | 24 | 1 | 68 | 564 |
| 8:45 | 5 | 185 | 11 | 3 | 201 | 3 | 269 | 7 | 0 | 279 | 13 | 16 | 2 | 0 | 31 | 29 | 16 | 13 | 0 | 58 | 569 |
| Hourly Total | 32 | 793 | 35 | 20 | 860 | 10 | 984 | 44 | 1 | 1038 | 66 | 93 | 25 | 3 | 184 | 126 | 68 | 57 | 1 | 251 | 2333 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| 16:00 | 10 | 184 | 8 | 3 | 202 | 3 | 216 | 23 | 1 | 242 | 8 | 19 | 11 | 3 | 38 | 32 | 19 | 14 | 0 | 65 | 547 |
| 16:15 | 9 | 190 | 12 | 0 | 211 | 5 | 213 | 11 | 2 | 229 | 7 | 24 | 9 | 2 | 40 | 22 | 23 | 17 | 2 | 62 | 542 |
| 16:30 | 10 | 209 | 7 | 1 | 226 | 5 | 205 | 12 | 0 | 222 | 5 | 19 | 10 | 1 | 34 | 33 | 18 | 25 | 2 | 76 | 558 |
| 16:45 | 4 | 202 | 6 | 0 | 212 | 2 | 236 | 12 | 1 | 250 | 9 | 24 | 7 | 1 | 40 | 28 | 31 | 14 | 1 | 73 | 575 |
| Hourly Total | 33 | 785 | 33 | 4 | 851 | 15 | 870 | 58 | 4 | 943 | 29 | 86 | 37 | 7 | 152 | 115 | 91 | 70 | 5 | 276 | 2222 |
| 17:00 | 8 | 209 | 12 | 1 | 229 | 3 | 233 | 14 | 1 | 250 | 9 | 17 | 6 | 0 | 32 | 33 | 19 | 12 | 0 | 64 | 575 |
| 17:15 | 8 | 218 | 5 | 6 | 231 | 2 | 238 | 11 | 2 | 251 | 11 | 13 | 8 | 0 | 32 | 30 | 34 | 20 | 1 | 84 | 598 |
| 17:30 | 13 | 215 | 7 | 1 | 235 | 3 | 248 | 22 | 2 | 273 | 10 | 9 | 5 | 2 | 24 | 26 | 28 | 21 | 1 | 75 | 607 |
| 17:45 | 3 | 209 | 6 | 5 | 218 | 5 | 217 | 22 | 5 | 244 | 7 | 18 | 8 | 3 | 33 | 40 | 18 | 13 | 10 | 71 | 566 |
| Hourly Total | 32 | 851 | 30 | 13 | 913 | 13 | 936 | 69 | 10 | 1018 | 37 | 57 | 27 | 5 | 121 | 129 | 99 | 66 | 12 | 294 | 2346 |
| 18:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11:00 | 21 | 162 | 9 | 5 | 192 | 4 | 183 | 7 | 1 | 194 | 19 | 14 | 14 | 1 | 47 | 31 | 7 | 32 | 2 | 70 | 503 |
| 11:15 | 5 | 192 | 11 | 4 | 208 | 5 | 211 | 10 | 3 | 226 | 11 | 20 | 7 | 5 | 38 | 28 | 19 | 10 | 3 | 57 | 529 |
| 11:30 | 9 | 159 | 11 | 5 | 179 | 0 | 228 | 8 | 3 | 236 | 8 | 18 | 13 | 0 | 39 | 36 | 14 | 16 | 9 | 66 | 520 |
| 11:45 | 7 | 187 | 10 | 1 | 204 | 7 | 215 | 17 | 1 | 239 | 11 | 24 | 8 | 1 | 43 | 24 | 12 | 22 | 1 | 58 | 544 |
| Hourly Total | 42 | 700 | 41 | 15 | 783 | 16 | 837 | 42 | 8 | 895 | 49 | 76 | 42 | 7 | 167 | 119 | 52 | 80 | 15 | 251 | 2096 |
| 12:00 | 18 | 150 | 10 | 2 | 178 | 2 | 196 | 15 | 2 | 213 | 9 | 31 | 8 | 1 | 48 | 28 | 25 | 16 | 2 | 69 | 508 |
| 12:15 | 14 | 202 | 11 | 3 | 227 | 3 | 192 | 13 | 1 | 208 | 9 | 11 | 9 | 0 | 29 | 21 | 10 | 21 | 3 | 52 | 516 |
| 12:30 | 9 | 185 | 13 | 2 | 207 | 6 | 187 | 9 | 0 | 202 | 10 | 23 | 11 | 0 | 44 | 29 | 21 | 24 | 2 | 74 | 527 |
| 12:45 | 13 | 194 | 7 | 1 | 214 | 3 | 224 | 7 | 1 | 234 | 16 | 15 | 10 | 0 | 41 | 24 | 16 | 21 | 1 | 61 | 550 |
| Hourly Total | 54 | 731 | 41 | 8 | 826 | 14 | 799 | 44 | 4 | 857 | 44 | 80 | 38 | 1 | 162 | 102 | 72 | 82 | 8 | 256 | 2101 |
| Grand Total | 215 | 4615 | 213 | 69 | 5043 | 76 | 5321 | 294 | 30 | 5691 | 270 | 459 | 187 | 24 | 916 | 701 | 449 | 404 | 44 | 1554 | 13204 |
| Approach % | 4.3 | 91.5 | 4.2 | - | - | 1.3 | 93.5 | 5.2 | - | - | 29.5 | 50.1 | 20.4 | - | - | 45.1 | 28.9 | 26.0 | - | - | - |
| Total % | 1.6 | 35.0 | 1.6 | - | 38.2 | 0.6 | 40.3 | 2.2 | - | 43.1 | 2.0 | 3.5 | 1.4 | - | 6.9 | 5.3 | 3.4 | 3.1 | - | 11.8 | - |
| Lights | 212 | 4487 | 207 | - | 4906 | 70 | 5213 | 288 | - | 5571 | 262 | 450 | 181 | - | 893 | 693 | 442 | 397 | - | 1532 | 12902 |
| % Lights | 98.6 | 97.2 | 97.2 | - | 97.3 | 92.1 | 98.0 | 98.0 | - | 97.9 | 97.0 | 98.0 | 96.8 | - | 97.5 | 98.9 | 98.4 | 98.3 | - | 98.6 | 97.7 |
| Other Vehicles | 3 | 127 | 6 | - | 136 | 6 | 105 | 6 | - | 117 | 8 | 8 | 6 | - | 22 | 8 | 5 | 7 | - | 20 | 295 |
| % Other Vehicles | 1.4 | 2.8 | 2.8 | - | 2.7 | 7.9 | 2.0 | 2.0 | - | 2.1 | 3.0 | 1.7 | 3.2 | - | 2.4 | 1.1 | 1.1 | 1.7 | - | 1.3 | 2.2 |
| Bicycles on Road | 0 | 1 | 0 | - | 1 | 0 | 3 | 0 | - | 3 | 0 | 1 | 0 | - | 1 | 0 | 2 | 0 | - | 2 | 7 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.1 | 0.0 | - | 0.1 | 0.0 | 0.2 | 0.0 | - | 0.1 | 0.0 | 0.4 | 0.0 | - | 0.1 | 0.1 |
| Pedestrians | - | - | - | 69 | - | - | - | - | 30 | - | - | - | - | 24 | - | - | - | - | 44 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counter:: MIO
Counted By:: BH
Weather:: Clear

Count Name: Aberdeen Ave and Lancaster Ave
Site Code: 1
Start Date: 05/31/2018


Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counter:: MIO
Counted By:: BH
Weather:: Clear

Count Name: Aberdeen Ave and Lancaster Ave
Site Code: 1
Start Date: 05/31/2018


# Turning Movement Peak Hour Data (7:45)

| Start Time | Lancaster Avenue Eastbound | | | | | Lancaster Avenue Westbound | | | | | S. Aberdeen Avenue Northbound | | | | | N. Aberdeen Avenue Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 7:45 | 8 | 177 | 10 | 4 | 195 | 4 | 241 | 6 | 3 | 251 | 19 | 31 | 10 | 1 | 60 | 43 | 33 | 24 | 1 | 100 | 606 |
| 8:00 | 11 | 225 | 8 | 5 | 244 | 3 | 241 | 17 | 0 | 261 | 26 | 27 | 12 | 1 | 65 | 44 | 20 | 12 | 0 | 76 | 646 |
| 8:15 | 7 | 190 | 6 | 1 | 203 | 1 | 243 | 9 | 0 | 253 | 13 | 30 | 6 | 0 | 49 | 23 | 18 | 8 | 0 | 49 | 554 |
| 8:30 | 9 | 193 | 10 | 11 | 212 | 3 | 231 | 11 | 1 | 245 | 14 | 20 | 5 | 2 | 39 | 30 | 14 | 24 | 1 | 68 | 564 |
| Total | 35 | 785 | 34 | 21 | 854 | 11 | 956 | 43 | 4 | 1010 | 72 | 108 | 33 | 4 | 213 | 140 | 85 | 68 | 2 | 293 | 2370 |
| Approach % | 4.1 | 91.9 | 4.0 | - | - | 1.1 | 94.7 | 4.3 | - | - | 33.8 | 50.7 | 15.5 | - | - | 47.8 | 29.0 | 23.2 | - | - | - |
| Total % | 1.5 | 33.1 | 1.4 | - | 36.0 | 0.5 | 40.3 | 1.8 | - | 42.6 | 3.0 | 4.6 | 1.4 | - | 9.0 | 5.9 | 3.6 | 2.9 | - | 12.4 | - |
| PHF | 0.795 | 0.872 | 0.850 | - | 0.875 | 0.688 | 0.984 | 0.632 | - | 0.967 | 0.692 | 0.871 | 0.688 | - | 0.819 | 0.795 | 0.644 | 0.708 | - | 0.733 | 0.917 |
| Lights | 34 | 755 | 33 | - | 822 | 9 | 921 | 43 | - | 973 | 66 | 103 | 30 | - | 199 | 139 | 83 | 66 | - | 288 | 2282 |
| % Lights | 97.1 | 96.2 | 97.1 | - | 96.3 | 81.8 | 96.3 | 100.0 | - | 96.3 | 91.7 | 95.4 | 90.9 | - | 93.4 | 99.3 | 97.6 | 97.1 | - | 98.3 | 96.3 |
| Other Vehicles | 1 | 30 | 1 | - | 32 | 2 | 35 | 0 | - | 37 | 6 | 5 | 3 | - | 14 | 1 | 2 | 2 | - | 5 | 88 |
| % Other Vehicles | 2.9 | 3.8 | 2.9 | - | 3.7 | 18.2 | 3.7 | 0.0 | - | 3.7 | 8.3 | 4.6 | 9.1 | - | 6.6 | 0.7 | 2.4 | 2.9 | - | 1.7 | 3.7 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 21 | - | - | - | - | 4 | - | - | - | - | 4 | - | - | - | - | 2 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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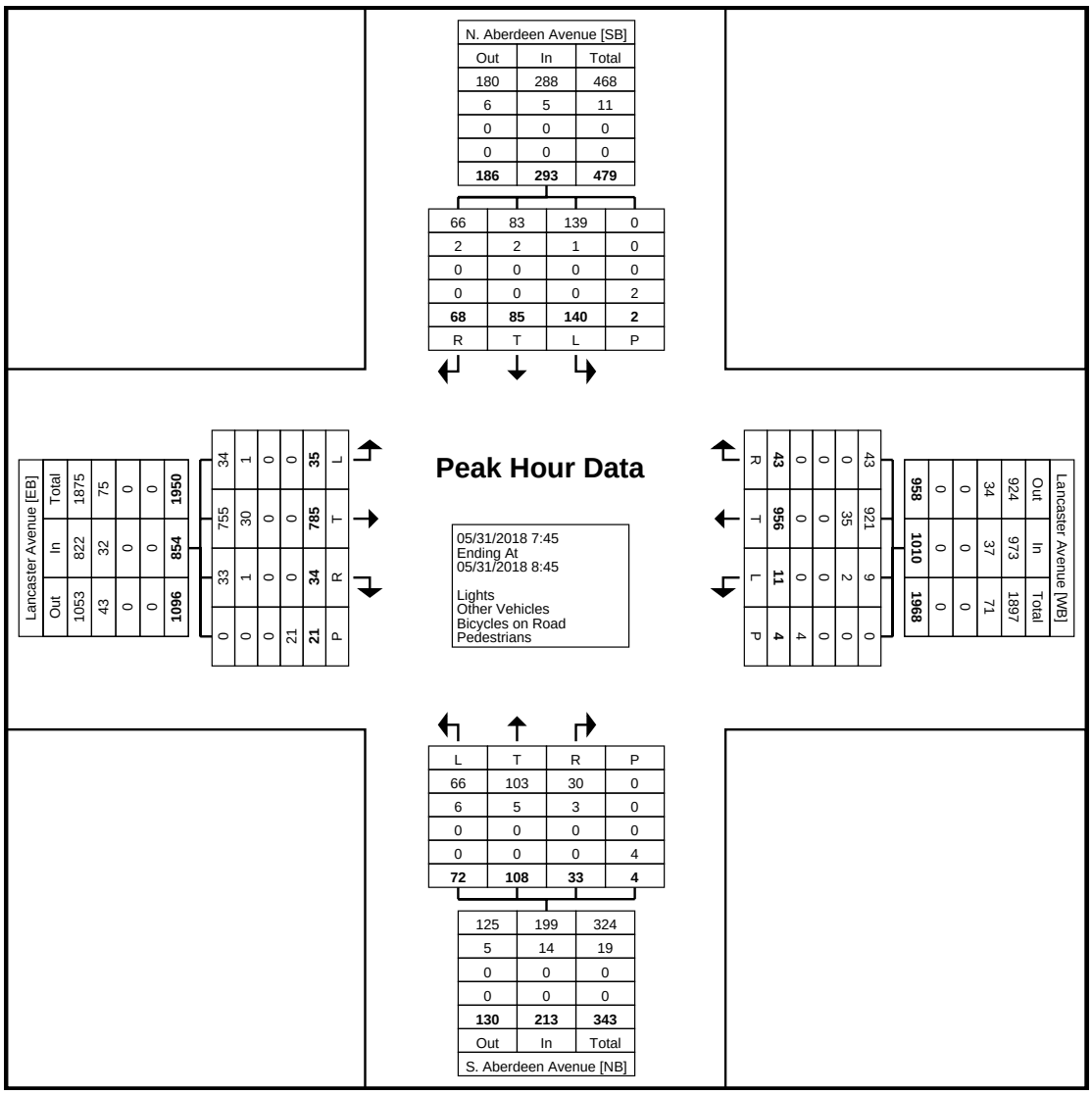
Counter:: MIO
Counted By:: BH
Weather:: Clear

Count Name: Aberdeen Ave and Lancaster Ave
Site Code: 1
Start Date: 05/31/2018


Turning Movement Peak Hour Data Plot (7:45)

Traffic Planning and Design, Inc
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Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counter:: MIO
Counted By:: BH
Weather:: Clear

Count Name: Aberdeen Ave and Lancaster Ave
Site Code: 1
Start Date: 05/31/2018


# Turning Movement Peak Hour Data (16:45)

| Start Time | Lancaster Avenue Eastbound | | | | | Lancaster Avenue Westbound | | | | | S. Aberdeen Avenue Northbound | | | | | N. Aberdeen Avenue Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 16:45 | 4 | 202 | 6 | 0 | 212 | 2 | 236 | 12 | 1 | 250 | 9 | 24 | 7 | 1 | 40 | 28 | 31 | 14 | 1 | 73 | 575 |
| 17:00 | 8 | 209 | 12 | 1 | 229 | 3 | 233 | 14 | 1 | 250 | 9 | 17 | 6 | 0 | 32 | 33 | 19 | 12 | 0 | 64 | 575 |
| 17:15 | 8 | 218 | 5 | 6 | 231 | 2 | 238 | 11 | 2 | 251 | 11 | 13 | 8 | 0 | 32 | 30 | 34 | 20 | 1 | 84 | 598 |
| 17:30 | 13 | 215 | 7 | 1 | 235 | 3 | 248 | 22 | 2 | 273 | 10 | 9 | 5 | 2 | 24 | 26 | 28 | 21 | 1 | 75 | 607 |
| Total | 33 | 844 | 30 | 8 | 907 | 10 | 955 | 59 | 6 | 1024 | 39 | 63 | 26 | 3 | 128 | 117 | 112 | 67 | 3 | 296 | 2355 |
| Approach % | 3.6 | 93.1 | 3.3 | - | - | 1.0 | 93.3 | 5.8 | - | - | 30.5 | 49.2 | 20.3 | - | - | 39.5 | 37.8 | 22.6 | - | - | - |
| Total % | 1.4 | 35.8 | 1.3 | - | 38.5 | 0.4 | 40.6 | 2.5 | - | 43.5 | 1.7 | 2.7 | 1.1 | - | 5.4 | 5.0 | 4.8 | 2.8 | - | 12.6 | - |
| PHF | 0.635 | 0.968 | 0.625 | - | 0.965 | 0.833 | 0.963 | 0.670 | - | 0.938 | 0.886 | 0.656 | 0.813 | - | 0.800 | 0.886 | 0.824 | 0.798 | - | 0.881 | 0.970 |
| Lights | 32 | 832 | 29 | - | 893 | 10 | 946 | 57 | - | 1013 | 39 | 63 | 26 | - | 128 | 114 | 111 | 67 | - | 292 | 2326 |
| % Lights | 97.0 | 98.6 | 96.7 | - | 98.5 | 100.0 | 99.1 | 96.6 | - | 98.9 | 100.0 | 100.0 | 100.0 | - | 100.0 | 97.4 | 99.1 | 100.0 | - | 98.6 | 98.8 |
| Other Vehicles | 1 | 12 | 1 | - | 14 | 0 | 9 | 2 | - | 11 | 0 | 0 | 0 | - | 0 | 3 | 0 | 0 | - | 3 | 28 |
| % Other Vehicles | 3.0 | 1.4 | 3.3 | - | 1.5 | 0.0 | 0.9 | 3.4 | - | 1.1 | 0.0 | 0.0 | 0.0 | - | 0.0 | 2.6 | 0.0 | 0.0 | - | 1.0 | 1.2 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | - | 1 | 1 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.9 | 0.0 | - | 0.3 | 0.0 |
| Pedestrians | - | - | - | 8 | - | - | - | - | 6 | - | - | - | - | 3 | - | - | - | - | 3 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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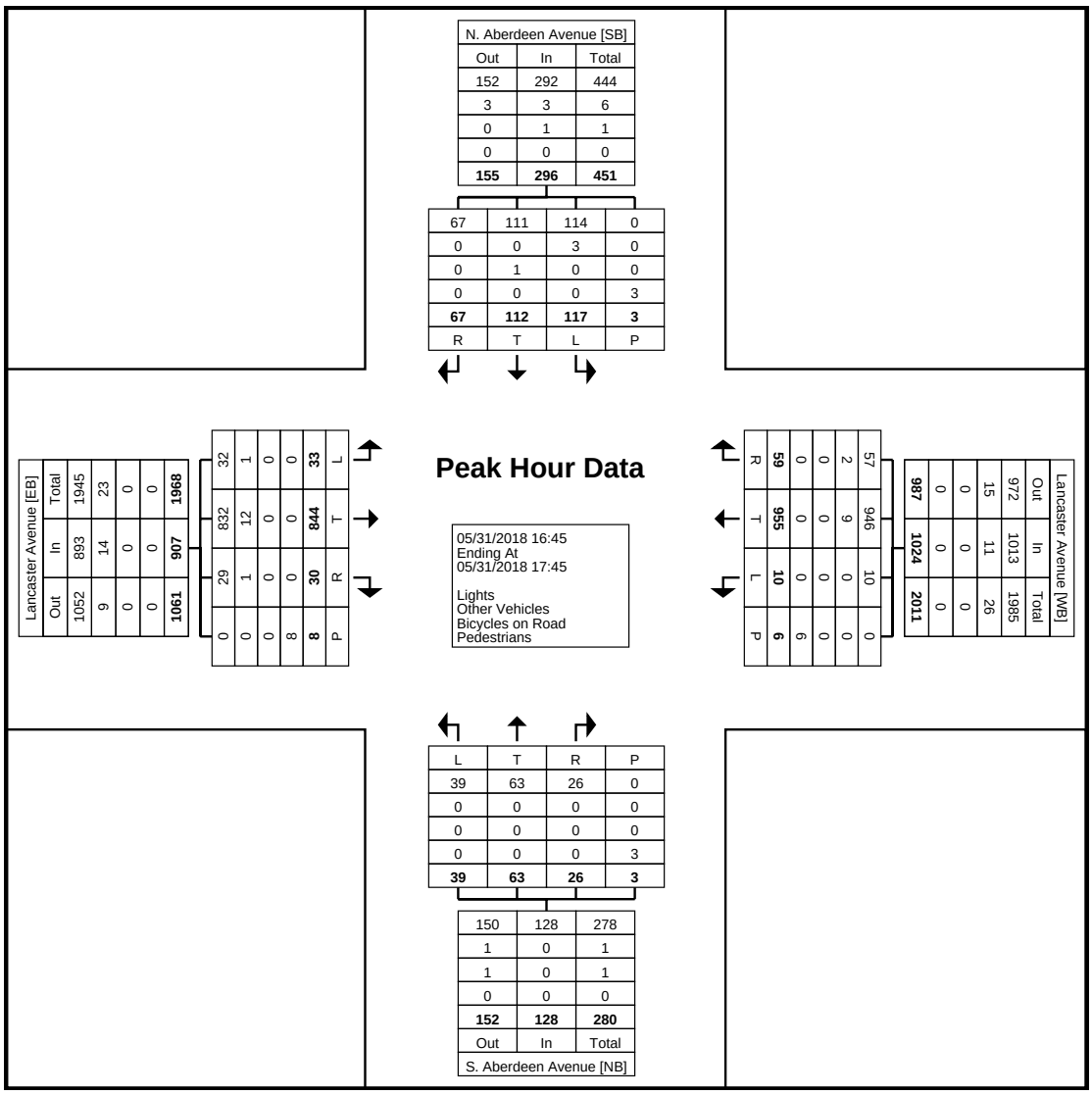
Counter:: MIO
Counted By:: BH
Weather:: Clear

Count Name: Aberdeen Ave and Lancaster Ave
Site Code: 1
Start Date: 05/31/2018


Turning Movement Peak Hour Data Plot (16:45)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counter:: MIO
Counted By:: BH
Weather:: Clear

Count Name: Aberdeen Ave and Lancaster Ave
Site Code: 1
Start Date: 05/31/2018


# Turning Movement Peak Hour Data (11:15)

| Start Time | Lancaster Avenue Eastbound | | | | | Lancaster Avenue Westbound | | | | | S. Aberdeen Avenue Northbound | | | | | N. Aberdeen Avenue Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 11:15 | 5 | 192 | 11 | 4 | 208 | 5 | 211 | 10 | 3 | 226 | 11 | 20 | 7 | 5 | 38 | 28 | 19 | 10 | 3 | 57 | 529 |
| 11:30 | 9 | 159 | 11 | 5 | 179 | 0 | 228 | 8 | 3 | 236 | 8 | 18 | 13 | 0 | 39 | 36 | 14 | 16 | 9 | 66 | 520 |
| 11:45 | 7 | 187 | 10 | 1 | 204 | 7 | 215 | 17 | 1 | 239 | 11 | 24 | 8 | 1 | 43 | 24 | 12 | 22 | 1 | 58 | 544 |
| 12:00 | 18 | 150 | 10 | 2 | 178 | 2 | 196 | 15 | 2 | 213 | 9 | 31 | 8 | 1 | 48 | 28 | 25 | 16 | 2 | 69 | 508 |
| Total | 39 | 688 | 42 | 12 | 769 | 14 | 850 | 50 | 9 | 914 | 39 | 93 | 36 | 7 | 168 | 116 | 70 | 64 | 15 | 250 | 2101 |
| Approach % | 5.1 | 89.5 | 5.5 | - | - | 1.5 | 93.0 | 5.5 | - | - | 23.2 | 55.4 | 21.4 | - | - | 46.4 | 28.0 | 25.6 | - | - | - |
| Total % | 1.9 | 32.7 | 2.0 | - | 36.6 | 0.7 | 40.5 | 2.4 | - | 43.5 | 1.9 | 4.4 | 1.7 | - | 8.0 | 5.5 | 3.3 | 3.0 | - | 11.9 | - |
| PHF | 0.542 | 0.896 | 0.955 | - | 0.924 | 0.500 | 0.932 | 0.735 | - | 0.956 | 0.886 | 0.750 | 0.692 | - | 0.875 | 0.806 | 0.700 | 0.727 | - | 0.906 | 0.966 |
| Lights | 39 | 674 | 41 | - | 754 | 13 | 833 | 49 | - | 895 | 39 | 91 | 36 | - | 166 | 115 | 70 | 63 | - | 248 | 2063 |
| % Lights | 100.0 | 98.0 | 97.6 | - | 98.0 | 92.9 | 98.0 | 98.0 | - | 97.9 | 100.0 | 97.8 | 100.0 | - | 98.8 | 99.1 | 100.0 | 98.4 | - | 99.2 | 98.2 |
| Other Vehicles | 0 | 13 | 1 | - | 14 | 1 | 14 | 1 | - | 16 | 0 | 1 | 0 | - | 1 | 1 | 0 | 1 | - | 2 | 33 |
| % Other Vehicles | 0.0 | 1.9 | 2.4 | - | 1.8 | 7.1 | 1.6 | 2.0 | - | 1.8 | 0.0 | 1.1 | 0.0 | - | 0.6 | 0.9 | 0.0 | 1.6 | - | 0.8 | 1.6 |
| Bicycles on Road | 0 | 1 | 0 | - | 1 | 0 | 3 | 0 | - | 3 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 5 |
| % Bicycles on Road | 0.0 | 0.1 | 0.0 | - | 0.1 | 0.0 | 0.4 | 0.0 | - | 0.3 | 0.0 | 1.1 | 0.0 | - | 0.6 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.2 |
| Pedestrians | - | - | - | 12 | - | - | - | - | 9 | - | - | - | - | 7 | - | - | - | - | 15 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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Counter:: MIO
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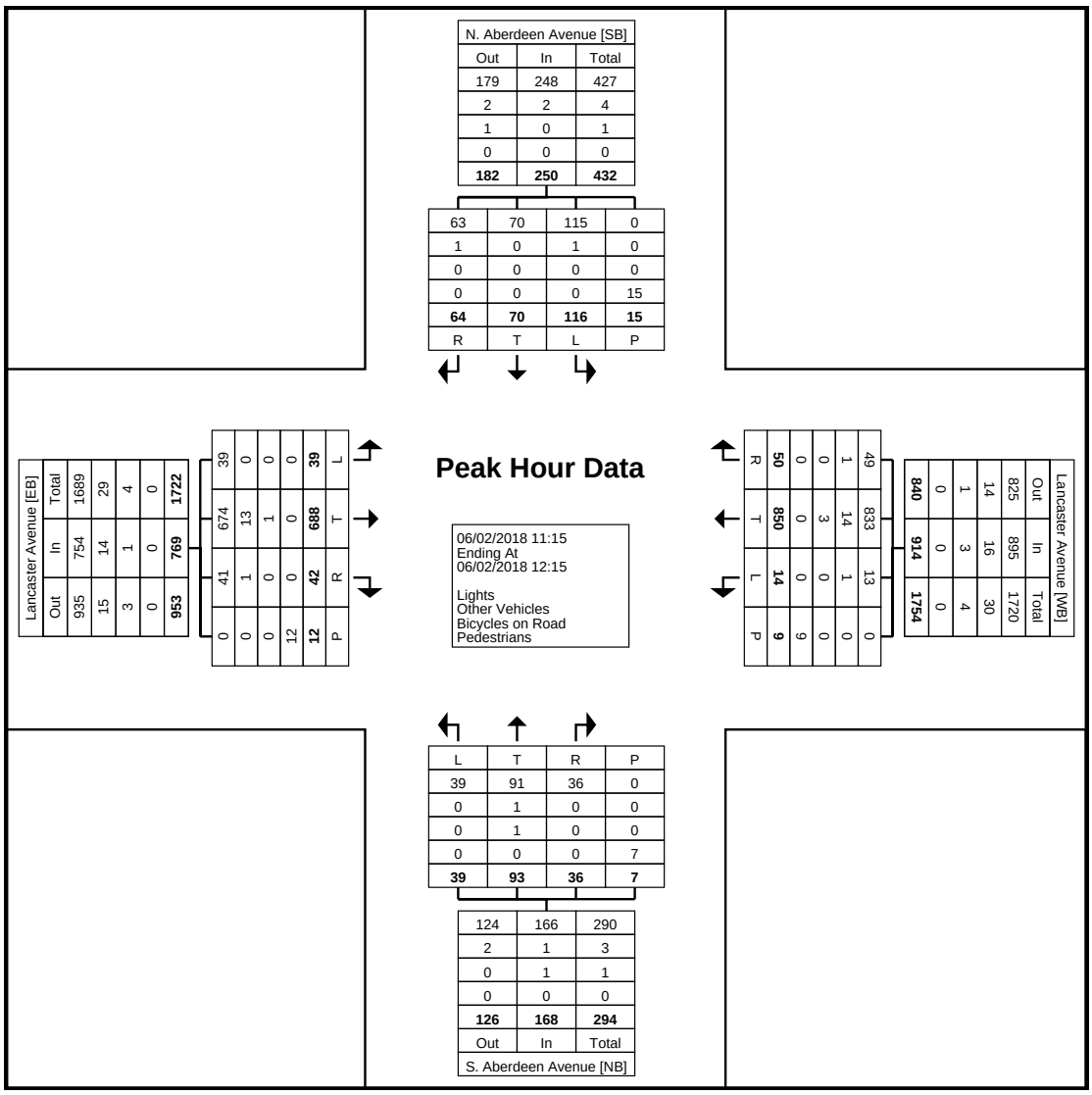
Count Name: Aberdeen Ave and Lancaster Ave
Site Code: 1
Start Date: 05/31/2018


Turning Movement Peak Hour Data Plot (11:15)

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184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Radnor, PA
Lancaster Ave & Aberdeen Ave
Tuesday, September 11, 2018
Location: 40.043737, -75.381298

Count Name: Lancaster Ave/Aberdeen Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Aberdeen Avenue Northbound | | | | | | | Aberdeen Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 2:00 PM | 9 | 180 | 7 | 0 | 0 | 1 | 196 | 1 | 159 | 19 | 1 | 0 | 0 | 180 | 9 | 13 | 6 | 0 | 0 | 1 | 28 | 27 | 13 | 14 | 1 | 0 | 0 | 55 | 459 |
| 2:15 PM | 12 | 195 | 11 | 0 | 0 | 1 | 218 | 0 | 192 | 11 | 0 | 0 | 1 | 203 | 8 | 11 | 9 | 1 | 0 | 1 | 29 | 25 | 14 | 13 | 2 | 0 | 1 | 54 | 504 |
| 2:30 PM | 10 | 202 | 6 | 0 | 0 | 0 | 218 | 6 | 176 | 9 | 1 | 0 | 1 | 192 | 9 | 11 | 4 | 1 | 0 | 0 | 25 | 33 | 13 | 20 | 0 | 0 | 2 | 66 | 501 |
| 2:45 PM | 8 | 176 | 9 | 0 | 0 | 1 | 193 | 3 | 189 | 19 | 3 | 0 | 0 | 214 | 13 | 8 | 10 | 0 | 0 | 0 | 31 | 38 | 20 | 13 | 1 | 0 | 3 | 72 | 510 |
| Hourly Total | 39 | 753 | 33 | 0 | 0 | 3 | 825 | 10 | 716 | 58 | 5 | 0 | 2 | 789 | 39 | 43 | 29 | 2 | 0 | 2 | 113 | 123 | 60 | 60 | 4 | 0 | 6 | 247 | 1974 |
| 3:00 PM | 5 | 204 | 12 | 0 | 0 | 8 | 221 | 7 | 167 | 9 | 0 | 0 | 0 | 183 | 14 | 16 | 12 | 2 | 0 | 0 | 44 | 39 | 7 | 16 | 0 | 0 | 6 | 62 | 510 |
| 3:15 PM | 12 | 238 | 6 | 0 | 0 | 10 | 256 | 5 | 170 | 14 | 0 | 0 | 1 | 189 | 11 | 19 | 5 | 1 | 0 | 0 | 36 | 41 | 16 | 10 | 0 | 0 | 13 | 67 | 548 |
| 3:30 PM | 15 | 195 | 15 | 1 | 0 | 9 | 226 | 6 | 179 | 11 | 0 | 0 | 0 | 196 | 10 | 13 | 8 | 2 | 0 | 0 | 33 | 30 | 17 | 16 | 0 | 0 | 4 | 63 | 518 |
| 3:45 PM | 9 | 207 | 5 | 0 | 0 | 3 | 221 | 7 | 192 | 9 | 0 | 0 | 1 | 208 | 5 | 13 | 7 | 1 | 0 | 1 | 26 | 38 | 20 | 14 | 0 | 0 | 5 | 72 | 527 |
| Hourly Total | 41 | 844 | 38 | 1 | 0 | 30 | 924 | 25 | 708 | 43 | 0 | 0 | 2 | 776 | 40 | 61 | 32 | 6 | 0 | 1 | 139 | 148 | 60 | 56 | 0 | 0 | 28 | 264 | 2103 |
| Grand Total | 80 | 1597 | 71 | 1 | 0 | 33 | 1749 | 35 | 1424 | 101 | 5 | 0 | 4 | 1565 | 79 | 104 | 61 | 8 | 0 | 3 | 252 | 271 | 120 | 116 | 4 | 0 | 34 | 511 | 4077 |
| Approach % | 4.6 | 91.3 | 4.1 | 0.1 | 0.0 | - | - | 2.2 | 91.0 | 6.5 | 0.3 | 0.0 | - | - | 31.3 | 41.3 | 24.2 | 3.2 | 0.0 | - | - | 53.0 | 23.5 | 22.7 | 0.8 | 0.0 | - | - | - |
| Total % | 2.0 | 39.2 | 1.7 | 0.0 | 0.0 | - | 42.9 | 0.9 | 34.9 | 2.5 | 0.1 | 0.0 | - | 38.4 | 1.9 | 2.6 | 1.5 | 0.2 | 0.0 | - | 6.2 | 6.6 | 2.9 | 2.8 | 0.1 | 0.0 | - | 12.5 | - |
| Lights | 80 | 1563 | 71 | 1 | 0 | - | 1715 | 33 | 1382 | 99 | 5 | 0 | - | 1519 | 68 | 99 | 60 | 8 | 0 | - | 235 | 269 | 115 | 114 | 4 | 0 | - | 502 | 3971 |
| % Lights | 100.0 | 97.9 | 100.0 | 100.0 | - | - | 98.1 | 94.3 | 97.1 | 98.0 | 100.0 | - | - | 97.1 | 86.1 | 95.2 | 98.4 | 100.0 | - | - | 93.3 | 99.3 | 95.8 | 98.3 | 100.0 | - | - | 98.2 | 97.4 |
| Buses | 0 | 4 | 0 | 0 | 0 | - | 4 | 1 | 8 | 0 | 0 | 0 | - | 9 | 4 | 3 | 1 | 0 | 0 | - | 8 | 0 | 3 | 0 | 0 | 0 | - | 3 | 24 |
| % Buses | 0.0 | 0.3 | 0.0 | 0.0 | - | - | 0.2 | 2.9 | 0.6 | 0.0 | 0.0 | - | - | 0.6 | 5.1 | 2.9 | 1.6 | 0.0 | - | - | 3.2 | 0.0 | 2.5 | 0.0 | 0.0 | - | - | 0.6 | 0.6 |
| Trucks | 0 | 30 | 0 | 0 | 0 | - | 30 | 1 | 34 | 2 | 0 | 0 | - | 37 | 7 | 2 | 0 | 0 | 0 | - | 9 | 2 | 2 | 2 | 0 | 0 | - | 6 | 82 |
| % Trucks | 0.0 | 1.9 | 0.0 | 0.0 | - | - | 1.7 | 2.9 | 2.4 | 2.0 | 0.0 | - | - | 2.4 | 8.9 | 1.9 | 0.0 | 0.0 | - | - | 3.6 | 0.7 | 1.7 | 1.7 | 0.0 | - | - | 1.2 | 2.0 |
| Bicycles on Crosswalk | - | - | - | - | - | 2 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 1 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 6.1 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 33.3 | - | - | - | - | - | - | 2.9 | - | - |
| Pedestrians | - | - | - | - | - | 31 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | 2 | - | - | - | - | - | - | 33 | - | - |
| % Pedestrians | - | - | - | - | - | 93.9 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 66.7 | - | - | - | - | - | - | 97.1 | - | - |

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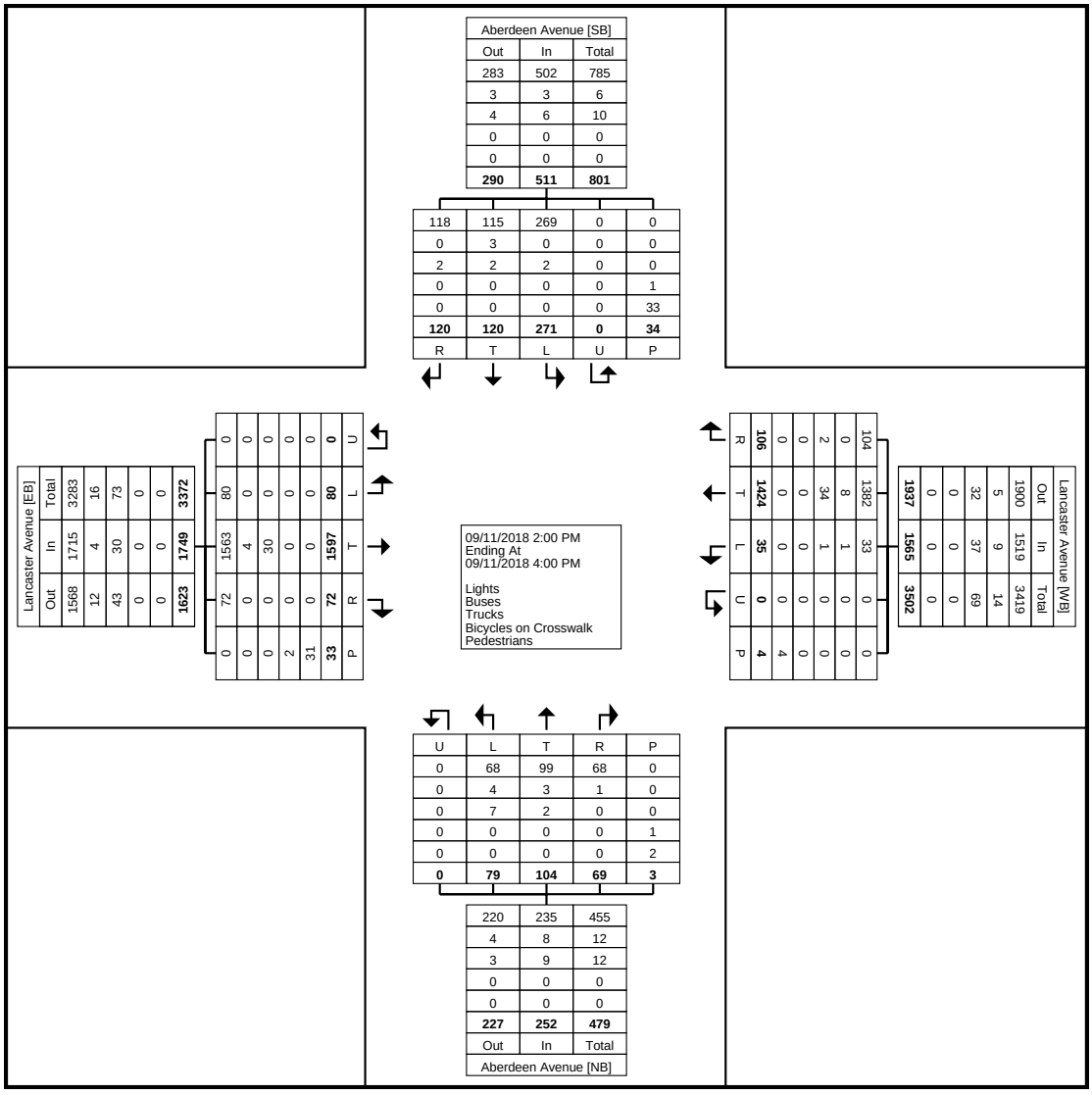
Radnor, PA
Lancaster Ave & Aberdeen Ave
Tuesday, September 11, 2018
Location: 40.043737, -75.381298

Count Name: Lancaster Ave/Aberdeen Ave
Site Code:
Start Date: 09/11/2018


Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & Aberdeen Ave
Tuesday, September 11, 2018
Location: 40.043737, -75.381298

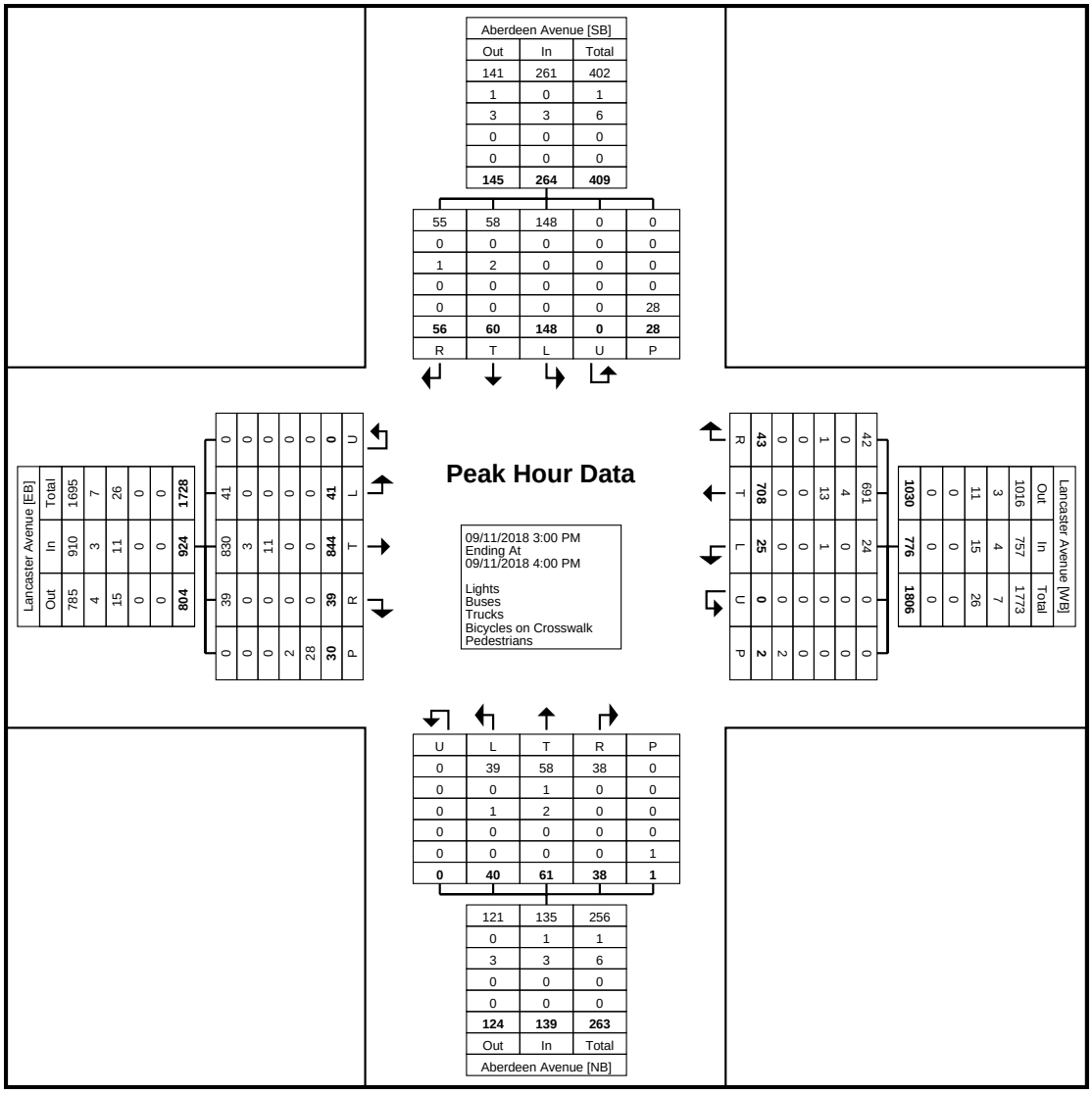
Count Name: Lancaster Ave/Aberdeen Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (3:00 PM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Aberdeen Avenue Northbound | | | | | | | Aberdeen Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 3:00 PM | 5 | 204 | 12 | 0 | 0 | 8 | 221 | 7 | 167 | 9 | 0 | 0 | 0 | 183 | 14 | 16 | 12 | 2 | 0 | 0 | 44 | 39 | 7 | 16 | 0 | 0 | 6 | 62 | 510 |
| 3:15 PM | 12 | 238 | 6 | 0 | 0 | 10 | 256 | 5 | 170 | 14 | 0 | 0 | 1 | 189 | 11 | 19 | 5 | 1 | 0 | 0 | 36 | 41 | 16 | 10 | 0 | 0 | 13 | 67 | 548 |
| 3:30 PM | 15 | 195 | 15 | 1 | 0 | 9 | 226 | 6 | 179 | 11 | 0 | 0 | 0 | 196 | 10 | 13 | 8 | 2 | 0 | 0 | 33 | 30 | 17 | 16 | 0 | 0 | 4 | 63 | 518 |
| 3:45 PM | 9 | 207 | 5 | 0 | 0 | 3 | 221 | 7 | 192 | 9 | 0 | 0 | 1 | 208 | 5 | 13 | 7 | 1 | 0 | 1 | 26 | 38 | 20 | 14 | 0 | 0 | 5 | 72 | 527 |
| Total | 41 | 844 | 38 | 1 | 0 | 30 | 924 | 25 | 708 | 43 | 0 | 0 | 2 | 776 | 40 | 61 | 32 | 6 | 0 | 1 | 139 | 148 | 60 | 56 | 0 | 0 | 28 | 264 | 2103 |
| Approach % | 4.4 | 91.3 | 4.1 | 0.1 | 0.0 | - | - | 3.2 | 91.2 | 5.5 | 0.0 | 0.0 | - | - | 28.8 | 43.9 | 23.0 | 4.3 | 0.0 | - | - | 56.1 | 22.7 | 21.2 | 0.0 | 0.0 | - | - | - |
| Total % | 1.9 | 40.1 | 1.8 | 0.0 | 0.0 | - | 43.9 | 1.2 | 33.7 | 2.0 | 0.0 | 0.0 | - | 36.9 | 1.9 | 2.9 | 1.5 | 0.3 | 0.0 | - | 6.6 | 7.0 | 2.9 | 2.7 | 0.0 | 0.0 | - | 12.6 | - |
| PHF | 0.683 | 0.887 | 0.633 | 0.250 | 0.000 | - | 0.902 | 0.893 | 0.922 | 0.768 | 0.000 | 0.000 | - | 0.933 | 0.714 | 0.803 | 0.667 | 0.750 | 0.000 | - | 0.790 | 0.902 | 0.750 | 0.875 | 0.000 | 0.000 | - | 0.917 | 0.959 |
| Lights | 41 | 830 | 38 | 1 | 0 | - | 910 | 24 | 691 | 42 | 0 | 0 | - | 757 | 39 | 58 | 32 | 6 | 0 | - | 135 | 148 | 58 | 55 | 0 | 0 | - | 261 | 2063 |
| % Lights | 100.0 | 98.3 | 100.0 | 100.0 | - | - | 98.5 | 96.0 | 97.6 | 97.7 | - | - | - | 97.6 | 97.5 | 95.1 | 100.0 | 100.0 | - | - | 97.1 | 100.0 | 96.7 | 98.2 | - | - | - | 98.9 | 98.1 |
| Buses | 0 | 3 | 0 | 0 | 0 | - | 3 | 0 | 4 | 0 | 0 | 0 | - | 4 | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 8 |
| % Buses | 0.0 | 0.4 | 0.0 | 0.0 | - | - | 0.3 | 0.0 | 0.6 | 0.0 | - | - | - | 0.5 | 0.0 | 1.6 | 0.0 | 0.0 | - | - | 0.7 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.4 |
| Trucks | 0 | 11 | 0 | 0 | 0 | - | 11 | 1 | 13 | 1 | 0 | 0 | - | 15 | 1 | 2 | 0 | 0 | 0 | - | 3 | 0 | 2 | 1 | 0 | 0 | - | 3 | 32 |
| % Trucks | 0.0 | 1.3 | 0.0 | 0.0 | - | - | 1.2 | 4.0 | 1.8 | 2.3 | - | - | - | 1.9 | 2.5 | 3.3 | 0.0 | 0.0 | - | - | 2.2 | 0.0 | 3.3 | 1.8 | - | - | - | 1.1 | 1.5 |
| Bicycles on Crosswalk | - | - | - | - | - | 2 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 6.7 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 28 | - | - | - | - | - | - | 2 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 28 | - | - |
| % Pedestrians | - | - | - | - | - | 93.3 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Lancaster Ave & Aberdeen Ave
Tuesday, September 11, 2018
Location: 40.043737, -75.381298

Count Name: Lancaster Ave/Aberdeen Ave
Site Code:
Start Date: 09/11/2018


Turning Movement Peak Hour Data Plot (3:00 PM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Radnor, PA
Lancaster Ave & Aberdeen Ave
Sunday, September 9, 2018
Location: 40.043737, -75.381298

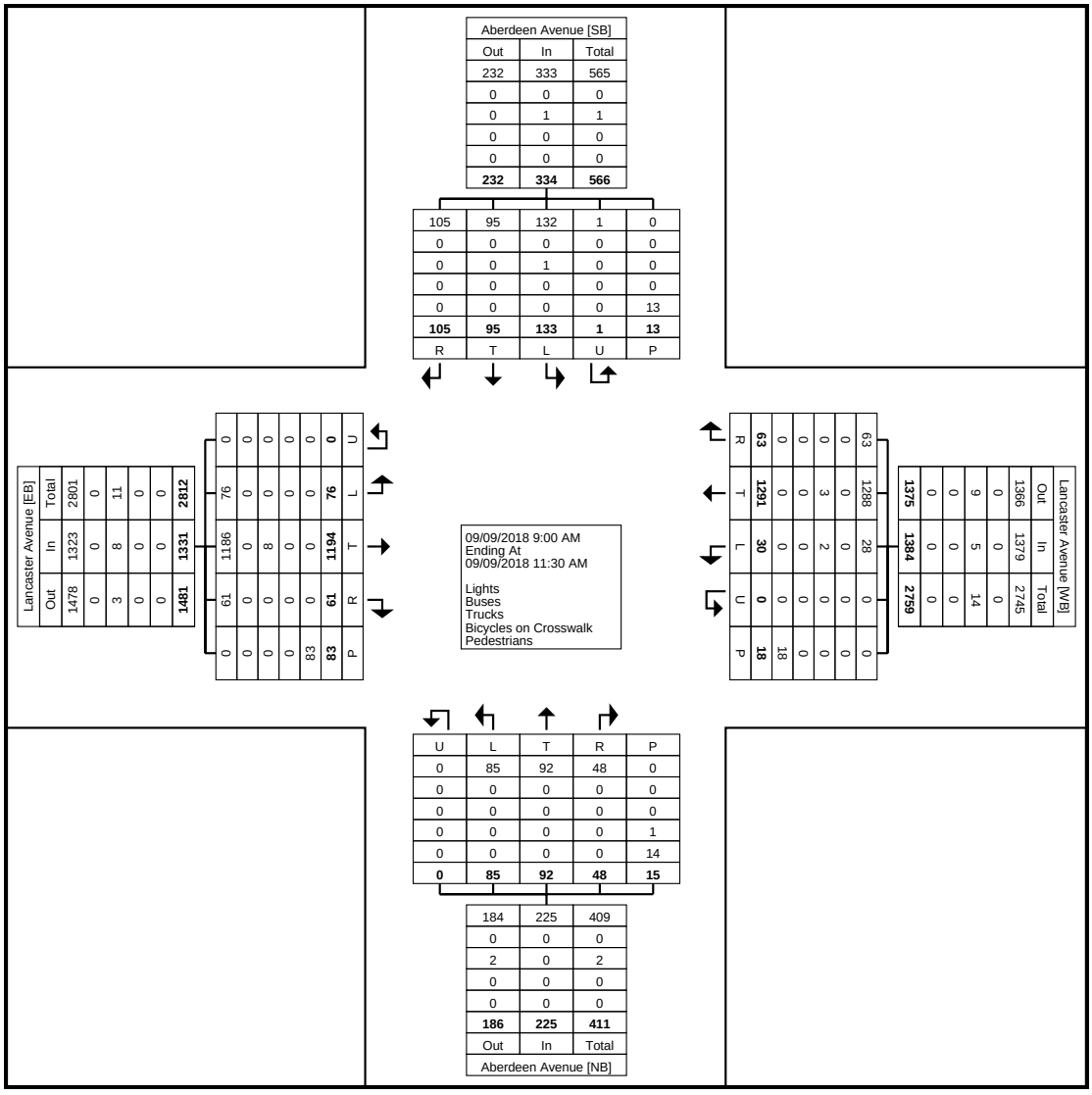
Count Name: Lancaster Ave/Aberdeen Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Aberdeen Avenue Northbound | | | | | | | Aberdeen Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 9:00 AM | 13 | 75 | 3 | 0 | 0 | 1 | 91 | 4 | 125 | 5 | 0 | 0 | 0 | 134 | 8 | 3 | 5 | 0 | 0 | 0 | 16 | 16 | 3 | 13 | 3 | 0 | 0 | 35 | 276 |
| 9:15 AM | 5 | 116 | 13 | 0 | 0 | 9 | 134 | 5 | 96 | 3 | 0 | 0 | 1 | 104 | 8 | 9 | 2 | 0 | 0 | 1 | 19 | 8 | 17 | 9 | 1 | 0 | 2 | 35 | 292 |
| 9:30 AM | 8 | 102 | 3 | 0 | 0 | 19 | 113 | 3 | 120 | 2 | 0 | 0 | 0 | 125 | 5 | 4 | 2 | 0 | 0 | 3 | 11 | 10 | 10 | 10 | 0 | 0 | 3 | 30 | 279 |
| 9:45 AM | 5 | 129 | 8 | 0 | 0 | 3 | 142 | 1 | 134 | 9 | 1 | 0 | 0 | 145 | 12 | 5 | 0 | 0 | 0 | 2 | 17 | 8 | 5 | 10 | 1 | 0 | 0 | 24 | 328 |
| Hourly Total | 31 | 422 | 27 | 0 | 0 | 32 | 480 | 13 | 475 | 19 | 1 | 0 | 1 | 508 | 33 | 21 | 9 | 0 | 0 | 6 | 63 | 42 | 35 | 42 | 5 | 0 | 5 | 124 | 1175 |
| 10:00 AM | 2 | 117 | 0 | 0 | 0 | 5 | 119 | 2 | 113 | 3 | 0 | 0 | 2 | 118 | 6 | 12 | 4 | 0 | 0 | 2 | 22 | 10 | 6 | 13 | 0 | 0 | 0 | 29 | 288 |
| 10:15 AM | 15 | 113 | 8 | 0 | 0 | 24 | 136 | 2 | 124 | 8 | 0 | 0 | 9 | 134 | 17 | 12 | 12 | 0 | 0 | 7 | 41 | 21 | 6 | 8 | 0 | 0 | 7 | 35 | 346 |
| 10:30 AM | 6 | 123 | 8 | 0 | 0 | 4 | 137 | 1 | 160 | 7 | 0 | 0 | 6 | 168 | 13 | 12 | 5 | 0 | 0 | 0 | 30 | 17 | 9 | 11 | 0 | 1 | 0 | 38 | 373 |
| 10:45 AM | 10 | 140 | 8 | 0 | 0 | 2 | 158 | 3 | 142 | 7 | 0 | 0 | 0 | 152 | 4 | 6 | 3 | 1 | 0 | 0 | 14 | 9 | 8 | 11 | 0 | 0 | 0 | 28 | 352 |
| Hourly Total | 33 | 493 | 24 | 0 | 0 | 35 | 550 | 8 | 539 | 25 | 0 | 0 | 17 | 572 | 40 | 42 | 24 | 1 | 0 | 9 | 107 | 57 | 29 | 43 | 0 | 1 | 7 | 130 | 1359 |
| 11:00 AM | 7 | 149 | 6 | 1 | 0 | 5 | 163 | 1 | 133 | 6 | 1 | 0 | 0 | 141 | 6 | 17 | 7 | 0 | 0 | 0 | 30 | 19 | 8 | 4 | 4 | 0 | 0 | 35 | 369 |
| 11:15 AM | 5 | 130 | 3 | 0 | 0 | 11 | 138 | 8 | 144 | 10 | 1 | 0 | 0 | 163 | 6 | 12 | 7 | 0 | 0 | 0 | 25 | 15 | 23 | 7 | 0 | 0 | 1 | 45 | 371 |
| Grand Total | 76 | 1194 | 60 | 1 | 0 | 83 | 1331 | 30 | 1291 | 60 | 3 | 0 | 18 | 1384 | 85 | 92 | 47 | 1 | 0 | 15 | 225 | 133 | 95 | 96 | 9 | 1 | 13 | 334 | 3274 |
| Approach % | 5.7 | 89.7 | 4.5 | 0.1 | 0.0 | - | - | 2.2 | 93.3 | 4.3 | 0.2 | 0.0 | - | - | 37.8 | 40.9 | 20.9 | 0.4 | 0.0 | - | - | 39.8 | 28.4 | 28.7 | 2.7 | 0.3 | - | - | - |
| Total % | 2.3 | 36.5 | 1.8 | 0.0 | 0.0 | - | 40.7 | 0.9 | 39.4 | 1.8 | 0.1 | 0.0 | - | 42.3 | 2.6 | 2.8 | 1.4 | 0.0 | 0.0 | - | 6.9 | 4.1 | 2.9 | 2.9 | 0.3 | 0.0 | - | 10.2 | - |
| Lights | 76 | 1186 | 60 | 1 | 0 | - | 1323 | 28 | 1288 | 60 | 3 | 0 | - | 1379 | 85 | 92 | 47 | 1 | 0 | - | 225 | 132 | 95 | 96 | 9 | 1 | - | 333 | 3260 |
| % Lights | 100.0 | 99.3 | 100.0 | 100.0 | - | - | 99.4 | 93.3 | 99.8 | 100.0 | 100.0 | - | - | 99.6 | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 99.2 | 100.0 | 100.0 | 100.0 | 100.0 | - | 99.7 | 99.6 |
| Buses | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Trucks | 0 | 8 | 0 | 0 | 0 | - | 8 | 2 | 3 | 0 | 0 | 0 | - | 5 | 0 | 0 | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | 0 | 0 | - | 1 | 14 |
| % Trucks | 0.0 | 0.7 | 0.0 | 0.0 | - | - | 0.6 | 6.7 | 0.2 | 0.0 | 0.0 | - | - | 0.4 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.3 | 0.4 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 6.7 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 83 | - | - | - | - | - | - | 18 | - | - | - | - | - | - | 14 | - | - | - | - | - | - | 13 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 93.3 | - | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Lancaster Ave & Aberdeen Ave
Sunday, September 9, 2018
Location: 40.043737, -75.381298

Count Name: Lancaster Ave/Aberdeen Ave-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Data Plot

Radnor, PA
Lancaster Ave & Aberdeen Ave
Sunday, September 9, 2018
Location: 40.043737, -75.381298

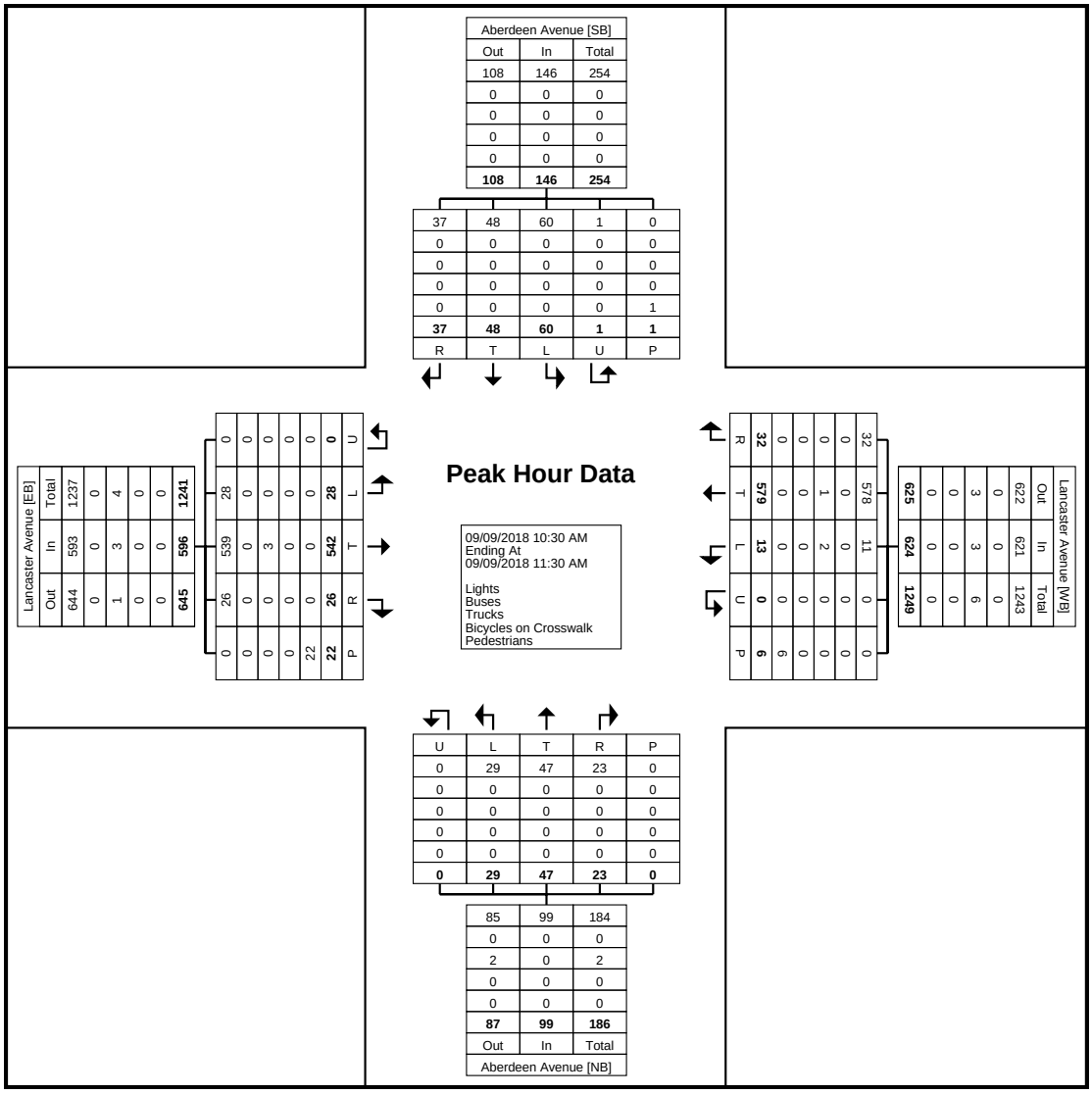
Count Name: Lancaster Ave/Aberdeen Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Peak Hour Data (10:30 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Aberdeen Avenue Northbound | | | | | | | Aberdeen Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 10:30 AM | 6 | 123 | 8 | 0 | 0 | 4 | 137 | 1 | 160 | 7 | 0 | 0 | 6 | 168 | 13 | 12 | 5 | 0 | 0 | 0 | 30 | 17 | 9 | 11 | 0 | 1 | 0 | 38 | 373 |
| 10:45 AM | 10 | 140 | 8 | 0 | 0 | 2 | 158 | 3 | 142 | 7 | 0 | 0 | 0 | 152 | 4 | 6 | 3 | 1 | 0 | 0 | 14 | 9 | 8 | 11 | 0 | 0 | 0 | 28 | 352 |
| 11:00 AM | 7 | 149 | 6 | 1 | 0 | 5 | 163 | 1 | 133 | 6 | 1 | 0 | 0 | 141 | 6 | 17 | 7 | 0 | 0 | 0 | 30 | 19 | 8 | 4 | 4 | 0 | 0 | 35 | 369 |
| 11:15 AM | 5 | 130 | 3 | 0 | 0 | 11 | 138 | 8 | 144 | 10 | 1 | 0 | 0 | 163 | 6 | 12 | 7 | 0 | 0 | 0 | 25 | 15 | 23 | 7 | 0 | 0 | 1 | 45 | 371 |
| Total | 28 | 542 | 25 | 1 | 0 | 22 | 596 | 13 | 579 | 30 | 2 | 0 | 6 | 624 | 29 | 47 | 22 | 1 | 0 | 0 | 99 | 60 | 48 | 33 | 4 | 1 | 1 | 146 | 1465 |
| Approach % | 4.7 | 90.9 | 4.2 | 0.2 | 0.0 | - | - | 2.1 | 92.8 | 4.8 | 0.3 | 0.0 | - | - | 29.3 | 47.5 | 22.2 | 1.0 | 0.0 | - | - | 41.1 | 32.9 | 22.6 | 2.7 | 0.7 | - | - | - |
| Total % | 1.9 | 37.0 | 1.7 | 0.1 | 0.0 | - | 40.7 | 0.9 | 39.5 | 2.0 | 0.1 | 0.0 | - | 42.6 | 2.0 | 3.2 | 1.5 | 0.1 | 0.0 | - | 6.8 | 4.1 | 3.3 | 2.3 | 0.3 | 0.1 | - | 10.0 | - |
| PHF | 0.700 | 0.909 | 0.781 | 0.250 | 0.000 | - | 0.914 | 0.406 | 0.905 | 0.750 | 0.500 | 0.000 | - | 0.929 | 0.558 | 0.691 | 0.786 | 0.250 | 0.000 | - | 0.825 | 0.789 | 0.522 | 0.750 | 0.250 | 0.250 | - | 0.811 | 0.982 |
| Lights | 28 | 539 | 25 | 1 | 0 | - | 593 | 11 | 578 | 30 | 2 | 0 | - | 621 | 29 | 47 | 22 | 1 | 0 | - | 99 | 60 | 48 | 33 | 4 | 1 | - | 146 | 1459 |
| % Lights | 100.0 | 99.4 | 100.0 | 100.0 | - | - | 99.5 | 84.6 | 99.8 | 100.0 | 100.0 | - | - | 99.5 | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | - | 100.0 | 99.6 |
| Buses | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Trucks | 0 | 3 | 0 | 0 | 0 | - | 3 | 2 | 1 | 0 | 0 | 0 | - | 3 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 6 |
| % Trucks | 0.0 | 0.6 | 0.0 | 0.0 | - | - | 0.5 | 15.4 | 0.2 | 0.0 | 0.0 | - | - | 0.5 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.4 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 22 | - | - | - | - | - | - | 6 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 1 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Lancaster Ave & Aberdeen Ave
Sunday, September 9, 2018
Location: 40.043737, -75.381298

Count Name: Lancaster Ave/Aberdeen Ave-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Peak Hour Data Plot (10:30 AM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Radnor, PA
Lancaster Ave & Wayne Ave
Tuesday, September 11, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Wayne Avenue Northbound | | | | | | | Wayne Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 7:00 AM | 5 | 131 | 5 | 0 | 0 | 3 | 141 | 8 | 178 | 14 | 0 | 0 | 7 | 200 | 2 | 11 | 5 | 1 | 0 | 2 | 19 | 19 | 11 | 3 | 0 | 0 | 0 | 33 | 393 |
| 7:15 AM | 1 | 164 | 8 | 0 | 0 | 1 | 173 | 6 | 159 | 13 | 0 | 0 | 6 | 178 | 6 | 11 | 6 | 0 | 0 | 0 | 23 | 11 | 17 | 7 | 0 | 0 | 1 | 35 | 409 |
| 7:30 AM | 1 | 147 | 4 | 0 | 0 | 3 | 152 | 9 | 183 | 20 | 0 | 0 | 26 | 212 | 1 | 14 | 10 | 0 | 0 | 3 | 25 | 22 | 26 | 4 | 0 | 0 | 0 | 52 | 441 |
| 7:45 AM | 4 | 196 | 7 | 0 | 0 | 0 | 207 | 7 | 187 | 26 | 0 | 0 | 8 | 220 | 15 | 23 | 18 | 0 | 0 | 1 | 56 | 38 | 28 | 7 | 1 | 0 | 0 | 74 | 557 |
| Hourly Total | 11 | 638 | 24 | 0 | 0 | 7 | 673 | 30 | 707 | 73 | 0 | 0 | 47 | 810 | 24 | 59 | 39 | 1 | 0 | 6 | 123 | 90 | 82 | 21 | 1 | 0 | 1 | 194 | 1800 |
| 8:00 AM | 6 | 165 | 7 | 0 | 0 | 2 | 178 | 6 | 194 | 36 | 1 | 0 | 8 | 237 | 11 | 28 | 8 | 0 | 0 | 3 | 47 | 21 | 24 | 7 | 2 | 0 | 0 | 54 | 516 |
| 8:15 AM | 9 | 142 | 4 | 0 | 0 | 8 | 155 | 7 | 193 | 24 | 0 | 1 | 4 | 225 | 6 | 18 | 11 | 0 | 0 | 1 | 35 | 18 | 23 | 4 | 0 | 0 | 5 | 45 | 460 |
| 8:30 AM | 10 | 147 | 7 | 0 | 0 | 3 | 164 | 12 | 213 | 25 | 0 | 0 | 4 | 250 | 8 | 29 | 6 | 0 | 0 | 2 | 43 | 16 | 16 | 14 | 0 | 0 | 6 | 46 | 503 |
| 8:45 AM | 13 | 137 | 5 | 0 | 0 | 5 | 155 | 4 | 180 | 28 | 0 | 0 | 5 | 212 | 5 | 38 | 7 | 0 | 0 | 7 | 50 | 28 | 25 | 6 | 0 | 0 | 3 | 59 | 476 |
| Hourly Total | 38 | 591 | 23 | 0 | 0 | 18 | 652 | 29 | 780 | 113 | 1 | 1 | 21 | 924 | 30 | 113 | 32 | 0 | 0 | 13 | 175 | 83 | 88 | 31 | 2 | 0 | 14 | 204 | 1955 |
| 9:00 AM | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hourly Total | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2:00 PM | 12 | 142 | 7 | 0 | 0 | 5 | 161 | 5 | 144 | 22 | 0 | 0 | 14 | 171 | 6 | 10 | 13 | 0 | 0 | 5 | 29 | 29 | 20 | 7 | 2 | 0 | 1 | 58 | 419 |
| 2:15 PM | 8 | 155 | 10 | 0 | 0 | 7 | 173 | 7 | 157 | 24 | 2 | 0 | 7 | 190 | 7 | 20 | 8 | 0 | 0 | 8 | 35 | 32 | 14 | 20 | 3 | 0 | 3 | 69 | 467 |
| 2:30 PM | 6 | 180 | 11 | 0 | 0 | 7 | 197 | 8 | 126 | 23 | 0 | 0 | 5 | 157 | 11 | 18 | 12 | 0 | 0 | 8 | 41 | 31 | 18 | 4 | 1 | 0 | 7 | 54 | 449 |
| 2:45 PM | 8 | 149 | 9 | 0 | 0 | 11 | 166 | 14 | 151 | 13 | 0 | 0 | 11 | 178 | 10 | 19 | 11 | 0 | 0 | 4 | 40 | 28 | 25 | 9 | 0 | 0 | 3 | 62 | 446 |
| Hourly Total | 34 | 626 | 37 | 0 | 0 | 30 | 697 | 34 | 578 | 82 | 2 | 0 | 37 | 696 | 34 | 67 | 44 | 0 | 0 | 25 | 145 | 120 | 77 | 40 | 6 | 0 | 14 | 243 | 1781 |
| 3:00 PM | 11 | 169 | 12 | 0 | 0 | 10 | 192 | 7 | 141 | 20 | 1 | 0 | 38 | 169 | 7 | 15 | 10 | 0 | 0 | 10 | 32 | 32 | 14 | 11 | 0 | 0 | 13 | 57 | 450 |
| 3:15 PM | 8 | 176 | 8 | 0 | 0 | 13 | 192 | 10 | 140 | 17 | 0 | 0 | 15 | 167 | 8 | 25 | 12 | 0 | 0 | 6 | 45 | 33 | 28 | 7 | 0 | 0 | 7 | 68 | 472 |
| 3:30 PM | 6 | 170 | 12 | 0 | 0 | 10 | 188 | 4 | 148 | 28 | 0 | 0 | 17 | 180 | 5 | 11 | 9 | 0 | 0 | 7 | 25 | 27 | 25 | 10 | 0 | 0 | 15 | 62 | 455 |
| 3:45 PM | 2 | 172 | 11 | 0 | 0 | 8 | 185 | 11 | 159 | 20 | 0 | 0 | 8 | 190 | 6 | 23 | 11 | 0 | 0 | 4 | 40 | 22 | 34 | 13 | 2 | 0 | 7 | 71 | 486 |
| Hourly Total | 27 | 687 | 43 | 0 | 0 | 41 | 757 | 32 | 588 | 85 | 1 | 0 | 78 | 706 | 26 | 74 | 42 | 0 | 0 | 27 | 142 | 114 | 101 | 41 | 2 | 0 | 42 | 258 | 1863 |
| 4:00 PM | 6 | 168 | 8 | 0 | 0 | 9 | 182 | 13 | 136 | 23 | 2 | 0 | 11 | 174 | 3 | 12 | 17 | 0 | 0 | 2 | 32 | 20 | 22 | 7 | 1 | 0 | 3 | 50 | 438 |
| 4:15 PM | 4 | 135 | 8 | 0 | 0 | 6 | 147 | 12 | 169 | 24 | 0 | 0 | 7 | 205 | 7 | 14 | 8 | 0 | 0 | 3 | 29 | 27 | 22 | 6 | 0 | 0 | 3 | 55 | 436 |
| 4:30 PM | 7 | 183 | 11 | 0 | 0 | 2 | 201 | 4 | 177 | 18 | 0 | 0 | 3 | 199 | 6 | 18 | 7 | 0 | 0 | 4 | 31 | 35 | 34 | 7 | 0 | 0 | 3 | 76 | 507 |
| 4:45 PM | 8 | 173 | 17 | 0 | 0 | 9 | 198 | 12 | 164 | 26 | 0 | 0 | 6 | 202 | 6 | 19 | 18 | 0 | 0 | 4 | 43 | 27 | 43 | 17 | 0 | 0 | 2 | 87 | 530 |
| Hourly Total | 25 | 659 | 44 | 0 | 0 | 26 | 728 | 41 | 646 | 91 | 2 | 0 | 27 | 780 | 22 | 63 | 50 | 0 | 0 | 13 | 135 | 109 | 121 | 37 | 1 | 0 | 11 | 268 | 1911 |
| 5:00 PM | 12 | 196 | 12 | 0 | 0 | 10 | 220 | 6 | 160 | 19 | 0 | 0 | 7 | 185 | 6 | 20 | 9 | 0 | 0 | 1 | 35 | 24 | 27 | 14 | 0 | 0 | 13 | 65 | 505 |
| 5:15 PM | 13 | 187 | 13 | 0 | 0 | 11 | 213 | 10 | 169 | 26 | 2 | 0 | 12 | 207 | 4 | 31 | 5 | 0 | 0 | 2 | 40 | 20 | 40 | 8 | 0 | 0 | 5 | 68 | 528 |
| 5:30 PM | 10 | 149 | 16 | 0 | 0 | 8 | 175 | 7 | 163 | 23 | 1 | 0 | 13 | 194 | 5 | 19 | 5 | 1 | 0 | 8 | 30 | 21 | 34 | 19 | 0 | 0 | 9 | 74 | 473 |
| 5:45 PM | 20 | 165 | 12 | 0 | 0 | 3 | 197 | 6 | 194 | 17 | 1 | 0 | 11 | 218 | 7 | 22 | 15 | 0 | 0 | 1 | 44 | 26 | 36 | 6 | 1 | 0 | 3 | 69 | 528 |
| Hourly Total | 55 | 697 | 53 | 0 | 0 | 32 | 805 | 29 | 686 | 85 | 4 | 0 | 43 | 804 | 22 | 92 | 34 | 1 | 0 | 12 | 149 | 91 | 137 | 47 | 1 | 0 | 30 | 276 | 2034 |
| Grand Total | 190 | 3899 | 224 | 0 | 0 | 154 | 4313 | 195 | 3985 | 529 | 10 | 1 | 253 | 4720 | 158 | 468 | 241 | 2 | 0 | 96 | 869 | 607 | 606 | 217 | 13 | 0 | 112 | 1443 | 11345 |
| Approach % | 4.4 | 90.4 | 5.2 | 0.0 | 0.0 | - | - | 4.1 | 84.4 | 11.2 | 0.2 | 0.0 | - | - | 18.2 | 53.9 | 27.7 | 0.2 | 0.0 | - | - | 42.1 | 42.0 | 15.0 | 0.9 | 0.0 | - | - | - |
| Total % | 1.7 | 34.4 | 2.0 | 0.0 | 0.0 | - | 38.0 | 1.7 | 35.1 | 4.7 | 0.1 | 0.0 | - | 41.6 | 1.4 | 4.1 | 2.1 | 0.0 | 0.0 | - | 7.7 | 5.4 | 5.3 | 1.9 | 0.1 | 0.0 | - | 12.7 | - |
| Lights | 183 | 3804 | 220 | 0 | 0 | - | 4207 | 189 | 3877 | 514 | 9 | 1 | - | 4590 | 150 | 455 | 229 | 2 | 0 | - | 836 | 584 | 582 | 211 | 13 | 0 | - | 1390 | 11023 |
| % Lights | 96.3 | 97.6 | 98.2 | - | - | - | 97.5 | 96.9 | 97.3 | 97.2 | 90.0 | 100.0 | - | 97.2 | 94.9 | 97.2 | 95.0 | 100.0 | - | - | 96.2 | 96.2 | 96.0 | 97.2 | 100.0 | - | - | 96.3 | 97.2 |
| Buses | 1 | 17 | 1 | 0 | 0 | - | 19 | 1 | 27 | 2 | 0 | 0 | - | 30 | 1 | 7 | 2 | 0 | 0 | - | 10 | 10 | 8 | 0 | 0 | 0 | - | 18 | 77 |
| % Buses | 0.5 | 0.4 | 0.4 | - | - | - | 0.4 | 0.5 | 0.7 | 0.4 | 0.0 | 0.0 | - | 0.6 | 0.6 | 1.5 | 0.8 | 0.0 | - | - | 1.2 | 1.6 | 1.3 | 0.0 | 0.0 | - | - | 1.2 | 0.7 |
| Trucks | 6 | 78 | 3 | 0 | 0 | - | 87 | 5 | 81 | 13 | 1 | 0 | - | 100 | 7 | 6 | 10 | 0 | 0 | - | 23 | 13 | 16 | 6 | 0 | 0 | - | 35 | 245 |
| % Trucks | 3.2 | 2.0 | 1.3 | - | - | - | 2.0 | 2.6 | 2.0 | 2.5 | 10.0 | 0.0 | - | 2.1 | 4.4 | 1.3 | 4.1 | 0.0 | - | - | 2.6 | 2.1 | 2.6 | 2.8 | 0.0 | - | - | 2.4 | 2.2 |
| Bicycles on Crosswalk | - | - | - | - | - | 3 | - | - | - | - | - | - | 3 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 1.9 | - | - | - | - | - | - | 1.2 | - | - | - | - | - | - | 1.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 151 | - | - | - | - | - | - | 250 | - | - | - | - | - | - | 95 | - | - | - | - | - | - | 112 | - | - |
| % Pedestrians | - | - | - | - | - | 98.1 | - | - | - | - | - | - | 98.8 | - | - | - | - | - | - | 99.0 | - | - | - | - | - | - | 100.0 | - | - |

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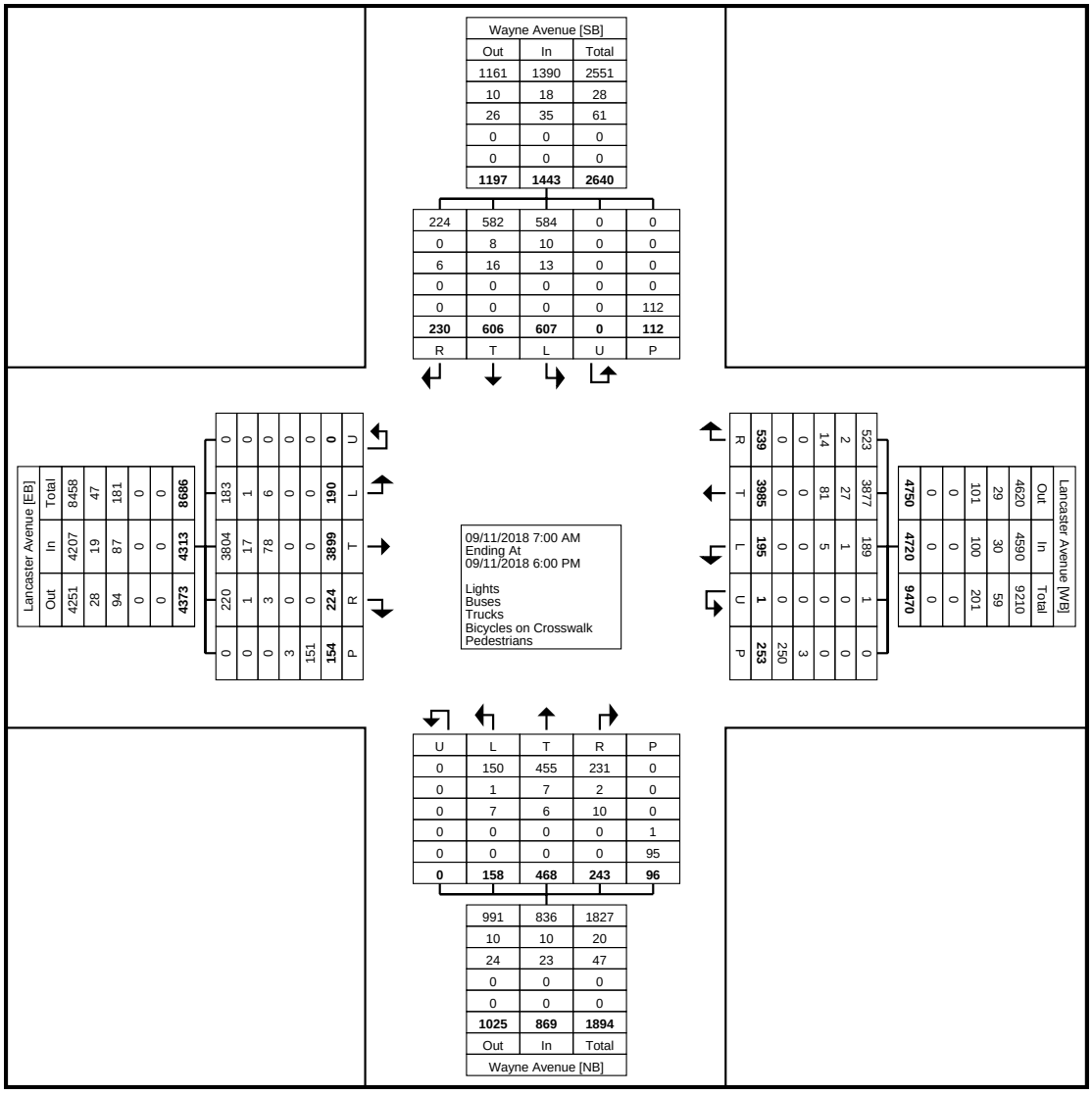
Radnor, PA
Lancaster Ave & Wayne Ave
Tuesday, September 11, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave
Site Code:
Start Date: 09/11/2018
Page No: 2




Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & Wayne Ave
Tuesday, September 11, 2018
Location: 40.044058, -75.387867

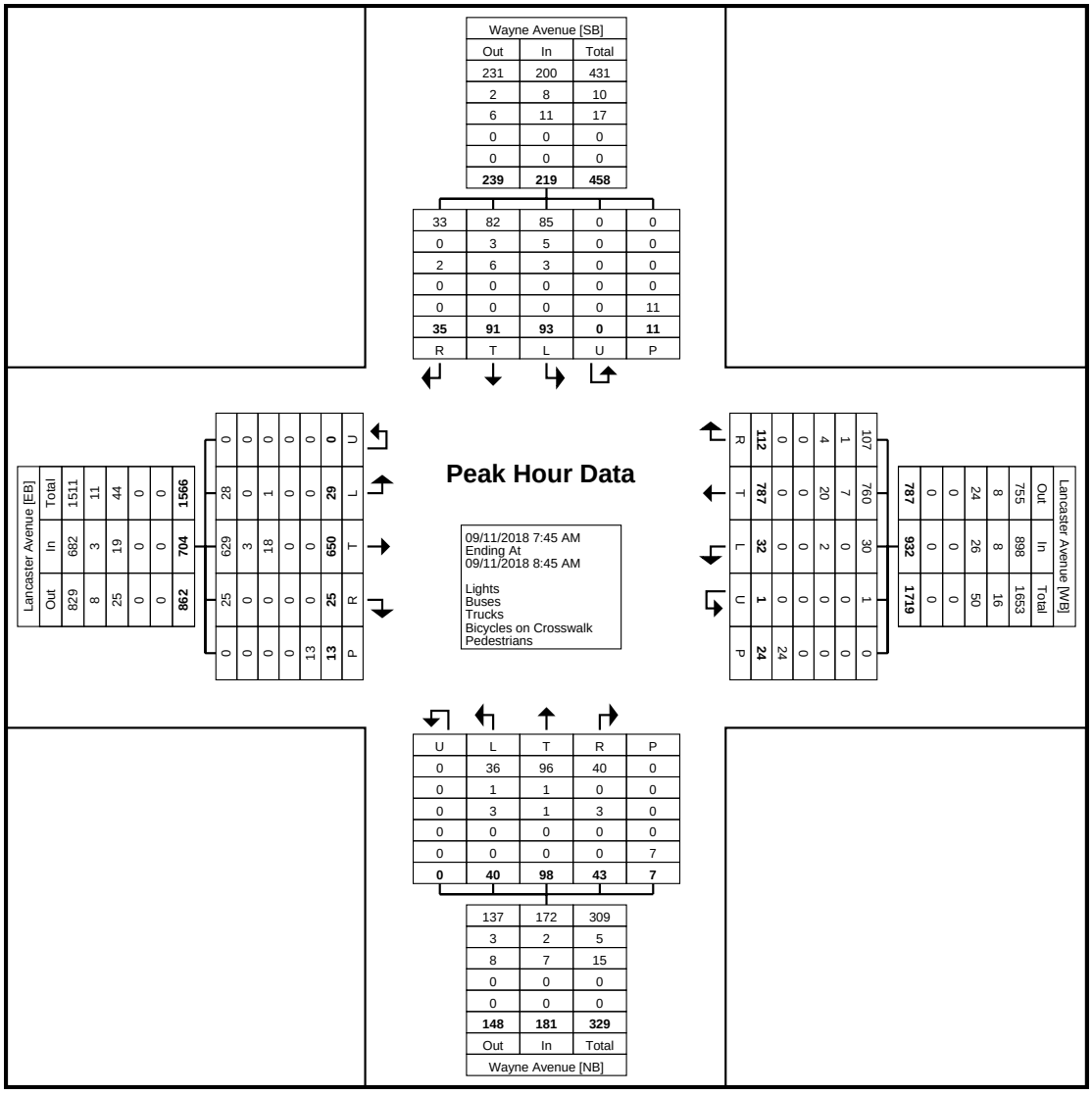
Count Name: Lancaster Ave/Wayne Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (7:45 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Wayne Avenue Northbound | | | | | | | Wayne Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 7:45 AM | 4 | 196 | 7 | 0 | 0 | 0 | 207 | 7 | 187 | 26 | 0 | 0 | 8 | 220 | 15 | 23 | 18 | 0 | 0 | 1 | 56 | 38 | 28 | 7 | 1 | 0 | 0 | 74 | 557 |
| 8:00 AM | 6 | 165 | 7 | 0 | 0 | 2 | 178 | 6 | 194 | 36 | 1 | 0 | 8 | 237 | 11 | 28 | 8 | 0 | 0 | 3 | 47 | 21 | 24 | 7 | 2 | 0 | 0 | 54 | 516 |
| 8:15 AM | 9 | 142 | 4 | 0 | 0 | 8 | 155 | 7 | 193 | 24 | 0 | 1 | 4 | 225 | 6 | 18 | 11 | 0 | 0 | 1 | 35 | 18 | 23 | 4 | 0 | 0 | 5 | 45 | 460 |
| 8:30 AM | 10 | 147 | 7 | 0 | 0 | 3 | 164 | 12 | 213 | 25 | 0 | 0 | 4 | 250 | 8 | 29 | 6 | 0 | 0 | 2 | 43 | 16 | 16 | 14 | 0 | 0 | 6 | 46 | 503 |
| Total | 29 | 650 | 25 | 0 | 0 | 13 | 704 | 32 | 787 | 111 | 1 | 1 | 24 | 932 | 40 | 98 | 43 | 0 | 0 | 7 | 181 | 93 | 91 | 32 | 3 | 0 | 11 | 219 | 2036 |
| Approach % | 4.1 | 92.3 | 3.6 | 0.0 | 0.0 | - | - | 3.4 | 84.4 | 11.9 | 0.1 | 0.1 | - | - | 22.1 | 54.1 | 23.8 | 0.0 | 0.0 | - | - | 42.5 | 41.6 | 14.6 | 1.4 | 0.0 | - | - | - |
| Total % | 1.4 | 31.9 | 1.2 | 0.0 | 0.0 | - | 34.6 | 1.6 | 38.7 | 5.5 | 0.0 | 0.0 | - | 45.8 | 2.0 | 4.8 | 2.1 | 0.0 | 0.0 | - | 8.9 | 4.6 | 4.5 | 1.6 | 0.1 | 0.0 | - | 10.8 | - |
| PHF | 0.725 | 0.829 | 0.893 | 0.000 | 0.000 | - | 0.850 | 0.667 | 0.924 | 0.771 | 0.250 | 0.250 | - | 0.932 | 0.667 | 0.845 | 0.597 | 0.000 | 0.000 | - | 0.808 | 0.612 | 0.813 | 0.571 | 0.375 | 0.000 | - | 0.740 | 0.914 |
| Lights | 28 | 629 | 25 | 0 | 0 | - | 682 | 30 | 760 | 106 | 1 | 1 | - | 898 | 36 | 96 | 40 | 0 | 0 | - | 172 | 85 | 82 | 30 | 3 | 0 | - | 200 | 1952 |
| % Lights | 96.6 | 96.8 | 100.0 | - | - | - | 96.9 | 93.8 | 96.6 | 95.5 | 100.0 | 100.0 | - | 96.4 | 90.0 | 98.0 | 93.0 | - | - | - | 95.0 | 91.4 | 90.1 | 93.8 | 100.0 | - | - | 91.3 | 95.9 |
| Buses | 0 | 3 | 0 | 0 | 0 | - | 3 | 0 | 7 | 1 | 0 | 0 | - | 8 | 1 | 1 | 0 | 0 | 0 | - | 2 | 5 | 3 | 0 | 0 | 0 | - | 8 | 21 |
| % Buses | 0.0 | 0.5 | 0.0 | - | - | - | 0.4 | 0.0 | 0.9 | 0.9 | 0.0 | 0.0 | - | 0.9 | 2.5 | 1.0 | 0.0 | - | - | - | 1.1 | 5.4 | 3.3 | 0.0 | 0.0 | - | - | 3.7 | 1.0 |
| Trucks | 1 | 18 | 0 | 0 | 0 | - | 19 | 2 | 20 | 4 | 0 | 0 | - | 26 | 3 | 1 | 3 | 0 | 0 | - | 7 | 3 | 6 | 2 | 0 | 0 | - | 11 | 63 |
| % Trucks | 3.4 | 2.8 | 0.0 | - | - | - | 2.7 | 6.3 | 2.5 | 3.6 | 0.0 | 0.0 | - | 2.8 | 7.5 | 1.0 | 7.0 | - | - | - | 3.9 | 3.2 | 6.6 | 6.3 | 0.0 | - | - | 5.0 | 3.1 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 13 | - | - | - | - | - | - | 24 | - | - | - | - | - | - | 7 | - | - | - | - | - | - | 11 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Lancaster Ave & Wayne Ave
Tuesday, September 11, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave
Site Code:
Start Date: 09/11/2018


Turning Movement Peak Hour Data Plot (7:45 AM)

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Radnor, PA
Lancaster Ave & Wayne Ave
Tuesday, September 11, 2018
Location: 40.044058, -75.387867

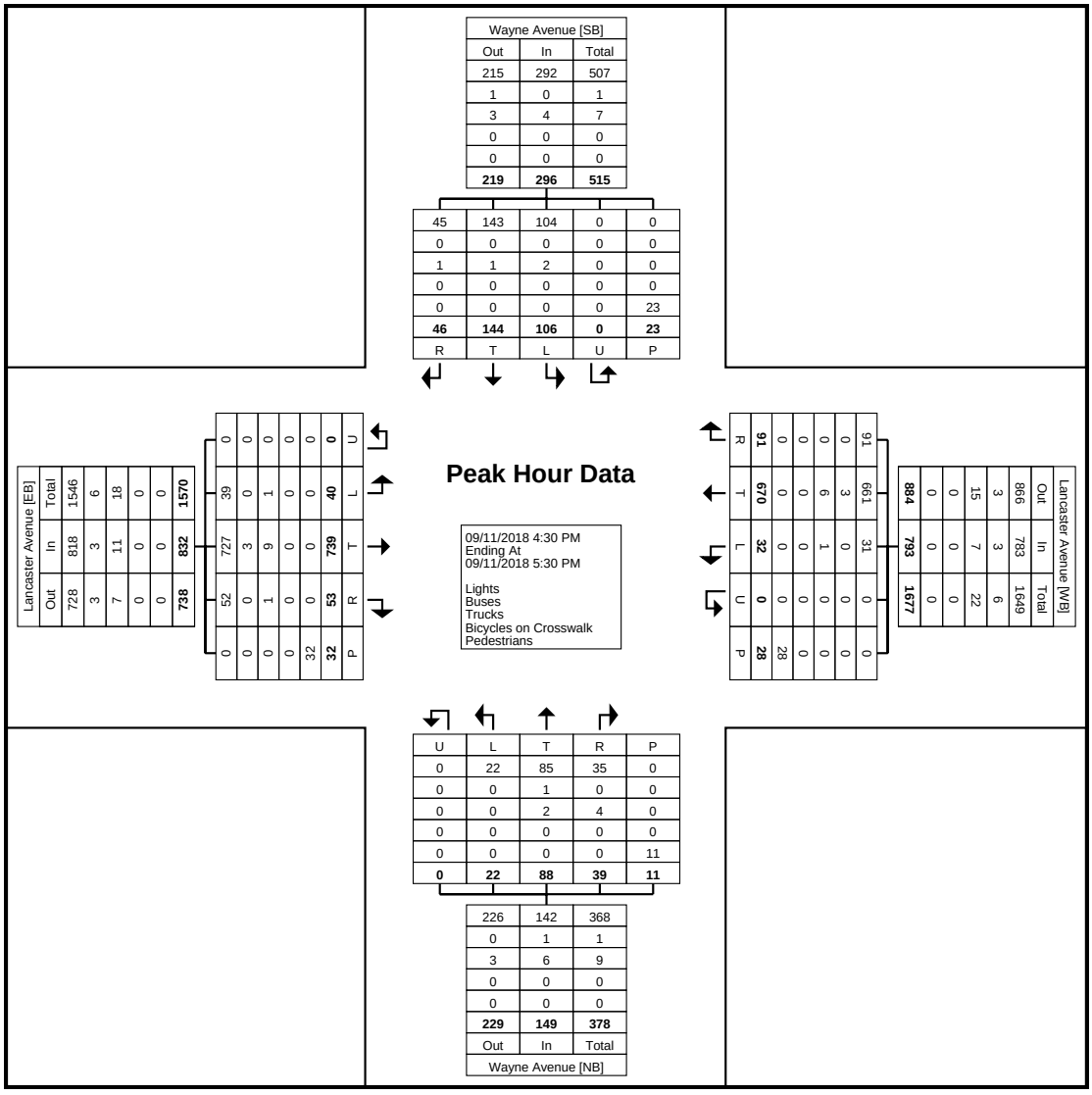
Count Name: Lancaster Ave/Wayne Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (4:30 PM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Wayne Avenue Northbound | | | | | | | Wayne Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 4:30 PM | 7 | 183 | 11 | 0 | 0 | 2 | 201 | 4 | 177 | 18 | 0 | 0 | 3 | 199 | 6 | 18 | 7 | 0 | 0 | 4 | 31 | 35 | 34 | 7 | 0 | 0 | 3 | 76 | 507 |
| 4:45 PM | 8 | 173 | 17 | 0 | 0 | 9 | 198 | 12 | 164 | 26 | 0 | 0 | 6 | 202 | 6 | 19 | 18 | 0 | 0 | 4 | 43 | 27 | 43 | 17 | 0 | 0 | 2 | 87 | 530 |
| 5:00 PM | 12 | 196 | 12 | 0 | 0 | 10 | 220 | 6 | 160 | 19 | 0 | 0 | 7 | 185 | 6 | 20 | 9 | 0 | 0 | 1 | 35 | 24 | 27 | 14 | 0 | 0 | 13 | 65 | 505 |
| 5:15 PM | 13 | 187 | 13 | 0 | 0 | 11 | 213 | 10 | 169 | 26 | 2 | 0 | 12 | 207 | 4 | 31 | 5 | 0 | 0 | 2 | 40 | 20 | 40 | 8 | 0 | 0 | 5 | 68 | 528 |
| Total | 40 | 739 | 53 | 0 | 0 | 32 | 832 | 32 | 670 | 89 | 2 | 0 | 28 | 793 | 22 | 88 | 39 | 0 | 0 | 11 | 149 | 106 | 144 | 46 | 0 | 0 | 23 | 296 | 2070 |
| Approach % | 4.8 | 88.8 | 6.4 | 0.0 | 0.0 | - | - | 4.0 | 84.5 | 11.2 | 0.3 | 0.0 | - | - | 14.8 | 59.1 | 26.2 | 0.0 | 0.0 | - | - | 35.8 | 48.6 | 15.5 | 0.0 | 0.0 | - | - | - |
| Total % | 1.9 | 35.7 | 2.6 | 0.0 | 0.0 | - | 40.2 | 1.5 | 32.4 | 4.3 | 0.1 | 0.0 | - | 38.3 | 1.1 | 4.3 | 1.9 | 0.0 | 0.0 | - | 7.2 | 5.1 | 7.0 | 2.2 | 0.0 | 0.0 | - | 14.3 | - |
| PHF | 0.769 | 0.943 | 0.779 | 0.000 | 0.000 | - | 0.945 | 0.667 | 0.946 | 0.856 | 0.250 | 0.000 | - | 0.958 | 0.917 | 0.710 | 0.542 | 0.000 | 0.000 | - | 0.866 | 0.757 | 0.837 | 0.676 | 0.000 | 0.000 | - | 0.851 | 0.976 |
| Lights | 39 | 727 | 52 | 0 | 0 | - | 818 | 31 | 661 | 89 | 2 | 0 | - | 783 | 22 | 85 | 35 | 0 | 0 | - | 142 | 104 | 143 | 45 | 0 | 0 | - | 292 | 2035 |
| % Lights | 97.5 | 98.4 | 98.1 | - | - | - | 98.3 | 96.9 | 98.7 | 100.0 | 100.0 | - | - | 98.7 | 100.0 | 96.6 | 89.7 | - | - | - | 95.3 | 98.1 | 99.3 | 97.8 | - | - | - | 98.6 | 98.3 |
| Buses | 0 | 3 | 0 | 0 | 0 | - | 3 | 0 | 3 | 0 | 0 | 0 | - | 3 | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 7 |
| % Buses | 0.0 | 0.4 | 0.0 | - | - | - | 0.4 | 0.0 | 0.4 | 0.0 | 0.0 | - | - | 0.4 | 0.0 | 1.1 | 0.0 | - | - | - | 0.7 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.3 |
| Trucks | 1 | 9 | 1 | 0 | 0 | - | 11 | 1 | 6 | 0 | 0 | 0 | - | 7 | 0 | 2 | 4 | 0 | 0 | - | 6 | 2 | 1 | 1 | 0 | 0 | - | 4 | 28 |
| % Trucks | 2.5 | 1.2 | 1.9 | - | - | - | 1.3 | 3.1 | 0.9 | 0.0 | 0.0 | - | - | 0.9 | 0.0 | 2.3 | 10.3 | - | - | - | 4.0 | 1.9 | 0.7 | 2.2 | - | - | - | 1.4 | 1.4 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 32 | - | - | - | - | - | - | 28 | - | - | - | - | - | - | 11 | - | - | - | - | - | - | 23 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Lancaster Ave & Wayne Ave
Tuesday, September 11, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave
Site Code:
Start Date: 09/11/2018


Turning Movement Peak Hour Data Plot (4:30 PM)

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Radnor, PA
Lancaster Ave & Wayne Ave
Saturday, September 8, 2018
Location: 40.044058, -75.387867

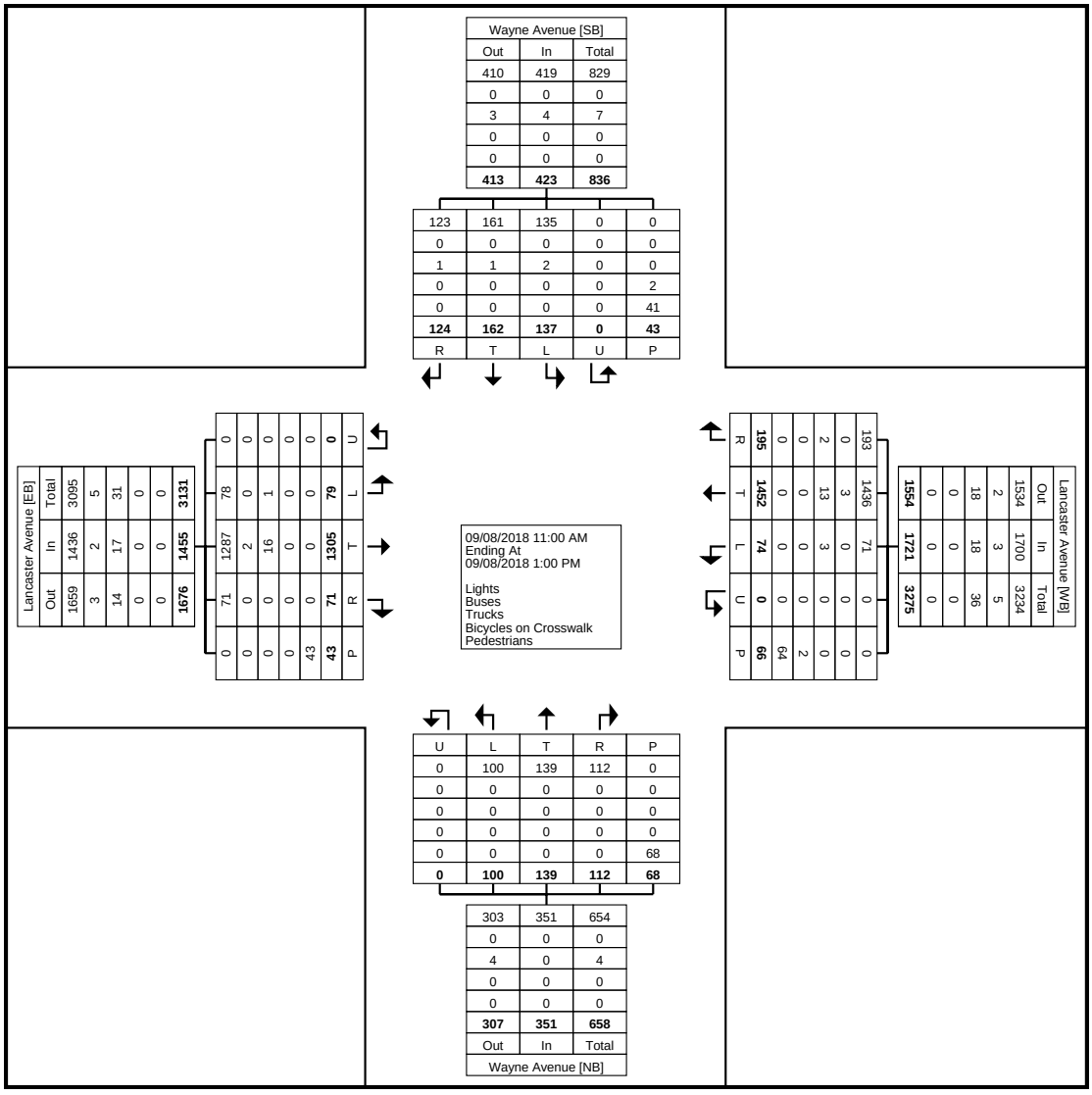
Count Name: Lancaster Ave/Wayne Ave-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Wayne Avenue Northbound | | | | | | | Wayne Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 11:00 AM | 6 | 146 | 7 | 0 | 0 | 2 | 159 | 10 | 164 | 20 | 0 | 0 | 11 | 194 | 8 | 10 | 10 | 0 | 0 | 3 | 28 | 16 | 22 | 15 | 0 | 0 | 2 | 53 | 434 |
| 11:15 AM | 13 | 151 | 7 | 0 | 0 | 5 | 171 | 11 | 183 | 25 | 0 | 0 | 7 | 219 | 9 | 13 | 7 | 1 | 0 | 7 | 30 | 17 | 14 | 19 | 0 | 0 | 1 | 50 | 470 |
| 11:30 AM | 8 | 165 | 11 | 1 | 0 | 1 | 185 | 4 | 157 | 25 | 0 | 0 | 17 | 186 | 18 | 22 | 14 | 0 | 0 | 3 | 54 | 15 | 22 | 11 | 0 | 0 | 6 | 48 | 473 |
| 11:45 AM | 9 | 181 | 12 | 0 | 0 | 14 | 202 | 17 | 174 | 17 | 0 | 0 | 6 | 208 | 19 | 13 | 24 | 1 | 0 | 2 | 57 | 11 | 17 | 16 | 0 | 0 | 7 | 44 | 511 |
| Hourly Total | 36 | 643 | 37 | 1 | 0 | 22 | 717 | 42 | 678 | 87 | 0 | 0 | 41 | 807 | 54 | 58 | 55 | 2 | 0 | 15 | 169 | 59 | 75 | 61 | 0 | 0 | 16 | 195 | 1888 |
| 12:00 PM | 9 | 171 | 11 | 0 | 0 | 5 | 191 | 10 | 200 | 21 | 1 | 0 | 7 | 232 | 12 | 20 | 16 | 2 | 0 | 10 | 50 | 18 | 17 | 24 | 0 | 0 | 8 | 59 | 532 |
| 12:15 PM | 10 | 167 | 7 | 0 | 0 | 8 | 184 | 8 | 213 | 22 | 1 | 0 | 6 | 244 | 15 | 21 | 15 | 0 | 0 | 22 | 51 | 18 | 26 | 13 | 0 | 0 | 2 | 57 | 536 |
| 12:30 PM | 10 | 170 | 8 | 0 | 0 | 5 | 188 | 9 | 182 | 24 | 0 | 0 | 8 | 215 | 14 | 26 | 12 | 0 | 0 | 13 | 52 | 20 | 19 | 7 | 0 | 0 | 6 | 46 | 501 |
| 12:45 PM | 14 | 154 | 7 | 0 | 0 | 3 | 175 | 5 | 179 | 39 | 0 | 0 | 4 | 223 | 5 | 14 | 10 | 0 | 0 | 8 | 29 | 22 | 25 | 19 | 0 | 0 | 11 | 66 | 493 |
| Hourly Total | 43 | 662 | 33 | 0 | 0 | 21 | 738 | 32 | 774 | 106 | 2 | 0 | 25 | 914 | 46 | 81 | 53 | 2 | 0 | 53 | 182 | 78 | 87 | 63 | 0 | 0 | 27 | 228 | 2062 |
| Grand Total | 79 | 1305 | 70 | 1 | 0 | 43 | 1455 | 74 | 1452 | 193 | 2 | 0 | 66 | 1721 | 100 | 139 | 108 | 4 | 0 | 68 | 351 | 137 | 162 | 124 | 0 | 0 | 43 | 423 | 3950 |
| Approach % | 5.4 | 89.7 | 4.8 | 0.1 | 0.0 | - | - | 4.3 | 84.4 | 11.2 | 0.1 | 0.0 | - | - | 28.5 | 39.6 | 30.8 | 1.1 | 0.0 | - | - | 32.4 | 38.3 | 29.3 | 0.0 | 0.0 | - | - | - |
| Total % | 2.0 | 33.0 | 1.8 | 0.0 | 0.0 | - | 36.8 | 1.9 | 36.8 | 4.9 | 0.1 | 0.0 | - | 43.6 | 2.5 | 3.5 | 2.7 | 0.1 | 0.0 | - | 8.9 | 3.5 | 4.1 | 3.1 | 0.0 | 0.0 | - | 10.7 | - |
| Lights | 78 | 1287 | 70 | 1 | 0 | - | 1436 | 71 | 1436 | 191 | 2 | 0 | - | 1700 | 100 | 139 | 108 | 4 | 0 | - | 351 | 135 | 161 | 123 | 0 | 0 | - | 419 | 3906 |
| % Lights | 98.7 | 98.6 | 100.0 | 100.0 | - | - | 98.7 | 95.9 | 98.9 | 99.0 | 100.0 | - | - | 98.8 | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 98.5 | 99.4 | 99.2 | - | - | - | 99.1 | 98.9 |
| Buses | 0 | 2 | 0 | 0 | 0 | - | 2 | 0 | 3 | 0 | 0 | 0 | - | 3 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 5 |
| % Buses | 0.0 | 0.2 | 0.0 | 0.0 | - | - | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 | - | - | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.1 |
| Trucks | 1 | 16 | 0 | 0 | 0 | - | 17 | 3 | 13 | 2 | 0 | 0 | - | 18 | 0 | 0 | 0 | 0 | 0 | - | 0 | 2 | 1 | 1 | 0 | 0 | - | 4 | 39 |
| % Trucks | 1.3 | 1.2 | 0.0 | 0.0 | - | - | 1.2 | 4.1 | 0.9 | 1.0 | 0.0 | - | - | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 1.5 | 0.6 | 0.8 | - | - | - | 0.9 | 1.0 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 2 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 2 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 3.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 4.7 | - | - |
| Pedestrians | - | - | - | - | - | 43 | - | - | - | - | - | - | 64 | - | - | - | - | - | - | 68 | - | - | - | - | - | - | 41 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 97.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 95.3 | - | - |

Radnor, PA
Lancaster Ave & Wayne Ave
Saturday, September 8, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave-Sat
Site Code:
Start Date: 09/08/2018


Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & Wayne Ave
Saturday, September 8, 2018
Location: 40.044058, -75.387867

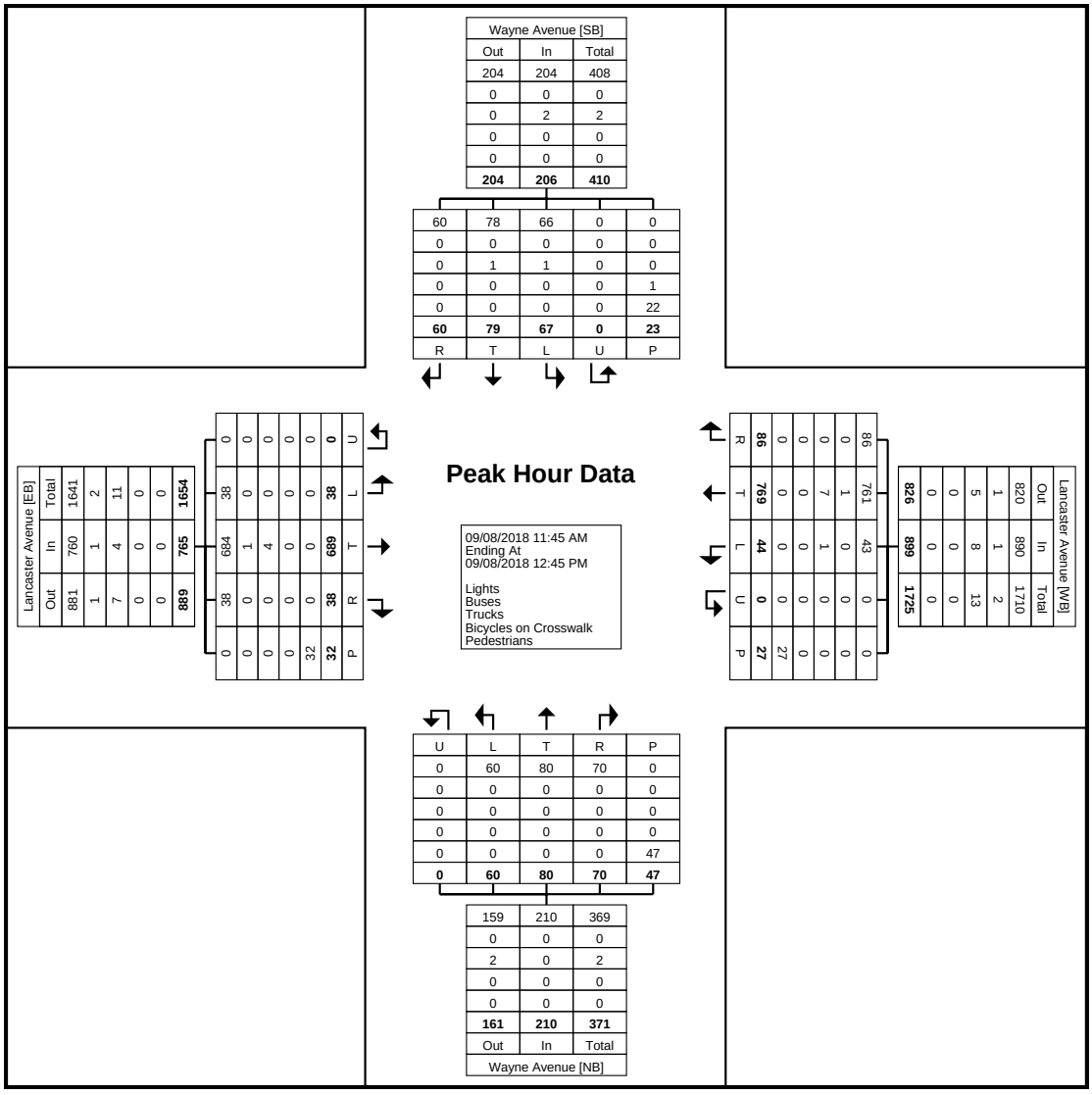
Count Name: Lancaster Ave/Wayne Ave-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Peak Hour Data (11:45 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Wayne Avenue Northbound | | | | | | | Wayne Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 11:45 AM | 9 | 181 | 12 | 0 | 0 | 14 | 202 | 17 | 174 | 17 | 0 | 0 | 6 | 208 | 19 | 13 | 24 | 1 | 0 | 2 | 57 | 11 | 17 | 16 | 0 | 0 | 7 | 44 | 511 |
| 12:00 PM | 9 | 171 | 11 | 0 | 0 | 5 | 191 | 10 | 200 | 21 | 1 | 0 | 7 | 232 | 12 | 20 | 16 | 2 | 0 | 10 | 50 | 18 | 17 | 24 | 0 | 0 | 8 | 59 | 532 |
| 12:15 PM | 10 | 167 | 7 | 0 | 0 | 8 | 184 | 8 | 213 | 22 | 1 | 0 | 6 | 244 | 15 | 21 | 15 | 0 | 0 | 22 | 51 | 18 | 26 | 13 | 0 | 0 | 2 | 57 | 536 |
| 12:30 PM | 10 | 170 | 8 | 0 | 0 | 5 | 188 | 9 | 182 | 24 | 0 | 0 | 8 | 215 | 14 | 26 | 12 | 0 | 0 | 13 | 52 | 20 | 19 | 7 | 0 | 0 | 6 | 46 | 501 |
| Total | 38 | 689 | 38 | 0 | 0 | 32 | 765 | 44 | 769 | 84 | 2 | 0 | 27 | 899 | 60 | 80 | 67 | 3 | 0 | 47 | 210 | 67 | 79 | 60 | 0 | 0 | 23 | 206 | 2080 |
| Approach % | 5.0 | 90.1 | 5.0 | 0.0 | 0.0 | - | - | 4.9 | 85.5 | 9.3 | 0.2 | 0.0 | - | - | 28.6 | 38.1 | 31.9 | 1.4 | 0.0 | - | - | 32.5 | 38.3 | 29.1 | 0.0 | 0.0 | - | - | - |
| Total % | 1.8 | 33.1 | 1.8 | 0.0 | 0.0 | - | 36.8 | 2.1 | 37.0 | 4.0 | 0.1 | 0.0 | - | 43.2 | 2.9 | 3.8 | 3.2 | 0.1 | 0.0 | - | 10.1 | 3.2 | 3.8 | 2.9 | 0.0 | 0.0 | - | 9.9 | - |
| PHF | 0.950 | 0.952 | 0.792 | 0.000 | 0.000 | - | 0.947 | 0.647 | 0.903 | 0.875 | 0.500 | 0.000 | - | 0.921 | 0.789 | 0.769 | 0.698 | 0.375 | 0.000 | - | 0.921 | 0.838 | 0.760 | 0.625 | 0.000 | 0.000 | - | 0.873 | 0.970 |
| Lights | 38 | 684 | 38 | 0 | 0 | - | 760 | 43 | 761 | 84 | 2 | 0 | - | 890 | 60 | 80 | 67 | 3 | 0 | - | 210 | 66 | 78 | 60 | 0 | 0 | - | 204 | 2064 |
| % Lights | 100.0 | 99.3 | 100.0 | - | - | - | 99.3 | 97.7 | 99.0 | 100.0 | 100.0 | - | - | 99.0 | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 98.5 | 98.7 | 100.0 | - | - | - | 99.0 | 99.2 |
| Buses | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 2 |
| % Buses | 0.0 | 0.1 | 0.0 | - | - | - | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | - | - | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.1 |
| Trucks | 0 | 4 | 0 | 0 | 0 | - | 4 | 1 | 7 | 0 | 0 | 0 | - | 8 | 0 | 0 | 0 | 0 | 0 | - | 0 | 1 | 1 | 0 | 0 | 0 | - | 2 | 14 |
| % Trucks | 0.0 | 0.6 | 0.0 | - | - | - | 0.5 | 2.3 | 0.9 | 0.0 | 0.0 | - | - | 0.9 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 1.5 | 1.3 | 0.0 | - | - | - | 1.0 | 0.7 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 1 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 4.3 | - | - |
| Pedestrians | - | - | - | - | - | 32 | - | - | - | - | - | - | 27 | - | - | - | - | - | - | 47 | - | - | - | - | - | - | 22 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 95.7 | - | - |

Radnor, PA
Lancaster Ave & Wayne Ave
Saturday, September 8, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave-Sat
Site Code:
Start Date: 09/08/2018


Turning Movement Peak Hour Data Plot (11:45 AM)

www.TSTData.com
184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Radnor, PA
Lancaster Ave & Wayne Ave
Sunday, September 9, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Wayne Avenue Northbound | | | | | | | Wayne Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 9:00 AM | 20 | 95 | 1 | 0 | 0 | 0 | 116 | 6 | 93 | 29 | 1 | 0 | 1 | 129 | 4 | 16 | 5 | 0 | 0 | 1 | 25 | 13 | 10 | 13 | 1 | 0 | 0 | 37 | 307 |
| 9:15 AM | 20 | 130 | 8 | 0 | 0 | 3 | 158 | 5 | 71 | 16 | 0 | 0 | 1 | 92 | 4 | 15 | 8 | 0 | 0 | 0 | 27 | 16 | 13 | 10 | 0 | 0 | 6 | 39 | 316 |
| 9:30 AM | 21 | 112 | 5 | 0 | 0 | 3 | 138 | 9 | 101 | 13 | 0 | 0 | 1 | 123 | 9 | 16 | 9 | 0 | 0 | 2 | 34 | 8 | 9 | 9 | 0 | 0 | 2 | 26 | 321 |
| 9:45 AM | 7 | 120 | 8 | 0 | 0 | 1 | 135 | 11 | 112 | 13 | 0 | 0 | 7 | 136 | 4 | 12 | 9 | 0 | 0 | 1 | 25 | 11 | 15 | 7 | 0 | 0 | 0 | 33 | 329 |
| Hourly Total | 68 | 457 | 22 | 0 | 0 | 7 | 547 | 31 | 377 | 71 | 1 | 0 | 10 | 480 | 21 | 59 | 31 | 0 | 0 | 4 | 111 | 48 | 47 | 39 | 1 | 0 | 8 | 135 | 1273 |
| 10:00 AM | 5 | 110 | 9 | 0 | 0 | 6 | 124 | 7 | 108 | 12 | 0 | 0 | 6 | 127 | 3 | 11 | 9 | 1 | 0 | 2 | 24 | 13 | 8 | 8 | 0 | 0 | 3 | 29 | 304 |
| 10:15 AM | 9 | 104 | 9 | 0 | 0 | 0 | 122 | 5 | 95 | 32 | 0 | 0 | 3 | 132 | 12 | 21 | 3 | 1 | 0 | 1 | 37 | 22 | 20 | 6 | 0 | 0 | 1 | 48 | 339 |
| 10:30 AM | 16 | 123 | 10 | 0 | 0 | 1 | 149 | 13 | 119 | 30 | 0 | 0 | 1 | 162 | 3 | 14 | 20 | 0 | 0 | 0 | 37 | 15 | 20 | 13 | 0 | 0 | 4 | 48 | 396 |
| 10:45 AM | 15 | 121 | 8 | 0 | 0 | 6 | 144 | 12 | 129 | 26 | 1 | 0 | 7 | 168 | 14 | 13 | 7 | 1 | 0 | 0 | 35 | 20 | 18 | 13 | 0 | 0 | 0 | 51 | 398 |
| Hourly Total | 45 | 458 | 36 | 0 | 0 | 13 | 539 | 37 | 451 | 100 | 1 | 0 | 17 | 589 | 32 | 59 | 39 | 3 | 0 | 3 | 133 | 70 | 66 | 40 | 0 | 0 | 8 | 176 | 1437 |
| 11:00 AM | 13 | 135 | 6 | 0 | 0 | 3 | 154 | 7 | 112 | 20 | 1 | 0 | 2 | 140 | 4 | 12 | 19 | 0 | 0 | 7 | 35 | 17 | 12 | 16 | 0 | 0 | 3 | 45 | 374 |
| 11:15 AM | 13 | 107 | 3 | 0 | 0 | 6 | 123 | 7 | 122 | 17 | 0 | 1 | 0 | 147 | 8 | 13 | 11 | 0 | 0 | 4 | 32 | 19 | 16 | 11 | 0 | 0 | 0 | 46 | 348 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 139 | 1157 | 67 | 0 | 0 | 29 | 1363 | 82 | 1062 | 208 | 3 | 1 | 29 | 1356 | 65 | 143 | 100 | 3 | 0 | 18 | 311 | 154 | 141 | 106 | 1 | 0 | 19 | 402 | 3432 |
| Approach % | 10.2 | 84.9 | 4.9 | 0.0 | 0.0 | - | - | 6.0 | 78.3 | 15.3 | 0.2 | 0.1 | - | - | 20.9 | 46.0 | 32.2 | 1.0 | 0.0 | - | - | 38.3 | 35.1 | 26.4 | 0.2 | 0.0 | - | - | - |
| Total % | 4.1 | 33.7 | 2.0 | 0.0 | 0.0 | - | 39.7 | 2.4 | 30.9 | 6.1 | 0.1 | 0.0 | - | 39.5 | 1.9 | 4.2 | 2.9 | 0.1 | 0.0 | - | 9.1 | 4.5 | 4.1 | 3.1 | 0.0 | 0.0 | - | 11.7 | - |
| Lights | 139 | 1153 | 67 | 0 | 0 | - | 1359 | 82 | 1059 | 208 | 3 | 1 | - | 1353 | 65 | 142 | 100 | 3 | 0 | - | 310 | 153 | 140 | 106 | 1 | 0 | - | 400 | 3422 |
| % Lights | 100.0 | 99.7 | 100.0 | - | - | - | 99.7 | 100.0 | 99.7 | 100.0 | 100.0 | 100.0 | - | 99.8 | 100.0 | 99.3 | 100.0 | 100.0 | - | - | 99.7 | 99.4 | 99.3 | 100.0 | 100.0 | - | - | 99.5 | 99.7 |
| Buses | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Trucks | 0 | 4 | 0 | 0 | 0 | - | 4 | 0 | 3 | 0 | 0 | 0 | - | 3 | 0 | 1 | 0 | 0 | 0 | - | 1 | 1 | 1 | 0 | 0 | 0 | - | 2 | 10 |
| % Trucks | 0.0 | 0.3 | 0.0 | - | - | - | 0.3 | 0.0 | 0.3 | 0.0 | 0.0 | 0.0 | - | 0.2 | 0.0 | 0.7 | 0.0 | 0.0 | - | - | 0.3 | 0.6 | 0.7 | 0.0 | 0.0 | - | - | 0.5 | 0.3 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 29 | - | - | - | - | - | - | 29 | - | - | - | - | - | - | 18 | - | - | - | - | - | - | 19 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

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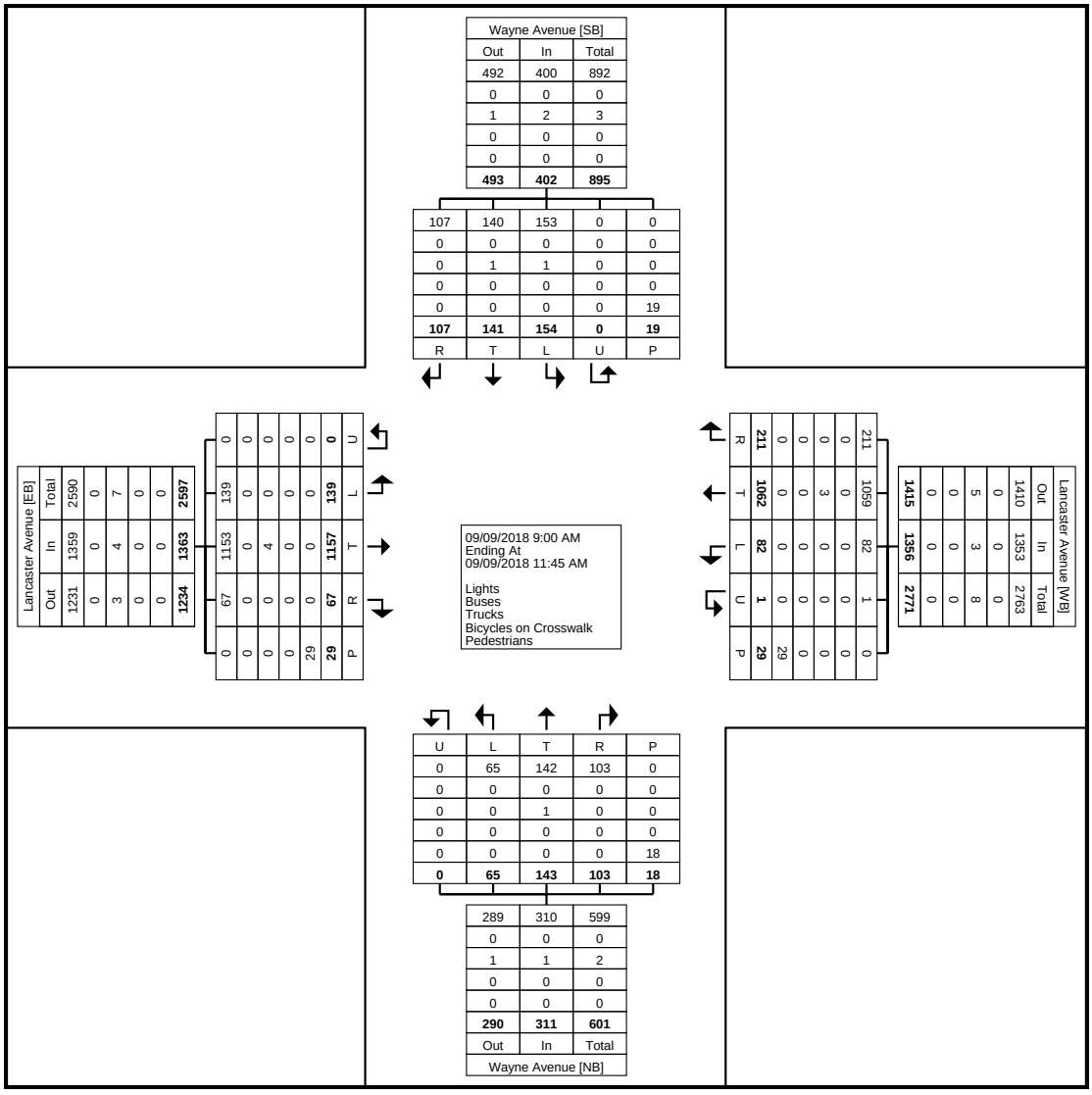
Radnor, PA
Lancaster Ave & Wayne Ave
Sunday, September 9, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & Wayne Ave
Sunday, September 9, 2018
Location: 40.044058, -75.387867

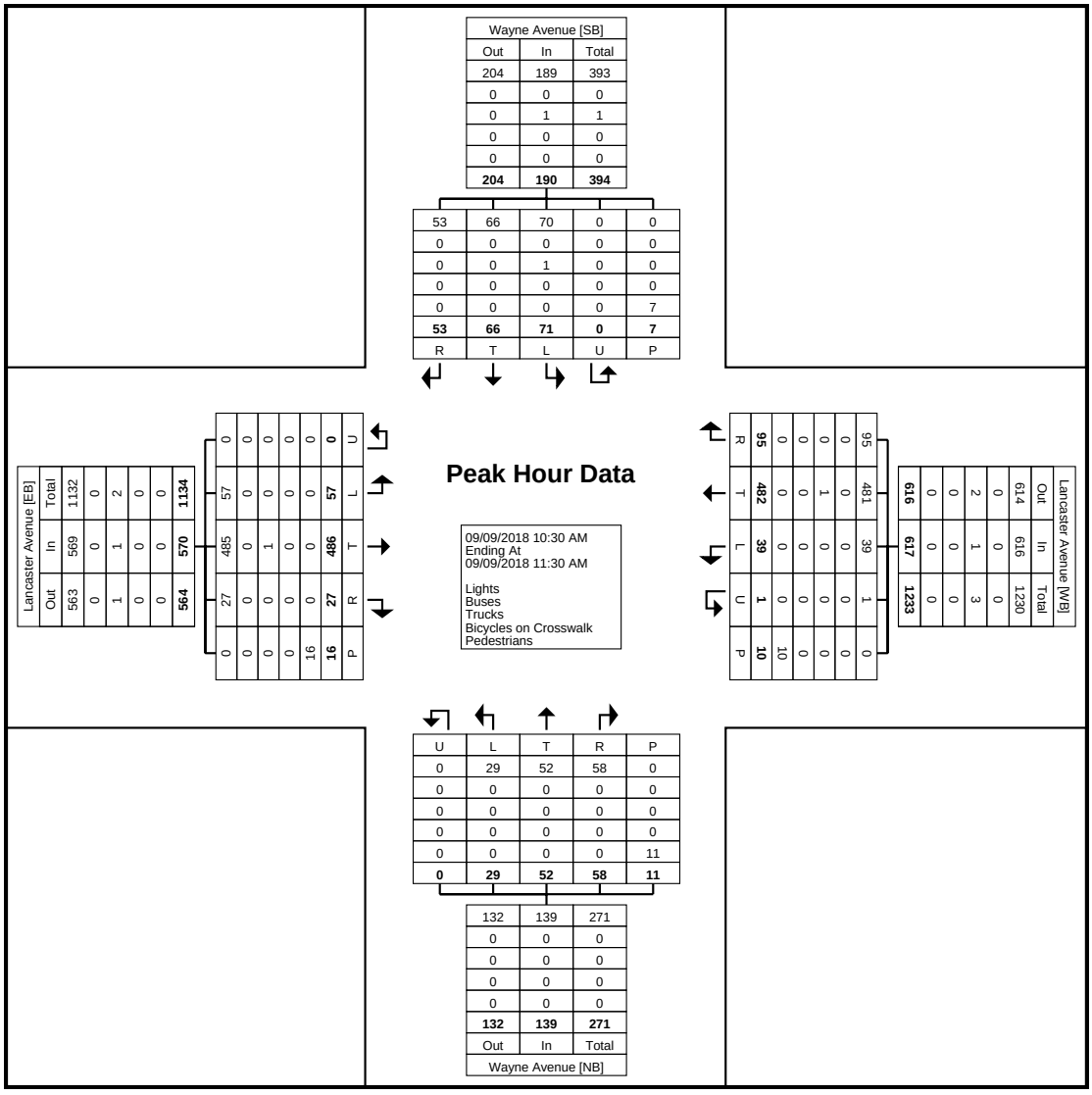
Count Name: Lancaster Ave/Wayne Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Peak Hour Data (10:30 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | Wayne Avenue Northbound | | | | | | | Wayne Avenue Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 10:30 AM | 16 | 123 | 10 | 0 | 0 | 1 | 149 | 13 | 119 | 30 | 0 | 0 | 1 | 162 | 3 | 14 | 20 | 0 | 0 | 0 | 37 | 15 | 20 | 13 | 0 | 0 | 4 | 48 | 396 |
| 10:45 AM | 15 | 121 | 8 | 0 | 0 | 6 | 144 | 12 | 129 | 26 | 1 | 0 | 7 | 168 | 14 | 13 | 7 | 1 | 0 | 0 | 35 | 20 | 18 | 13 | 0 | 0 | 0 | 51 | 398 |
| 11:00 AM | 13 | 135 | 6 | 0 | 0 | 3 | 154 | 7 | 112 | 20 | 1 | 0 | 2 | 140 | 4 | 12 | 19 | 0 | 0 | 7 | 35 | 17 | 12 | 16 | 0 | 0 | 3 | 45 | 374 |
| 11:15 AM | 13 | 107 | 3 | 0 | 0 | 6 | 123 | 7 | 122 | 17 | 0 | 1 | 0 | 147 | 8 | 13 | 11 | 0 | 0 | 4 | 32 | 19 | 16 | 11 | 0 | 0 | 0 | 46 | 348 |
| Total | 57 | 486 | 27 | 0 | 0 | 16 | 570 | 39 | 482 | 93 | 2 | 1 | 10 | 617 | 29 | 52 | 57 | 1 | 0 | 11 | 139 | 71 | 66 | 53 | 0 | 0 | 7 | 190 | 1516 |
| Approach % | 10.0 | 85.3 | 4.7 | 0.0 | 0.0 | - | - | 6.3 | 78.1 | 15.1 | 0.3 | 0.2 | - | - | 20.9 | 37.4 | 41.0 | 0.7 | 0.0 | - | - | 37.4 | 34.7 | 27.9 | 0.0 | 0.0 | - | - | - |
| Total % | 3.8 | 32.1 | 1.8 | 0.0 | 0.0 | - | 37.6 | 2.6 | 31.8 | 6.1 | 0.1 | 0.1 | - | 40.7 | 1.9 | 3.4 | 3.8 | 0.1 | 0.0 | - | 9.2 | 4.7 | 4.4 | 3.5 | 0.0 | 0.0 | - | 12.5 | - |
| PHF | 0.891 | 0.900 | 0.675 | 0.000 | 0.000 | - | 0.925 | 0.750 | 0.934 | 0.775 | 0.500 | 0.250 | - | 0.918 | 0.518 | 0.929 | 0.713 | 0.250 | 0.000 | - | 0.939 | 0.888 | 0.825 | 0.828 | 0.000 | 0.000 | - | 0.931 | 0.952 |
| Lights | 57 | 485 | 27 | 0 | 0 | - | 569 | 39 | 481 | 93 | 2 | 1 | - | 616 | 29 | 52 | 57 | 1 | 0 | - | 139 | 70 | 66 | 53 | 0 | 0 | - | 189 | 1513 |
| % Lights | 100.0 | 99.8 | 100.0 | - | - | - | 99.8 | 100.0 | 99.8 | 100.0 | 100.0 | 100.0 | - | 99.8 | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 98.6 | 100.0 | 100.0 | - | - | - | 99.5 | 99.8 |
| Buses | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 |
| Trucks | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | 0 | 0 | - | 1 | 3 |
| % Trucks | 0.0 | 0.2 | 0.0 | - | - | - | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 | 0.0 | - | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 1.4 | 0.0 | 0.0 | - | - | - | 0.5 | 0.2 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 16 | - | - | - | - | - | - | 10 | - | - | - | - | - | - | 11 | - | - | - | - | - | - | 7 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Lancaster Ave & Wayne Ave
Sunday, September 9, 2018
Location: 40.044058, -75.387867

Count Name: Lancaster Ave/Wayne Ave-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Peak Hour Data Plot (10:30 AM)

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Radnor, PA
Lancaster Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.043928, -75.385359

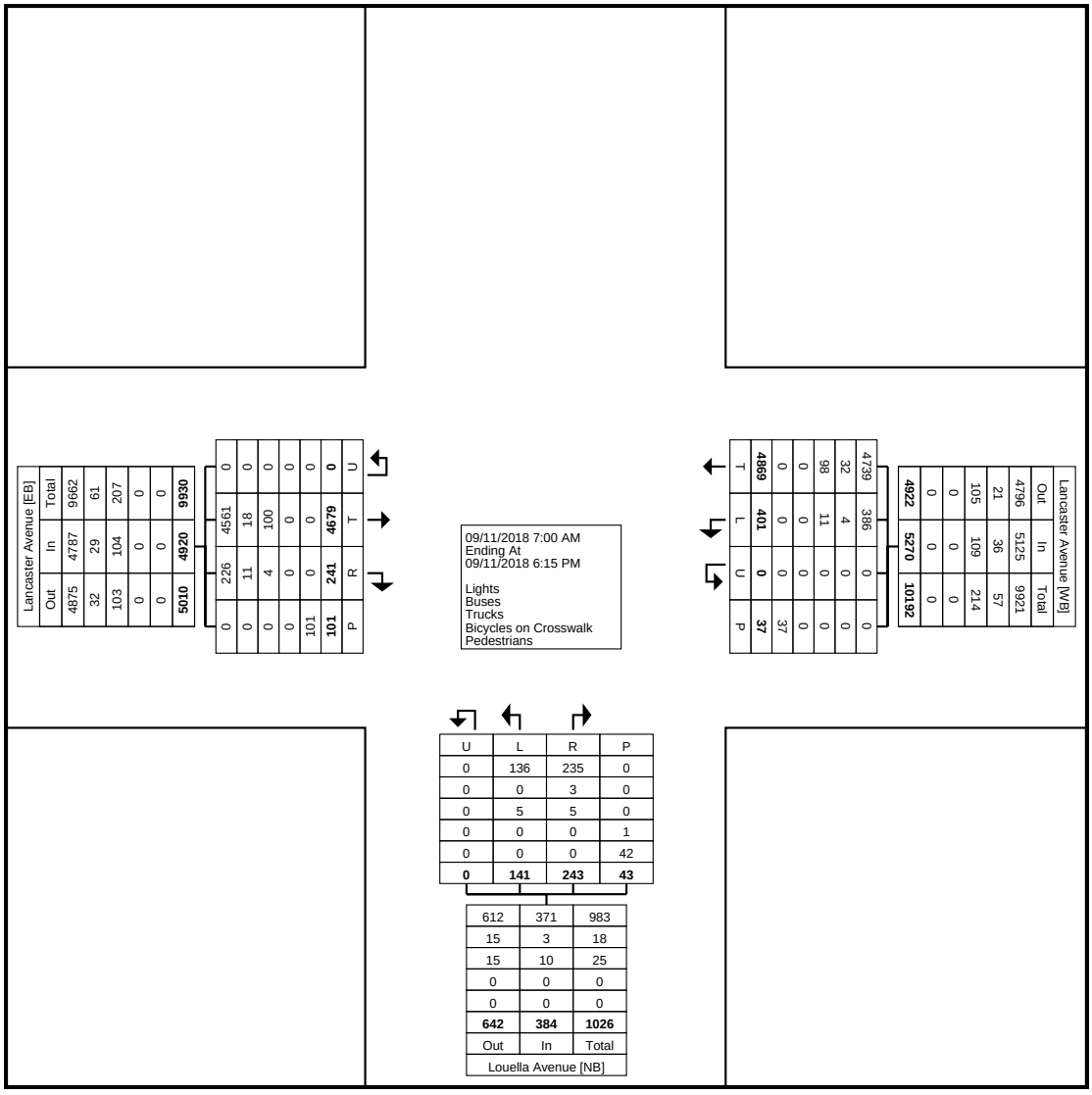
Count Name: Lancaster Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | Lancaster Avenue Westbound | | | | | Louella Avenue Northbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Left | Right | Right on Red | U-Turn | Peds | App. Total | Int. Total |
| 7:00 AM | 155 | 5 | 0 | 0 | 0 | 160 | 11 | 197 | 0 | 0 | 208 | 0 | 4 | 0 | 0 | 0 | 4 | 372 |
| 7:15 AM | 185 | 5 | 1 | 0 | 0 | 191 | 22 | 194 | 0 | 1 | 216 | 8 | 5 | 0 | 0 | 2 | 13 | 420 |
| 7:30 AM | 154 | 11 | 0 | 0 | 1 | 165 | 24 | 213 | 0 | 3 | 237 | 7 | 3 | 0 | 0 | 7 | 10 | 412 |
| 7:45 AM | 238 | 27 | 0 | 0 | 1 | 265 | 37 | 206 | 0 | 1 | 243 | 13 | 18 | 0 | 0 | 2 | 31 | 539 |
| Hourly Total | 732 | 48 | 1 | 0 | 2 | 781 | 94 | 810 | 0 | 5 | 904 | 28 | 30 | 0 | 0 | 11 | 58 | 1743 |
| 8:00 AM | 197 | 11 | 0 | 0 | 2 | 208 | 13 | 249 | 0 | 1 | 262 | 7 | 11 | 0 | 0 | 2 | 18 | 488 |
| 8:15 AM | 170 | 6 | 0 | 0 | 1 | 176 | 28 | 231 | 0 | 0 | 259 | 5 | 5 | 1 | 0 | 2 | 11 | 446 |
| 8:30 AM | 168 | 6 | 0 | 0 | 0 | 174 | 16 | 260 | 0 | 0 | 276 | 6 | 9 | 0 | 0 | 0 | 15 | 465 |
| 8:45 AM | 174 | 6 | 0 | 0 | 5 | 180 | 16 | 241 | 0 | 1 | 257 | 13 | 10 | 0 | 0 | 2 | 23 | 460 |
| Hourly Total | 709 | 29 | 0 | 0 | 8 | 738 | 73 | 981 | 0 | 2 | 1054 | 31 | 35 | 1 | 0 | 6 | 67 | 1859 |
| 9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 2:00 PM | 190 | 8 | 0 | 0 | 3 | 198 | 12 | 176 | 0 | 0 | 188 | 5 | 10 | 0 | 0 | 0 | 15 | 401 |
| 2:15 PM | 195 | 12 | 0 | 0 | 2 | 207 | 10 | 192 | 0 | 2 | 202 | 4 | 12 | 0 | 0 | 1 | 16 | 425 |
| 2:30 PM | 209 | 19 | 1 | 0 | 3 | 229 | 20 | 191 | 0 | 7 | 211 | 3 | 7 | 0 | 0 | 0 | 10 | 450 |
| 2:45 PM | 180 | 18 | 2 | 0 | 2 | 200 | 18 | 178 | 0 | 4 | 196 | 8 | 12 | 0 | 0 | 0 | 20 | 416 |
| Hourly Total | 774 | 57 | 3 | 0 | 10 | 834 | 60 | 737 | 0 | 13 | 797 | 20 | 41 | 0 | 0 | 1 | 61 | 1692 |
| 3:00 PM | 211 | 11 | 0 | 0 | 20 | 222 | 17 | 174 | 0 | 1 | 191 | 10 | 27 | 1 | 0 | 2 | 38 | 451 |
| 3:15 PM | 225 | 10 | 0 | 0 | 8 | 235 | 20 | 170 | 0 | 1 | 190 | 8 | 16 | 0 | 0 | 0 | 24 | 449 |
| 3:30 PM | 194 | 8 | 0 | 0 | 4 | 202 | 24 | 189 | 0 | 3 | 213 | 10 | 16 | 0 | 0 | 2 | 26 | 441 |
| 3:45 PM | 203 | 12 | 0 | 0 | 3 | 215 | 16 | 184 | 0 | 1 | 200 | 2 | 11 | 0 | 0 | 7 | 13 | 428 |
| Hourly Total | 833 | 41 | 0 | 0 | 35 | 874 | 77 | 717 | 0 | 6 | 794 | 30 | 70 | 1 | 0 | 11 | 101 | 1769 |
| 4:00 PM | 198 | 9 | 0 | 0 | 6 | 207 | 9 | 186 | 0 | 2 | 195 | 5 | 14 | 0 | 0 | 3 | 19 | 421 |
| 4:15 PM | 165 | 7 | 0 | 0 | 5 | 172 | 8 | 184 | 0 | 0 | 192 | 5 | 8 | 0 | 0 | 3 | 13 | 377 |
| 4:30 PM | 233 | 13 | 0 | 0 | 3 | 246 | 15 | 209 | 0 | 5 | 224 | 5 | 11 | 0 | 0 | 4 | 16 | 486 |
| 4:45 PM | 220 | 9 | 0 | 0 | 5 | 229 | 10 | 218 | 0 | 2 | 228 | 1 | 6 | 1 | 0 | 0 | 8 | 465 |
| Hourly Total | 816 | 38 | 0 | 0 | 19 | 854 | 42 | 797 | 0 | 9 | 839 | 16 | 39 | 1 | 0 | 10 | 56 | 1749 |
| 5:00 PM | 222 | 4 | 0 | 0 | 14 | 226 | 13 | 213 | 0 | 1 | 226 | 5 | 7 | 0 | 0 | 1 | 12 | 464 |
| 5:15 PM | 215 | 6 | 0 | 0 | 7 | 221 | 15 | 200 | 0 | 0 | 215 | 4 | 4 | 1 | 0 | 2 | 9 | 445 |
| 5:30 PM | 171 | 7 | 0 | 0 | 2 | 178 | 15 | 205 | 0 | 1 | 220 | 4 | 8 | 0 | 0 | 0 | 12 | 410 |
| 5:45 PM | 207 | 7 | 0 | 0 | 4 | 214 | 12 | 208 | 0 | 0 | 220 | 3 | 5 | 0 | 0 | 1 | 8 | 442 |
| Hourly Total | 815 | 24 | 0 | 0 | 27 | 839 | 55 | 826 | 0 | 2 | 881 | 16 | 24 | 1 | 0 | 4 | 41 | 1761 |
| 6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 4679 | 237 | 4 | 0 | 101 | 4920 | 401 | 4869 | 0 | 37 | 5270 | 141 | 239 | 4 | 0 | 43 | 384 | 10574 |
| Approach % | 95.1 | 4.8 | 0.1 | 0.0 | - | - | 7.6 | 92.4 | 0.0 | - | - | 36.7 | 62.2 | 1.0 | 0.0 | - | - | - |
| Total % | 44.3 | 2.2 | 0.0 | 0.0 | - | 46.5 | 3.8 | 46.0 | 0.0 | - | 49.8 | 1.3 | 2.3 | 0.0 | 0.0 | - | 3.6 | - |
| Lights | 4561 | 222 | 4 | 0 | - | 4787 | 386 | 4739 | 0 | - | 5125 | 136 | 231 | 4 | 0 | - | 371 | 10283 |
| % Lights | 97.5 | 93.7 | 100.0 | - | - | 97.3 | 96.3 | 97.3 | - | - | 97.2 | 96.5 | 96.7 | 100.0 | - | - | 96.6 | 97.2 |
| Buses | 18 | 11 | 0 | 0 | - | 29 | 4 | 32 | 0 | - | 36 | 0 | 3 | 0 | 0 | - | 3 | 68 |
| % Buses | 0.4 | 4.6 | 0.0 | - | - | 0.6 | 1.0 | 0.7 | - | - | 0.7 | 0.0 | 1.3 | 0.0 | - | - | 0.8 | 0.6 |
| Trucks | 100 | 4 | 0 | 0 | - | 104 | 11 | 98 | 0 | - | 109 | 5 | 5 | 0 | 0 | - | 10 | 223 |
| % Trucks | 2.1 | 1.7 | 0.0 | - | - | 2.1 | 2.7 | 2.0 | - | - | 2.1 | 3.5 | 2.1 | 0.0 | - | - | 2.6 | 2.1 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 1 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | - | 2.3 | - | - |
| Pedestrians | - | - | - | - | 101 | - | - | - | - | 37 | - | - | - | - | - | 42 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | - | 97.7 | - | - |

Radnor, PA
Lancaster Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.043928, -75.385359

Count Name: Lancaster Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


| Lancaster Avenue [EB] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Out | 4875 | 32 | 103 | 0 | 0 | 0 | **5010** | 226 | 11 | 4 | 0 | 0 | **241** | R |
| In | 4787 | 29 | 104 | 0 | 0 | 0 | **4920** | 4561 | 18 | 100 | 0 | 0 | **4679** | T |
| Total | 9662 | 61 | 207 | 0 | 0 | 0 | **9930** | 0 | 0 | 0 | 0 | 0 | **0** | U |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| P | 37 | 0 | 0 | 0 | 0 | 0 | **37** | 101 | 0 | 0 | 0 | 0 | **101** | P |
| U | 0 | 0 | 0 | 0 | 0 | 0 | **0** | 0 | 0 | 0 | 0 | 0 | **0** | U |
| L | 401 | 0 | 0 | 11 | 4 | 100 | **516** | 0 | 0 | 0 | 0 | 0 | **0** | L |
| T | 4869 | 0 | 0 | 98 | 32 | 4739 | **9938** | 0 | 0 | 0 | 0 | 0 | **0** | T |

| Lancaster Avenue [WB] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Total | 9921 | 57 | 214 | 0 | 0 | 0 | **10192** | 0 | 0 | 0 | 0 | 0 | **0** | U |
| In | 5125 | 36 | 109 | 0 | 0 | 0 | **5270** | 0 | 0 | 0 | 0 | 0 | **0** | L |
| Out | 4796 | 21 | 105 | 0 | 0 | 0 | **4922** | 0 | 0 | 0 | 0 | 0 | **0** | T |

| U | L | R | P |
|---|---|---|---|
| 0 | 136 | 235 | 0 |
| 0 | 0 | 3 | 0 |
| 0 | 5 | 5 | 0 |
| 0 | 0 | 0 | 1 |
| 0 | 0 | 0 | 42 |
| **0** | **141** | **243** | **43** |

| | | |
|---|---|---|
| 612 | 371 | 983 |
| 15 | 3 | 18 |
| 15 | 10 | 25 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| **642** | **384** | **1026** |
| Out | In | Total |
| Louella Avenue [NB] | | |

Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.043928, -75.385359

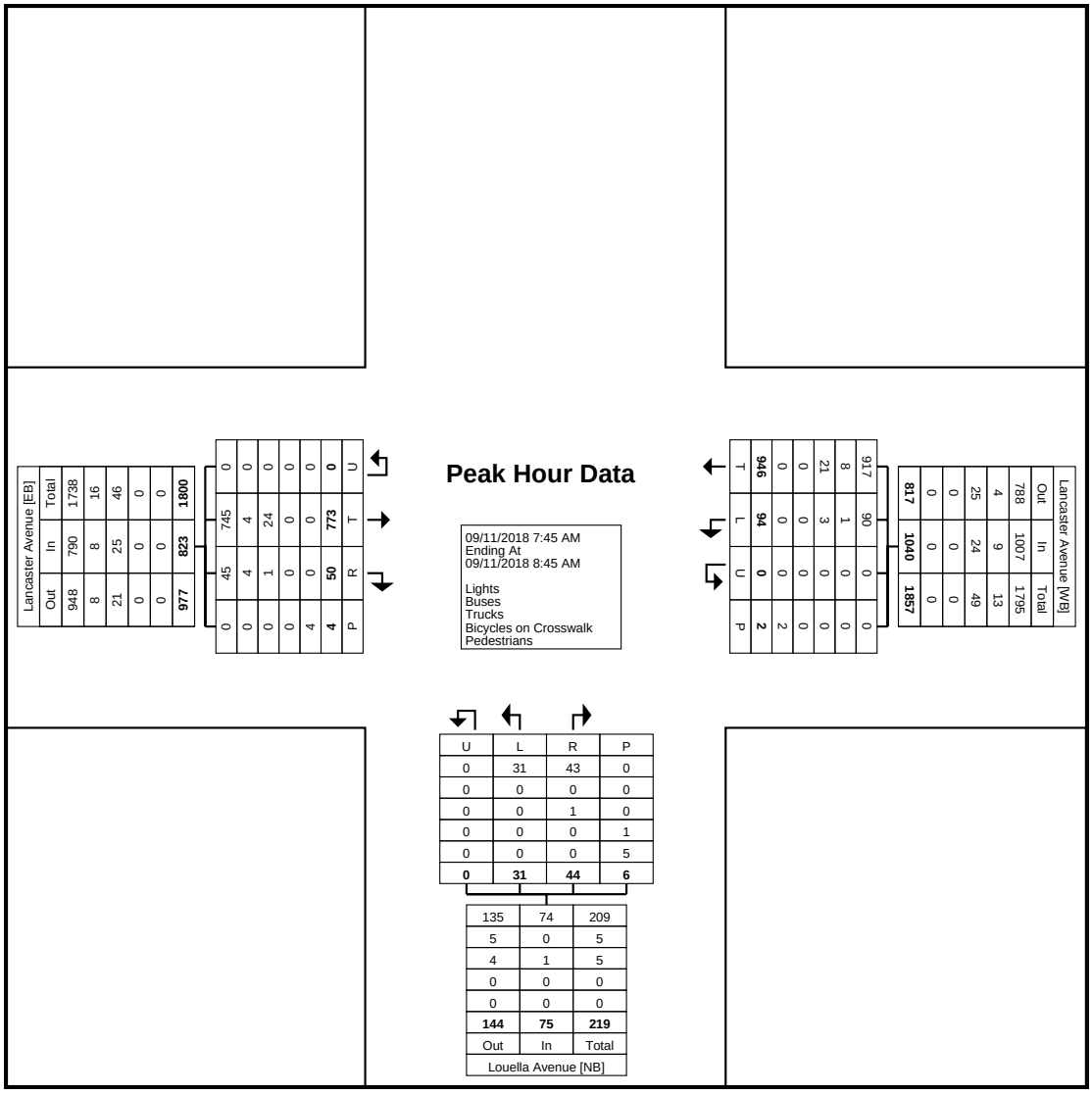
Count Name: Lancaster Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (7:45 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | Lancaster Avenue Westbound | | | | | Louella Avenue Northbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Left | Right | Right on Red | U-Turn | Peds | App. Total | Int. Total |
| 7:45 AM | 238 | 27 | 0 | 0 | 1 | 265 | 37 | 206 | 0 | 1 | 243 | 13 | 18 | 0 | 0 | 2 | 31 | 539 |
| 8:00 AM | 197 | 11 | 0 | 0 | 2 | 208 | 13 | 249 | 0 | 1 | 262 | 7 | 11 | 0 | 0 | 2 | 18 | 488 |
| 8:15 AM | 170 | 6 | 0 | 0 | 1 | 176 | 28 | 231 | 0 | 0 | 259 | 5 | 5 | 1 | 0 | 2 | 11 | 446 |
| 8:30 AM | 168 | 6 | 0 | 0 | 0 | 174 | 16 | 260 | 0 | 0 | 276 | 6 | 9 | 0 | 0 | 0 | 15 | 465 |
| Total | 773 | 50 | 0 | 0 | 4 | 823 | 94 | 946 | 0 | 2 | 1040 | 31 | 43 | 1 | 0 | 6 | 75 | 1938 |
| Approach % | 93.9 | 6.1 | 0.0 | 0.0 | - | - | 9.0 | 91.0 | 0.0 | - | - | 41.3 | 57.3 | 1.3 | 0.0 | - | - | - |
| Total % | 39.9 | 2.6 | 0.0 | 0.0 | - | 42.5 | 4.9 | 48.8 | 0.0 | - | 53.7 | 1.6 | 2.2 | 0.1 | 0.0 | - | 3.9 | - |
| PHF | 0.812 | 0.463 | 0.000 | 0.000 | - | 0.776 | 0.635 | 0.910 | 0.000 | - | 0.942 | 0.596 | 0.597 | 0.250 | 0.000 | - | 0.605 | 0.899 |
| Lights | 745 | 45 | 0 | 0 | - | 790 | 90 | 917 | 0 | - | 1007 | 31 | 42 | 1 | 0 | - | 74 | 1871 |
| % Lights | 96.4 | 90.0 | - | - | - | 96.0 | 95.7 | 96.9 | - | - | 96.8 | 100.0 | 97.7 | 100.0 | - | - | 98.7 | 96.5 |
| Buses | 4 | 4 | 0 | 0 | - | 8 | 1 | 8 | 0 | - | 9 | 0 | 0 | 0 | 0 | - | 0 | 17 |
| % Buses | 0.5 | 8.0 | - | - | - | 1.0 | 1.1 | 0.8 | - | - | 0.9 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.9 |
| Trucks | 24 | 1 | 0 | 0 | - | 25 | 3 | 21 | 0 | - | 24 | 0 | 1 | 0 | 0 | - | 1 | 50 |
| % Trucks | 3.1 | 2.0 | - | - | - | 3.0 | 3.2 | 2.2 | - | - | 2.3 | 0.0 | 2.3 | 0.0 | - | - | 1.3 | 2.6 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 1 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | - | 16.7 | - | - |
| Pedestrians | - | - | - | - | 4 | - | - | - | - | 2 | - | - | - | - | - | 5 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | - | 83.3 | - | - |

Radnor, PA
Lancaster Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.043928, -75.385359

Count Name: Lancaster Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


Turning Movement Peak Hour Data Plot (7:45 AM)

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Radnor, PA
Lancaster Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.043928, -75.385359

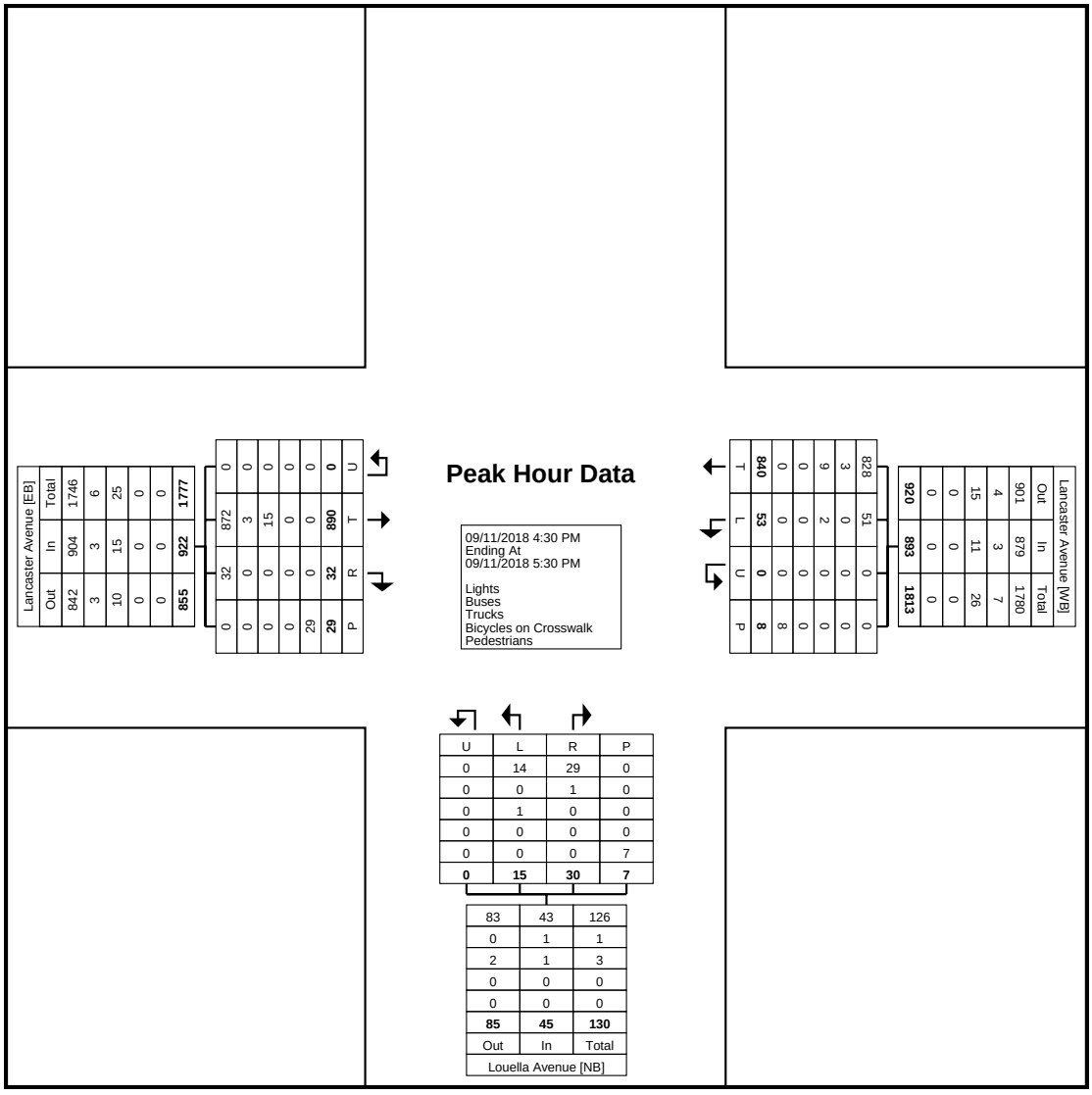
Count Name: Lancaster Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (4:30 PM)

| Start Time | Lancaster Avenue Eastbound | | | | | | Lancaster Avenue Westbound | | | | | Louella Avenue Northbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Left | Right | Right on Red | U-Turn | Peds | App. Total | Int. Total |
| 4:30 PM | 233 | 13 | 0 | 0 | 3 | 246 | 15 | 209 | 0 | 5 | 224 | 5 | 11 | 0 | 0 | 4 | 16 | 486 |
| 4:45 PM | 220 | 9 | 0 | 0 | 5 | 229 | 10 | 218 | 0 | 2 | 228 | 1 | 6 | 1 | 0 | 0 | 8 | 465 |
| 5:00 PM | 222 | 4 | 0 | 0 | 14 | 226 | 13 | 213 | 0 | 1 | 226 | 5 | 7 | 0 | 0 | 1 | 12 | 464 |
| 5:15 PM | 215 | 6 | 0 | 0 | 7 | 221 | 15 | 200 | 0 | 0 | 215 | 4 | 4 | 1 | 0 | 2 | 9 | 445 |
| Total | 890 | 32 | 0 | 0 | 29 | 922 | 53 | 840 | 0 | 8 | 893 | 15 | 28 | 2 | 0 | 7 | 45 | 1860 |
| Approach % | 96.5 | 3.5 | 0.0 | 0.0 | - | - | 5.9 | 94.1 | 0.0 | - | - | 33.3 | 62.2 | 4.4 | 0.0 | - | - | - |
| Total % | 47.8 | 1.7 | 0.0 | 0.0 | - | 49.6 | 2.8 | 45.2 | 0.0 | - | 48.0 | 0.8 | 1.5 | 0.1 | 0.0 | - | 2.4 | - |
| PHF | 0.955 | 0.615 | 0.000 | 0.000 | - | 0.937 | 0.883 | 0.963 | 0.000 | - | 0.979 | 0.750 | 0.636 | 0.500 | 0.000 | - | 0.703 | 0.957 |
| Lights | 872 | 32 | 0 | 0 | - | 904 | 51 | 828 | 0 | - | 879 | 14 | 27 | 2 | 0 | - | 43 | 1826 |
| % Lights | 98.0 | 100.0 | - | - | - | 98.0 | 96.2 | 98.6 | - | - | 98.4 | 93.3 | 96.4 | 100.0 | - | - | 95.6 | 98.2 |
| Buses | 3 | 0 | 0 | 0 | - | 3 | 0 | 3 | 0 | - | 3 | 0 | 1 | 0 | 0 | - | 1 | 7 |
| % Buses | 0.3 | 0.0 | - | - | - | 0.3 | 0.0 | 0.4 | - | - | 0.3 | 0.0 | 3.6 | 0.0 | - | - | 2.2 | 0.4 |
| Trucks | 15 | 0 | 0 | 0 | - | 15 | 2 | 9 | 0 | - | 11 | 1 | 0 | 0 | 0 | - | 1 | 27 |
| % Trucks | 1.7 | 0.0 | - | - | - | 1.6 | 3.8 | 1.1 | - | - | 1.2 | 6.7 | 0.0 | 0.0 | - | - | 2.2 | 1.5 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 29 | - | - | - | - | 8 | - | - | - | - | - | 7 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Lancaster Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.043928, -75.385359

Count Name: Lancaster Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


| Lancaster Avenue [EB] | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Out | 842 | 3 | 10 | 0 | 0 | **855** | 0 | 0 | 0 | 0 |
| In | 904 | 3 | 15 | 0 | 0 | **922** | 872 | 3 | 15 | 0 |
| Total | 1746 | 6 | 25 | 0 | 0 | **1777** | 0 | 0 | 0 | 0 |
| | | | | | | | 32 | 0 | 0 | 0 |
| | | | | | | | 0 | 0 | 0 | 0 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 29 | 0 | 0 | 0 |
| | | | | | | | **29** | **32** | **890** | **0** |
| | | | | | | | P | R | T | U |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 8 | 0 | 0 | 0 |
| | | | | | | | **8** | **0** | **53** | **840** |
| | | | | | | | P | U | L | T |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 0 | 0 | 0 | 0 |
| | | | | | | | 0 | 0 | 2 | 9 |
| | | | | | | | 0 | 0 | 0 | 3 |
| | | | | | | | 0 | 0 | 51 | 828 |

| Lancaster Avenue [WB] | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Total | 1780 | 7 | 26 | 11 | 15 | 0 | 0 | 0 | 0 | 0 |
| In | 879 | 3 | 11 | 0 | 0 | **893** | 0 | 0 | 0 | 0 |
| Out | 901 | 4 | 15 | 0 | 0 | **920** | 0 | 0 | 0 | 0 |
| | | | | | | | | | | |
| | | | | | | | | | | |

| U | L | R | P |
|---|---|---|---|
| 0 | 14 | 29 | 0 |
| 0 | 0 | 1 | 0 |
| 0 | 1 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 7 |
| **0** | **15** | **30** | **7** |

| | | |
|---|---|---|
| 83 | 43 | 126 |
| 0 | 1 | 1 |
| 2 | 1 | 3 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| **85** | **45** | **130** |
| Out | In | Total |

Turning Movement Peak Hour Data Plot (4:30 PM)

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610-466-1469
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Radnor, PA
Lancaster Ave & Louella Ave
Saturday, September 8, 2018
Location: 40.043928, -75.385359

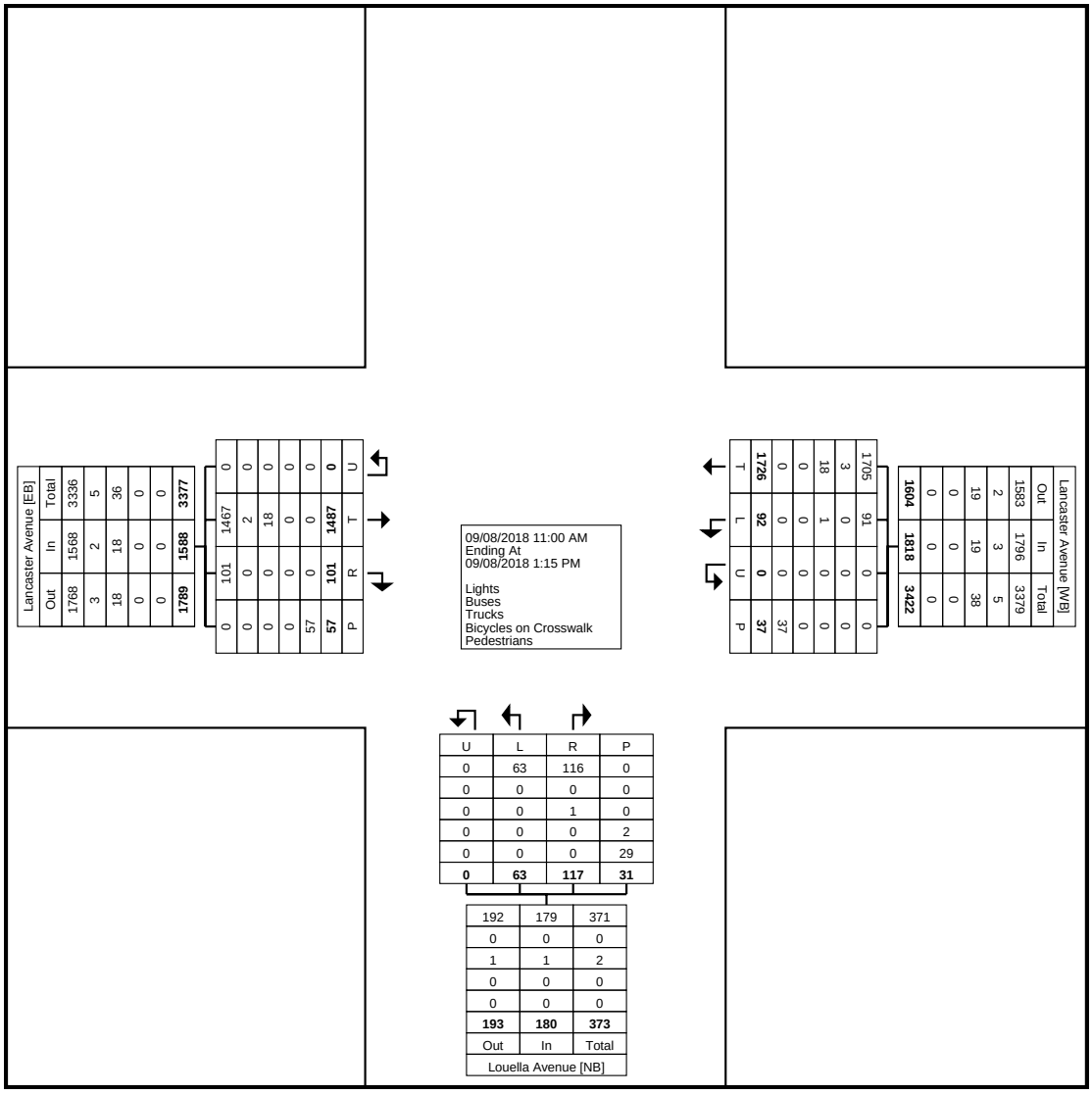
Count Name: Lancaster Ave/Louella Ave-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | Lancaster Avenue Westbound | | | | | Louella Avenue Northbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Left | Right | Right on Red | U-Turn | Peds | App. Total | Int. Total |
| 11:00 AM | 164 | 10 | 0 | 0 | 2 | 174 | 15 | 203 | 0 | 2 | 218 | 4 | 6 | 0 | 0 | 8 | 10 | 402 |
| 11:15 AM | 184 | 5 | 0 | 0 | 7 | 189 | 9 | 216 | 0 | 8 | 225 | 3 | 14 | 0 | 0 | 2 | 17 | 431 |
| 11:30 AM | 170 | 16 | 0 | 0 | 10 | 186 | 10 | 181 | 0 | 6 | 191 | 10 | 25 | 0 | 0 | 1 | 35 | 412 |
| 11:45 AM | 205 | 14 | 1 | 0 | 9 | 220 | 9 | 213 | 0 | 5 | 222 | 10 | 19 | 0 | 0 | 1 | 29 | 471 |
| Hourly Total | 723 | 45 | 1 | 0 | 28 | 769 | 43 | 813 | 0 | 21 | 856 | 27 | 64 | 0 | 0 | 12 | 91 | 1716 |
| 12:00 PM | 204 | 12 | 0 | 0 | 6 | 216 | 4 | 243 | 0 | 7 | 247 | 12 | 19 | 0 | 0 | 1 | 31 | 494 |
| 12:15 PM | 186 | 15 | 0 | 0 | 11 | 201 | 19 | 229 | 0 | 5 | 248 | 9 | 14 | 0 | 0 | 6 | 23 | 472 |
| 12:30 PM | 187 | 15 | 0 | 0 | 4 | 202 | 16 | 225 | 0 | 0 | 241 | 10 | 13 | 0 | 0 | 9 | 23 | 466 |
| 12:45 PM | 187 | 13 | 0 | 0 | 8 | 200 | 10 | 216 | 0 | 4 | 226 | 5 | 6 | 1 | 0 | 3 | 12 | 438 |
| Hourly Total | 764 | 55 | 0 | 0 | 29 | 819 | 49 | 913 | 0 | 16 | 962 | 36 | 52 | 1 | 0 | 19 | 89 | 1870 |
| 1:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 1487 | 100 | 1 | 0 | 57 | 1588 | 92 | 1726 | 0 | 37 | 1818 | 63 | 116 | 1 | 0 | 31 | 180 | 3586 |
| Approach % | 93.6 | 6.3 | 0.1 | 0.0 | - | - | 5.1 | 94.9 | 0.0 | - | - | 35.0 | 64.4 | 0.6 | 0.0 | - | - | - |
| Total % | 41.5 | 2.8 | 0.0 | 0.0 | - | 44.3 | 2.6 | 48.1 | 0.0 | - | 50.7 | 1.8 | 3.2 | 0.0 | 0.0 | - | 5.0 | - |
| Lights | 1467 | 100 | 1 | 0 | - | 1568 | 91 | 1705 | 0 | - | 1796 | 63 | 115 | 1 | 0 | - | 179 | 3543 |
| % Lights | 98.7 | 100.0 | 100.0 | - | - | 98.7 | 98.9 | 98.8 | - | - | 98.8 | 100.0 | 99.1 | 100.0 | - | - | 99.4 | 98.8 |
| Buses | 2 | 0 | 0 | 0 | - | 2 | 0 | 3 | 0 | - | 3 | 0 | 0 | 0 | 0 | - | 0 | 5 |
| % Buses | 0.1 | 0.0 | 0.0 | - | - | 0.1 | 0.0 | 0.2 | - | - | 0.2 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.1 |
| Trucks | 18 | 0 | 0 | 0 | - | 18 | 1 | 18 | 0 | - | 19 | 0 | 1 | 0 | 0 | - | 1 | 38 |
| % Trucks | 1.2 | 0.0 | 0.0 | - | - | 1.1 | 1.1 | 1.0 | - | - | 1.0 | 0.0 | 0.9 | 0.0 | - | - | 0.6 | 1.1 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 2 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | - | 6.5 | - | - |
| Pedestrians | - | - | - | - | 57 | - | - | - | - | 37 | - | - | - | - | - | 29 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | - | 93.5 | - | - |

Radnor, PA
Lancaster Ave & Louella Ave
Saturday, September 8, 2018
Location: 40.043928, -75.385359

Count Name: Lancaster Ave/Louella Ave-Sat
Site Code:
Start Date: 09/08/2018


| Lancaster Avenue [EB] | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Out | 1768 | 3 | 18 | 0 | 0 | **1789** | 57 | **57** |
| In | 1568 | 2 | 18 | 0 | 0 | **1588** | 0 | **0** |
| Total | 3336 | 5 | 36 | 0 | 0 | **3377** | 57 | **57** |

| U | T | R | P |
|---|---|---|---|
| 0 | 1467 | 101 | 0 |
| 0 | 2 | 0 | 0 |
| 0 | 18 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 57 |
| **0** | **1487** | **101** | **57** |
| U | T | R | P |

| T | L | U | P |
|---|---|---|---|
| 1705 | 91 | 0 | 0 |
| 3 | 0 | 0 | 0 |
| 18 | 1 | 0 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 0 | 37 |
| **1726** | **92** | **0** | **37** |
| T | L | U | P |

| Lancaster Avenue [WB] | | | |
|---|---|---|---|
| Out | 1583 | 2 | 19 |
| In | 1796 | 3 | 19 |
| Total | 3379 | 5 | 38 |
| **1604** | 0 | 0 | 0 |
| **1818** | 0 | 0 | 0 |
| **3422** | 0 | 0 | 0 |

| U | L | R | P |
|---|---|---|---|
| 0 | 63 | 116 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 |
| 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 29 |
| **0** | **63** | **117** | **31** |

| | | |
|---|---|---|
| 192 | 179 | 371 |
| 0 | 0 | 0 |
| 1 | 1 | 2 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| **193** | **180** | **373** |
| Out | In | Total |
| Louella Avenue [NB] | | |

Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & Louella Ave
Saturday, September 8, 2018
Location: 40.043928, -75.385359

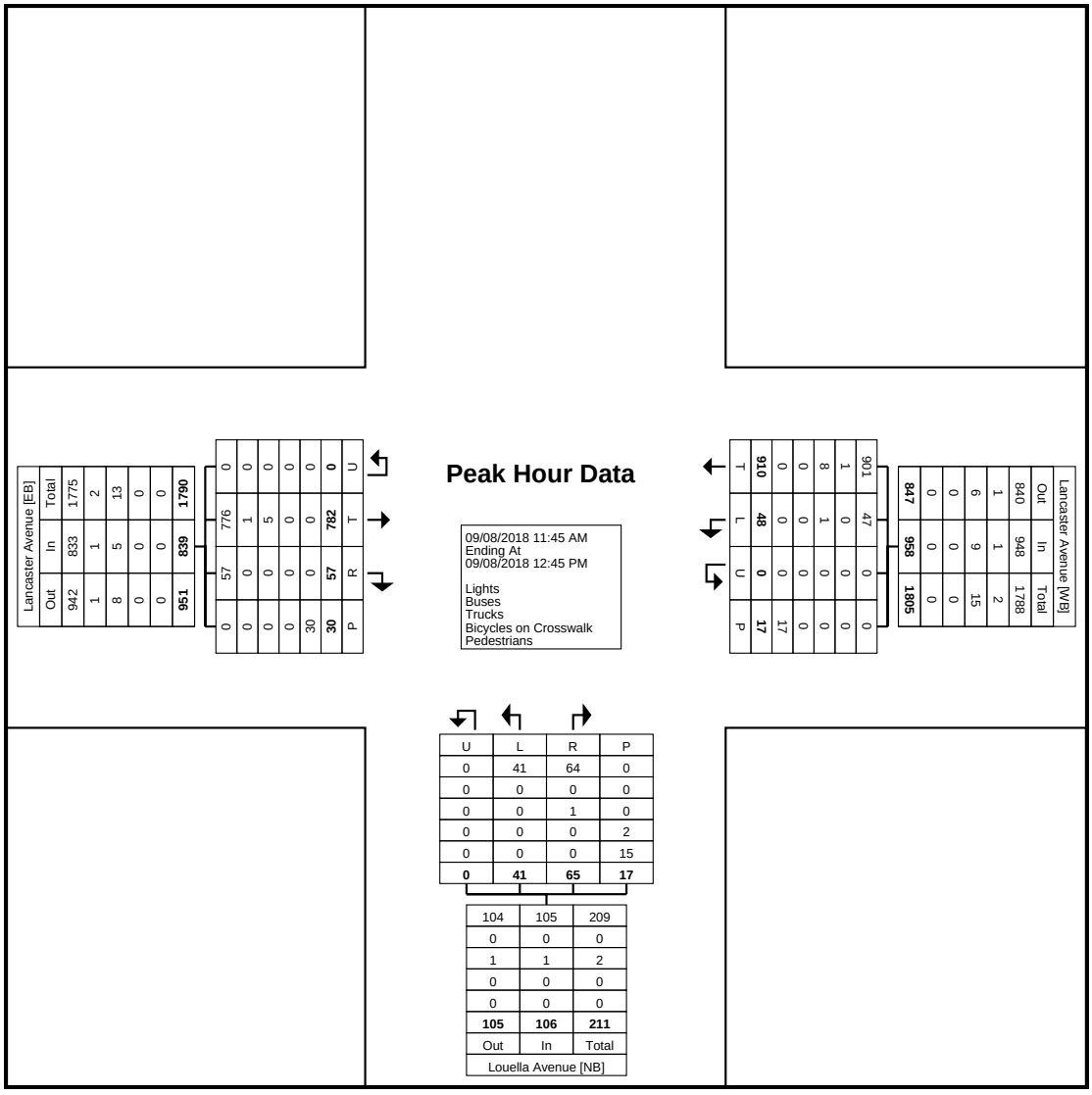
Count Name: Lancaster Ave/Louella Ave-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Peak Hour Data (11:45 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | Lancaster Avenue Westbound | | | | | Louella Avenue Northbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Left | Right | Right on Red | U-Turn | Peds | App. Total | Int. Total |
| 11:45 AM | 205 | 14 | 1 | 0 | 9 | 220 | 9 | 213 | 0 | 5 | 222 | 10 | 19 | 0 | 0 | 1 | 29 | 471 |
| 12:00 PM | 204 | 12 | 0 | 0 | 6 | 216 | 4 | 243 | 0 | 7 | 247 | 12 | 19 | 0 | 0 | 1 | 31 | 494 |
| 12:15 PM | 186 | 15 | 0 | 0 | 11 | 201 | 19 | 229 | 0 | 5 | 248 | 9 | 14 | 0 | 0 | 6 | 23 | 472 |
| 12:30 PM | 187 | 15 | 0 | 0 | 4 | 202 | 16 | 225 | 0 | 0 | 241 | 10 | 13 | 0 | 0 | 9 | 23 | 466 |
| Total | 782 | 56 | 1 | 0 | 30 | 839 | 48 | 910 | 0 | 17 | 958 | 41 | 65 | 0 | 0 | 17 | 106 | 1903 |
| Approach % | 93.2 | 6.7 | 0.1 | 0.0 | - | - | 5.0 | 95.0 | 0.0 | - | - | 38.7 | 61.3 | 0.0 | 0.0 | - | - | - |
| Total % | 41.1 | 2.9 | 0.1 | 0.0 | - | 44.1 | 2.5 | 47.8 | 0.0 | - | 50.3 | 2.2 | 3.4 | 0.0 | 0.0 | - | 5.6 | - |
| PHF | 0.954 | 0.933 | 0.250 | 0.000 | - | 0.953 | 0.632 | 0.936 | 0.000 | - | 0.966 | 0.854 | 0.855 | 0.000 | 0.000 | - | 0.855 | 0.963 |
| Lights | 776 | 56 | 1 | 0 | - | 833 | 47 | 901 | 0 | - | 948 | 41 | 64 | 0 | 0 | - | 105 | 1886 |
| % Lights | 99.2 | 100.0 | 100.0 | - | - | 99.3 | 97.9 | 99.0 | - | - | 99.0 | 100.0 | 98.5 | - | - | - | 99.1 | 99.1 |
| Buses | 1 | 0 | 0 | 0 | - | 1 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 2 |
| % Buses | 0.1 | 0.0 | 0.0 | - | - | 0.1 | 0.0 | 0.1 | - | - | 0.1 | 0.0 | 0.0 | - | - | - | 0.0 | 0.1 |
| Trucks | 5 | 0 | 0 | 0 | - | 5 | 1 | 8 | 0 | - | 9 | 0 | 1 | 0 | 0 | - | 1 | 15 |
| % Trucks | 0.6 | 0.0 | 0.0 | - | - | 0.6 | 2.1 | 0.9 | - | - | 0.9 | 0.0 | 1.5 | - | - | - | 0.9 | 0.8 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 2 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | - | 11.8 | - | - |
| Pedestrians | - | - | - | - | 30 | - | - | - | - | 17 | - | - | - | - | - | 15 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | - | 88.2 | - | - |

Radnor, PA
Lancaster Ave & Louella Ave
Saturday, September 8, 2018
Location: 40.043928, -75.385359

Count Name: Lancaster Ave/Louella Ave-Sat
Site Code:
Start Date: 09/08/2018


| Lancaster Avenue [EB] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Out | 942 | 1 | 8 | 0 | 0 | 0 | **951** | 0 | 0 | 0 | 0 | 0 | 30 | **30** | P |
| In | 833 | 1 | 5 | 0 | 0 | 0 | **839** | 57 | 0 | 0 | 0 | 0 | 0 | **57** | R |
| Total | 1775 | 2 | 13 | 0 | 0 | 0 | **1790** | 776 | 1 | 5 | 0 | 0 | 0 | **782** | T |
| | | | | | | | | | | | | | | **0** | U |

| Lancaster Avenue [WB] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Out | 840 | 1 | 6 | 0 | 0 | 0 | **847** | 901 | 1 | 8 | 0 | 0 | 0 | **910** | T |
| In | 948 | 1 | 9 | 0 | 0 | 0 | **958** | 47 | 0 | 1 | 0 | 0 | 0 | **48** | L |
| Total | 1788 | 2 | 15 | 0 | 0 | 0 | **1805** | 0 | 0 | 0 | 0 | 0 | 0 | **0** | U |
| | | | | | | | | 0 | 0 | 0 | 0 | 0 | 17 | **17** | P |

| U | L | R | P |
|---|---|---|---|
| 0 | 41 | 64 | 0 |
| 0 | 0 | 0 | 0 |
| 0 | 0 | 1 | 0 |
| 0 | 0 | 0 | 2 |
| 0 | 0 | 0 | 15 |
| **0** | **41** | **65** | **17** |

| 104 | 105 | 209 |
|---|---|---|
| 0 | 0 | 0 |
| 1 | 1 | 2 |
| 0 | 0 | 0 |
| 0 | 0 | 0 |
| **105** | **106** | **211** |
| Out | In | Total |
| Louella Avenue [NB] | | |

Turning Movement Peak Hour Data Plot (11:45 AM)

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610-466-1469
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Radnor, PA
Lancaster Ave & Louella Ave
Sunday, September 9, 2018
Location: 40.043928, -75.385359

Count Name: Lancaster Ave/Louella Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | Lancaster Avenue Westbound | | | | | Louella Avenue Northbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Left | Right | Right on Red | U-Turn | Peds | App. Total | Int. Total |
| 9:00 AM | 96 | 4 | 0 | 0 | 0 | 100 | 9 | 151 | 0 | 0 | 160 | 6 | 0 | 0 | 0 | 0 | 6 | 266 |
| 9:15 AM | 138 | 9 | 0 | 0 | 0 | 147 | 2 | 98 | 0 | 0 | 100 | 6 | 3 | 0 | 0 | 0 | 9 | 256 |
| 9:30 AM | 113 | 17 | 0 | 1 | 0 | 131 | 4 | 118 | 0 | 0 | 122 | 2 | 3 | 0 | 0 | 0 | 5 | 258 |
| 9:45 AM | 138 | 12 | 0 | 1 | 5 | 151 | 7 | 140 | 0 | 0 | 147 | 4 | 4 | 0 | 0 | 0 | 8 | 306 |
| Hourly Total | 485 | 42 | 0 | 2 | 5 | 529 | 22 | 507 | 0 | 0 | 529 | 18 | 10 | 0 | 0 | 0 | 28 | 1086 |
| 10:00 AM | 127 | 10 | 0 | 0 | 2 | 137 | 4 | 130 | 0 | 1 | 134 | 6 | 3 | 0 | 0 | 0 | 9 | 280 |
| 10:15 AM | 120 | 6 | 1 | 0 | 3 | 127 | 9 | 131 | 0 | 2 | 140 | 8 | 8 | 0 | 0 | 2 | 16 | 283 |
| 10:30 AM | 143 | 31 | 0 | 0 | 5 | 174 | 6 | 169 | 0 | 0 | 175 | 10 | 3 | 0 | 0 | 0 | 13 | 362 |
| 10:45 AM | 148 | 8 | 0 | 0 | 2 | 156 | 4 | 150 | 0 | 0 | 154 | 6 | 5 | 0 | 0 | 3 | 11 | 321 |
| Hourly Total | 538 | 55 | 1 | 0 | 12 | 594 | 23 | 580 | 0 | 3 | 603 | 30 | 19 | 0 | 0 | 5 | 49 | 1246 |
| 11:00 AM | 162 | 10 | 0 | 0 | 8 | 172 | 1 | 139 | 0 | 2 | 140 | 4 | 4 | 0 | 0 | 0 | 8 | 320 |
| 11:15 AM | 121 | 13 | 1 | 0 | 3 | 135 | 11 | 148 | 0 | 2 | 159 | 6 | 4 | 0 | 0 | 0 | 10 | 304 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 1306 | 120 | 2 | 2 | 28 | 1430 | 57 | 1374 | 0 | 7 | 1431 | 58 | 37 | 0 | 0 | 5 | 95 | 2956 |
| Approach % | 91.3 | 8.4 | 0.1 | 0.1 | - | - | 4.0 | 96.0 | 0.0 | - | - | 61.1 | 38.9 | 0.0 | 0.0 | - | - | - |
| Total % | 44.2 | 4.1 | 0.1 | 0.1 | - | 48.4 | 1.9 | 46.5 | 0.0 | - | 48.4 | 2.0 | 1.3 | 0.0 | 0.0 | - | 3.2 | - |
| Lights | 1299 | 120 | 2 | 2 | - | 1423 | 57 | 1371 | 0 | - | 1428 | 58 | 36 | 0 | 0 | - | 94 | 2945 |
| % Lights | 99.5 | 100.0 | 100.0 | 100.0 | - | 99.5 | 100.0 | 99.8 | - | - | 99.8 | 100.0 | 97.3 | - | - | - | 98.9 | 99.6 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 |
| Trucks | 7 | 0 | 0 | 0 | - | 7 | 0 | 3 | 0 | - | 3 | 0 | 1 | 0 | 0 | - | 1 | 11 |
| % Trucks | 0.5 | 0.0 | 0.0 | 0.0 | - | 0.5 | 0.0 | 0.2 | - | - | 0.2 | 0.0 | 2.7 | - | - | - | 1.1 | 0.4 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 28 | - | - | - | - | 7 | - | - | - | - | - | 5 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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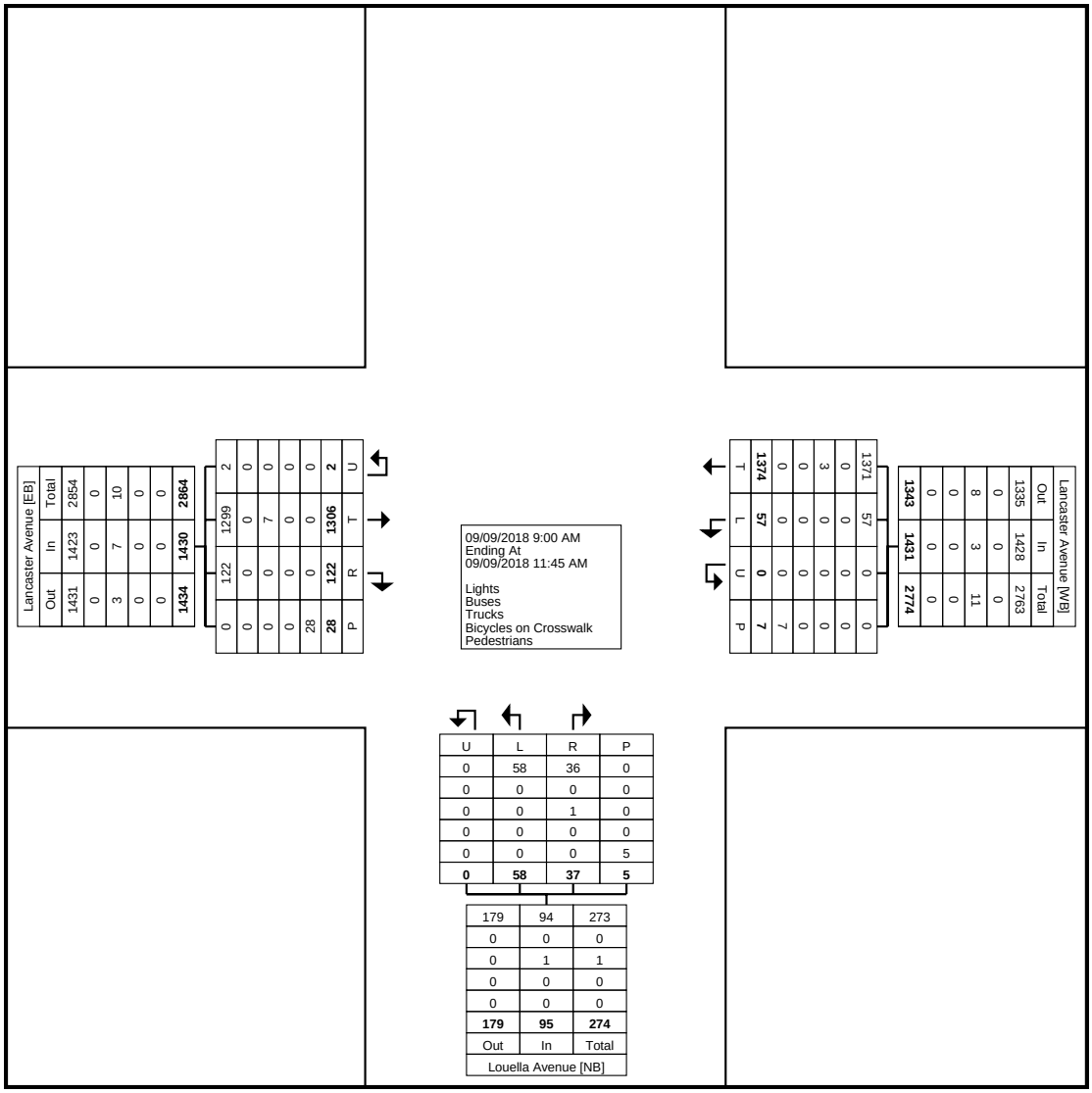
Radnor, PA
Lancaster Ave & Louella Ave
Sunday, September 9, 2018
Location: 40.043928, -75.385359

Count Name: Lancaster Ave/Louella Ave-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & Louella Ave
Sunday, September 9, 2018
Location: 40.043928, -75.385359

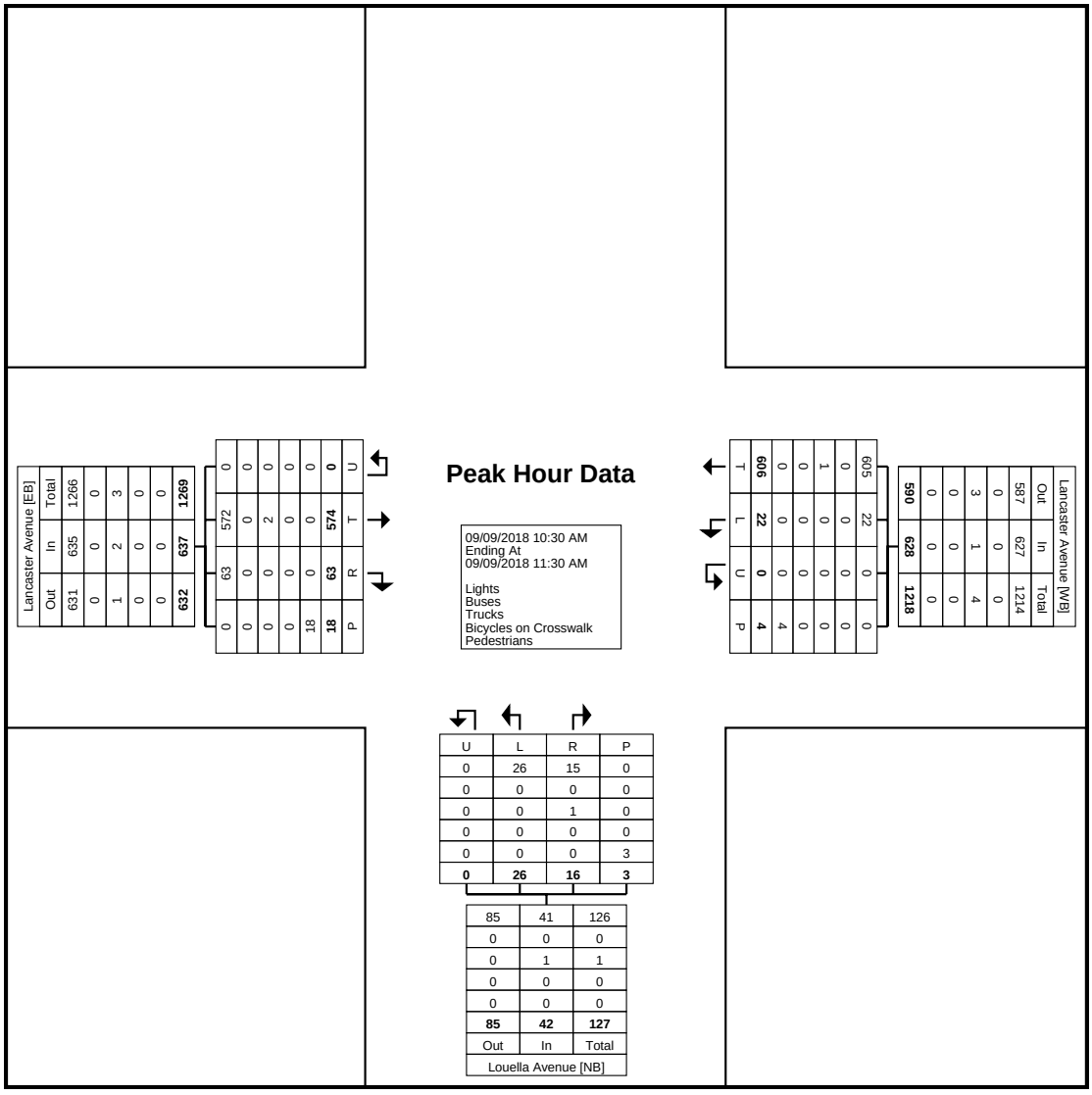
Count Name: Lancaster Ave/Louella Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Peak Hour Data (10:30 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | Lancaster Avenue Westbound | | | | | Louella Avenue Northbound | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Left | Right | Right on Red | U-Turn | Peds | App. Total | Int. Total |
| 10:30 AM | 143 | 31 | 0 | 0 | 5 | 174 | 6 | 169 | 0 | 0 | 175 | 10 | 3 | 0 | 0 | 0 | 13 | 362 |
| 10:45 AM | 148 | 8 | 0 | 0 | 2 | 156 | 4 | 150 | 0 | 0 | 154 | 6 | 5 | 0 | 0 | 3 | 11 | 321 |
| 11:00 AM | 162 | 10 | 0 | 0 | 8 | 172 | 1 | 139 | 0 | 2 | 140 | 4 | 4 | 0 | 0 | 0 | 8 | 320 |
| 11:15 AM | 121 | 13 | 1 | 0 | 3 | 135 | 11 | 148 | 0 | 2 | 159 | 6 | 4 | 0 | 0 | 0 | 10 | 304 |
| Total | 574 | 62 | 1 | 0 | 18 | 637 | 22 | 606 | 0 | 4 | 628 | 26 | 16 | 0 | 0 | 3 | 42 | 1307 |
| Approach % | 90.1 | 9.7 | 0.2 | 0.0 | - | - | 3.5 | 96.5 | 0.0 | - | - | 61.9 | 38.1 | 0.0 | 0.0 | - | - | - |
| Total % | 43.9 | 4.7 | 0.1 | 0.0 | - | 48.7 | 1.7 | 46.4 | 0.0 | - | 48.0 | 2.0 | 1.2 | 0.0 | 0.0 | - | 3.2 | - |
| PHF | 0.886 | 0.500 | 0.250 | 0.000 | - | 0.915 | 0.500 | 0.896 | 0.000 | - | 0.897 | 0.650 | 0.800 | 0.000 | 0.000 | - | 0.808 | 0.903 |
| Lights | 572 | 62 | 1 | 0 | - | 635 | 22 | 605 | 0 | - | 627 | 26 | 15 | 0 | 0 | - | 41 | 1303 |
| % Lights | 99.7 | 100.0 | 100.0 | - | - | 99.7 | 100.0 | 99.8 | - | - | 99.8 | 100.0 | 93.8 | - | - | - | 97.6 | 99.7 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 |
| Trucks | 2 | 0 | 0 | 0 | - | 2 | 0 | 1 | 0 | - | 1 | 0 | 1 | 0 | 0 | - | 1 | 4 |
| % Trucks | 0.3 | 0.0 | 0.0 | - | - | 0.3 | 0.0 | 0.2 | - | - | 0.2 | 0.0 | 6.3 | - | - | - | 2.4 | 0.3 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 18 | - | - | - | - | 4 | - | - | - | - | - | 3 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Lancaster Ave & Louella Ave
Sunday, September 9, 2018
Location: 40.043928, -75.385359

Count Name: Lancaster Ave/Louella Ave-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Peak Hour Data Plot (10:30 AM)

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Radnor, PA
Lancaster Ave & St Davids St
Tuesday, September 11, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids
Site Code:
Start Date: 09/11/2018
Page No: 1

# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | St Davids Road Northbound | | | | | | | Chamounix Road Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 7:00 AM | 6 | 172 | 0 | 0 | 0 | 1 | 178 | 2 | 227 | 25 | 3 | 0 | 2 | 257 | 2 | 6 | 12 | 0 | 0 | 0 | 20 | 12 | 4 | 4 | 1 | 0 | 1 | 21 | 476 |
| 7:15 AM | 4 | 189 | 0 | 0 | 0 | 0 | 193 | 4 | 246 | 24 | 2 | 0 | 2 | 276 | 3 | 5 | 17 | 1 | 0 | 2 | 26 | 17 | 4 | 4 | 0 | 0 | 1 | 25 | 520 |
| 7:30 AM | 6 | 209 | 0 | 0 | 0 | 1 | 215 | 5 | 268 | 49 | 4 | 0 | 2 | 326 | 2 | 13 | 17 | 1 | 0 | 1 | 33 | 19 | 9 | 2 | 1 | 0 | 2 | 31 | 605 |
| 7:45 AM | 1 | 234 | 2 | 1 | 0 | 0 | 238 | 8 | 289 | 74 | 4 | 0 | 5 | 375 | 1 | 22 | 19 | 3 | 0 | 0 | 45 | 22 | 20 | 16 | 0 | 0 | 1 | 58 | 716 |
| Hourly Total | 17 | 804 | 2 | 1 | 0 | 2 | 824 | 19 | 1030 | 172 | 13 | 0 | 11 | 1234 | 8 | 46 | 65 | 5 | 0 | 3 | 124 | 70 | 37 | 26 | 2 | 0 | 5 | 135 | 2317 |
| 8:00 AM | 6 | 232 | 1 | 0 | 0 | 0 | 239 | 1 | 278 | 63 | 4 | 0 | 0 | 346 | 11 | 16 | 19 | 0 | 0 | 0 | 46 | 25 | 7 | 7 | 0 | 0 | 1 | 39 | 670 |
| 8:15 AM | 5 | 196 | 2 | 0 | 0 | 2 | 203 | 2 | 265 | 56 | 5 | 0 | 0 | 328 | 5 | 17 | 12 | 0 | 0 | 0 | 34 | 20 | 6 | 5 | 0 | 0 | 2 | 31 | 596 |
| 8:30 AM | 2 | 193 | 3 | 0 | 0 | 2 | 198 | 2 | 281 | 73 | 6 | 0 | 0 | 362 | 2 | 12 | 17 | 0 | 0 | 0 | 31 | 25 | 5 | 10 | 0 | 0 | 2 | 40 | 631 |
| 8:45 AM | 5 | 198 | 2 | 0 | 0 | 3 | 205 | 6 | 267 | 62 | 9 | 0 | 2 | 344 | 4 | 5 | 14 | 0 | 0 | 0 | 23 | 23 | 7 | 10 | 0 | 0 | 0 | 40 | 612 |
| Hourly Total | 18 | 819 | 8 | 0 | 0 | 7 | 845 | 11 | 1091 | 254 | 24 | 0 | 2 | 1380 | 22 | 50 | 62 | 0 | 0 | 0 | 134 | 93 | 25 | 32 | 0 | 0 | 5 | 150 | 2509 |
| 9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 2:00 PM | 5 | 220 | 4 | 0 | 0 | 0 | 229 | 2 | 201 | 11 | 1 | 0 | 1 | 215 | 1 | 4 | 12 | 0 | 0 | 1 | 17 | 8 | 2 | 5 | 0 | 0 | 0 | 15 | 476 |
| 2:15 PM | 5 | 218 | 1 | 0 | 0 | 0 | 224 | 2 | 195 | 10 | 0 | 0 | 0 | 207 | 1 | 3 | 3 | 0 | 0 | 0 | 7 | 13 | 6 | 1 | 0 | 0 | 0 | 20 | 458 |
| 2:30 PM | 5 | 214 | 3 | 1 | 0 | 0 | 223 | 13 | 224 | 11 | 1 | 0 | 0 | 249 | 1 | 3 | 10 | 0 | 0 | 1 | 14 | 10 | 4 | 11 | 1 | 0 | 0 | 26 | 512 |
| 2:45 PM | 4 | 219 | 7 | 0 | 0 | 0 | 230 | 7 | 217 | 12 | 2 | 0 | 1 | 238 | 1 | 4 | 9 | 0 | 0 | 0 | 14 | 16 | 6 | 3 | 0 | 0 | 0 | 25 | 507 |
| Hourly Total | 19 | 871 | 15 | 1 | 0 | 0 | 906 | 24 | 837 | 44 | 4 | 0 | 2 | 909 | 4 | 14 | 34 | 0 | 0 | 2 | 52 | 47 | 18 | 20 | 1 | 0 | 0 | 86 | 1953 |
| 3:00 PM | 8 | 232 | 3 | 1 | 0 | 0 | 244 | 4 | 206 | 28 | 0 | 0 | 1 | 238 | 1 | 4 | 20 | 0 | 0 | 0 | 25 | 18 | 5 | 5 | 0 | 0 | 3 | 28 | 535 |
| 3:15 PM | 7 | 280 | 3 | 0 | 0 | 1 | 290 | 10 | 185 | 20 | 0 | 0 | 3 | 215 | 0 | 5 | 14 | 0 | 0 | 1 | 19 | 18 | 7 | 6 | 0 | 0 | 5 | 31 | 555 |
| 3:30 PM | 3 | 230 | 2 | 0 | 0 | 0 | 235 | 6 | 201 | 11 | 0 | 0 | 0 | 218 | 3 | 2 | 18 | 0 | 0 | 0 | 23 | 25 | 9 | 8 | 2 | 0 | 1 | 44 | 520 |
| 3:45 PM | 9 | 246 | 5 | 0 | 0 | 0 | 260 | 9 | 219 | 22 | 1 | 0 | 2 | 251 | 2 | 1 | 17 | 1 | 0 | 0 | 21 | 21 | 7 | 7 | 0 | 0 | 3 | 35 | 567 |
| Hourly Total | 27 | 988 | 13 | 1 | 0 | 1 | 1029 | 29 | 811 | 81 | 1 | 0 | 6 | 922 | 6 | 12 | 69 | 1 | 0 | 1 | 88 | 82 | 28 | 26 | 2 | 0 | 12 | 138 | 2177 |
| 4:00 PM | 6 | 242 | 5 | 0 | 0 | 0 | 253 | 4 | 213 | 35 | 2 | 0 | 2 | 254 | 3 | 3 | 13 | 0 | 0 | 0 | 19 | 23 | 4 | 8 | 0 | 0 | 1 | 35 | 561 |
| 4:15 PM | 10 | 209 | 9 | 2 | 0 | 0 | 230 | 11 | 226 | 22 | 1 | 0 | 1 | 260 | 2 | 2 | 8 | 0 | 0 | 3 | 12 | 23 | 8 | 9 | 0 | 0 | 2 | 40 | 542 |
| 4:30 PM | 5 | 266 | 4 | 0 | 0 | 0 | 275 | 14 | 228 | 27 | 2 | 0 | 2 | 271 | 2 | 4 | 9 | 0 | 0 | 0 | 15 | 20 | 13 | 7 | 0 | 0 | 0 | 40 | 601 |
| 4:45 PM | 4 | 256 | 1 | 0 | 0 | 0 | 261 | 8 | 228 | 27 | 1 | 0 | 4 | 264 | 2 | 2 | 8 | 2 | 0 | 3 | 14 | 15 | 7 | 9 | 1 | 0 | 2 | 32 | 571 |
| Hourly Total | 25 | 973 | 19 | 2 | 0 | 0 | 1019 | 37 | 895 | 111 | 6 | 0 | 9 | 1049 | 9 | 11 | 38 | 2 | 0 | 6 | 60 | 81 | 32 | 33 | 1 | 0 | 5 | 147 | 2275 |
| 5:00 PM | 7 | 268 | 3 | 0 | 0 | 0 | 278 | 9 | 271 | 36 | 3 | 0 | 4 | 319 | 2 | 2 | 4 | 0 | 0 | 1 | 8 | 20 | 0 | 8 | 0 | 0 | 2 | 28 | 633 |
| 5:15 PM | 11 | 245 | 4 | 0 | 0 | 0 | 260 | 12 | 229 | 31 | 1 | 0 | 1 | 273 | 2 | 11 | 8 | 0 | 0 | 0 | 21 | 15 | 6 | 8 | 0 | 0 | 2 | 29 | 583 |
| 5:30 PM | 11 | 210 | 4 | 1 | 0 | 0 | 226 | 11 | 276 | 27 | 1 | 0 | 3 | 315 | 0 | 4 | 5 | 0 | 0 | 0 | 9 | 15 | 9 | 13 | 0 | 0 | 0 | 37 | 587 |
| 5:45 PM | 6 | 231 | 5 | 0 | 0 | 0 | 242 | 7 | 229 | 41 | 1 | 0 | 0 | 278 | 0 | 8 | 15 | 0 | 0 | 2 | 23 | 24 | 7 | 13 | 0 | 0 | 1 | 44 | 587 |
| Hourly Total | 35 | 954 | 16 | 1 | 0 | 0 | 1006 | 39 | 1005 | 135 | 6 | 0 | 8 | 1185 | 4 | 25 | 32 | 0 | 0 | 3 | 61 | 74 | 22 | 42 | 0 | 0 | 5 | 138 | 2390 |
| Grand Total | 141 | 5409 | 73 | 6 | 0 | 10 | 5629 | 159 | 5671 | 797 | 54 | 0 | 38 | 6681 | 53 | 158 | 300 | 8 | 0 | 15 | 519 | 447 | 162 | 179 | 6 | 0 | 32 | 794 | 13623 |
| Approach % | 2.5 | 96.1 | 1.3 | 0.1 | 0.0 | - | - | 2.4 | 84.9 | 11.9 | 0.8 | 0.0 | - | - | 10.2 | 30.4 | 57.8 | 1.5 | 0.0 | - | - | 56.3 | 20.4 | 22.5 | 0.8 | 0.0 | - | - | - |
| Total % | 1.0 | 39.7 | 0.5 | 0.0 | 0.0 | - | 41.3 | 1.2 | 41.6 | 5.9 | 0.4 | 0.0 | - | 49.0 | 0.4 | 1.2 | 2.2 | 0.1 | 0.0 | - | 3.8 | 3.3 | 1.2 | 1.3 | 0.0 | 0.0 | - | 5.8 | - |
| Lights | 141 | 5274 | 69 | 6 | 0 | - | 5490 | 152 | 5518 | 790 | 54 | 0 | - | 6514 | 52 | 158 | 285 | 8 | 0 | - | 503 | 445 | 159 | 174 | 6 | 0 | - | 784 | 13291 |
| % Lights | 100.0 | 97.5 | 94.5 | 100.0 | - | - | 97.5 | 95.6 | 97.3 | 99.1 | 100.0 | - | - | 97.5 | 98.1 | 100.0 | 95.0 | 100.0 | - | - | 96.9 | 99.6 | 98.1 | 97.2 | 100.0 | - | - | 98.7 | 97.6 |
| Buses | 0 | 22 | 2 | 0 | 0 | - | 24 | 3 | 36 | 0 | 0 | 0 | - | 39 | 0 | 0 | 8 | 0 | 0 | - | 8 | 0 | 0 | 0 | 0 | 0 | - | 0 | 71 |
| % Buses | 0.0 | 0.4 | 2.7 | 0.0 | - | - | 0.4 | 1.9 | 0.6 | 0.0 | 0.0 | - | - | 0.6 | 0.0 | 0.0 | 2.7 | 0.0 | - | - | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.5 |
| Trucks | 0 | 113 | 2 | 0 | 0 | - | 115 | 4 | 117 | 7 | 0 | 0 | - | 128 | 1 | 0 | 7 | 0 | 0 | - | 8 | 2 | 3 | 5 | 0 | 0 | - | 10 | 261 |
| % Trucks | 0.0 | 2.1 | 2.7 | 0.0 | - | - | 2.0 | 2.5 | 2.1 | 0.9 | 0.0 | - | - | 1.9 | 1.9 | 0.0 | 2.3 | 0.0 | - | - | 1.5 | 0.4 | 1.9 | 2.8 | 0.0 | - | - | 1.3 | 1.9 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 3 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 9.4 | - | - |
| Pedestrians | - | - | - | - | - | 10 | - | - | - | - | - | - | 38 | - | - | - | - | - | - | 15 | - | - | - | - | - | - | 29 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 90.6 | - | - |

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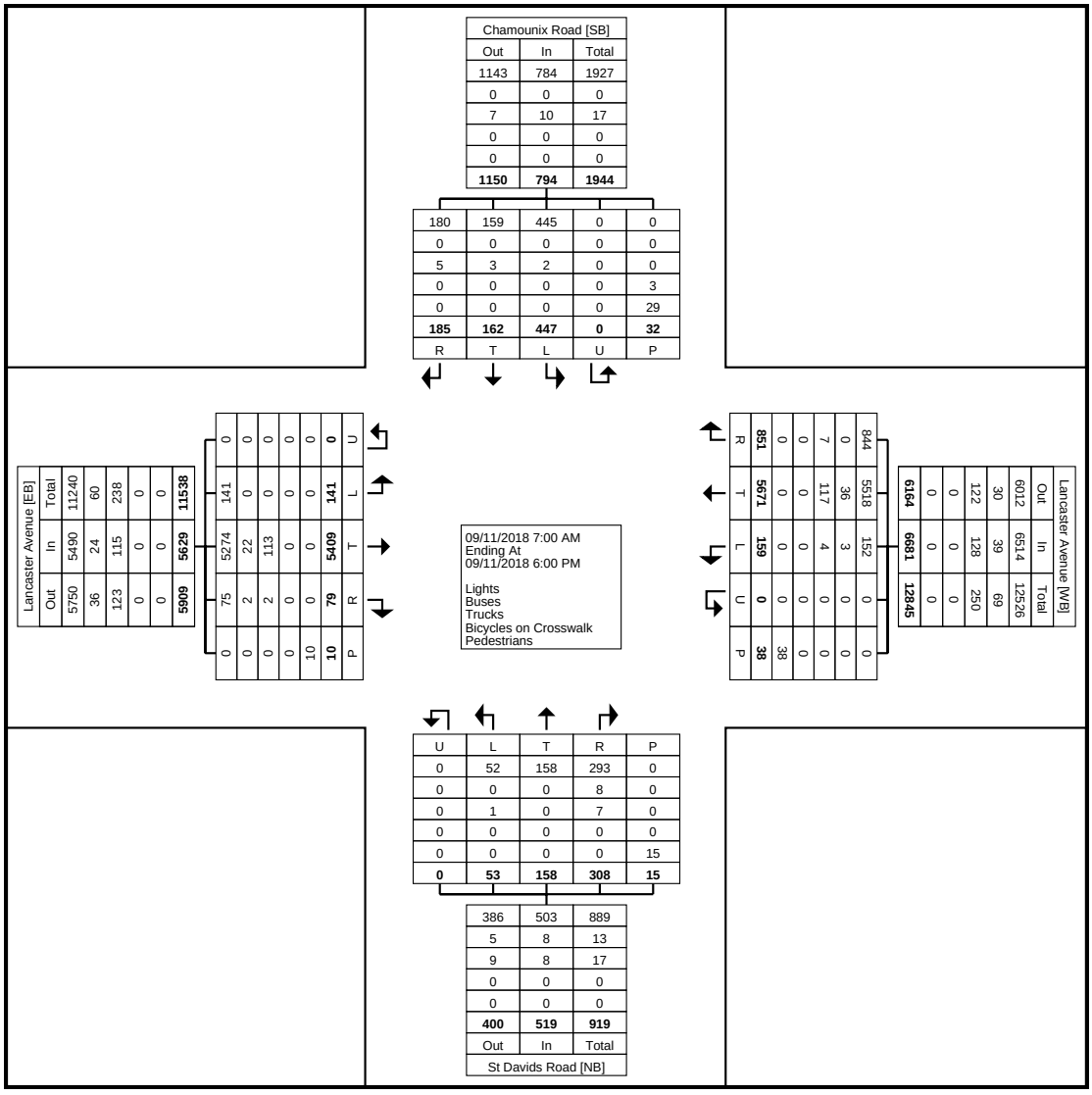
Radnor, PA
Lancaster Ave & St Davids St
Tuesday, September 11, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids
Site Code:
Start Date: 09/11/2018
Page No: 2




Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & St Davids St
Tuesday, September 11, 2018
Location: 40.042926, -75.374171

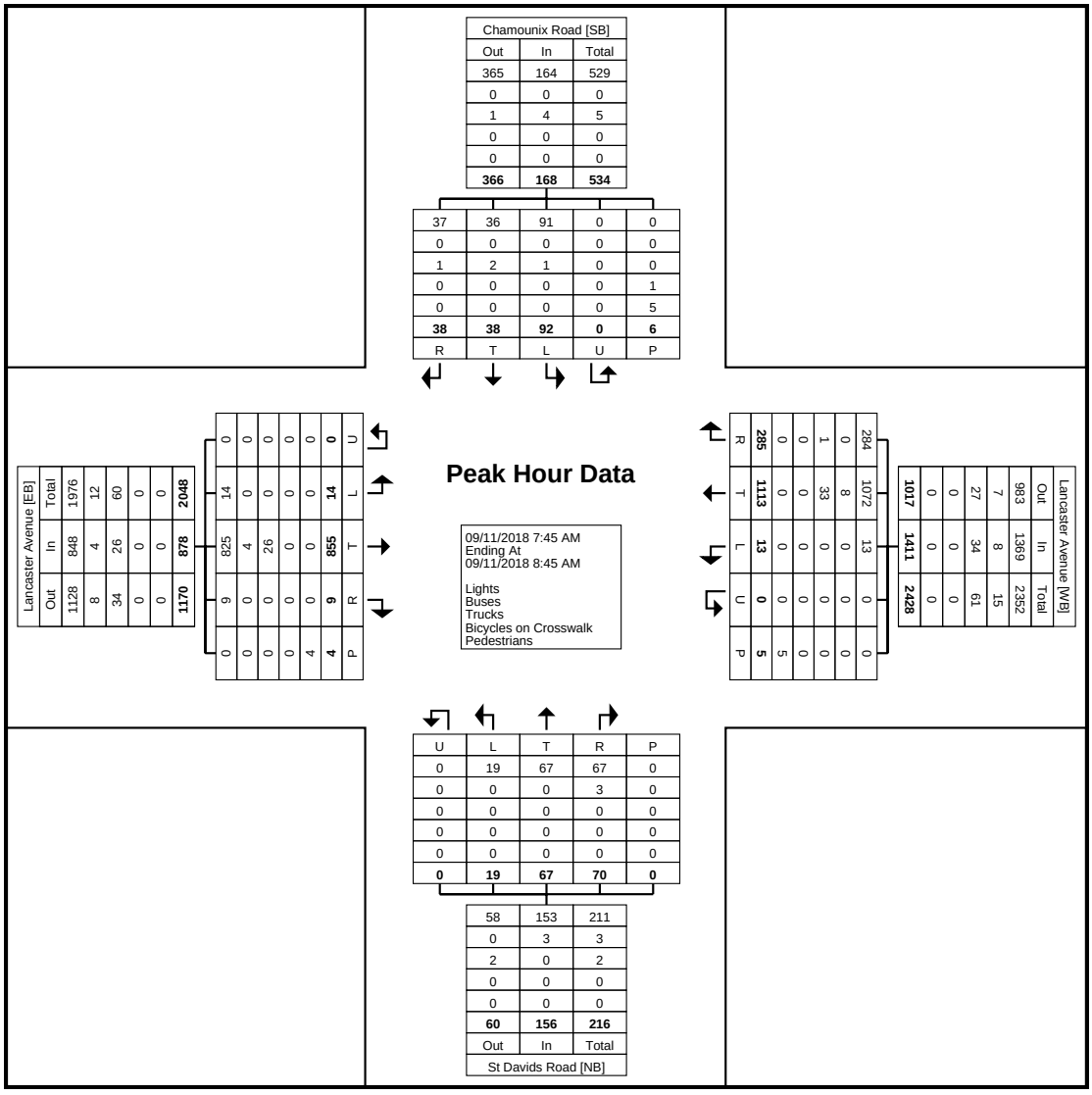
Count Name: Lancaster Ave/St Davids
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (7:45 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | St Davids Road Northbound | | | | | | | Chamounix Road Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 7:45 AM | 1 | 234 | 2 | 1 | 0 | 0 | 238 | 8 | 289 | 74 | 4 | 0 | 5 | 375 | 1 | 22 | 19 | 3 | 0 | 0 | 45 | 22 | 20 | 16 | 0 | 0 | 1 | 58 | 716 |
| 8:00 AM | 6 | 232 | 1 | 0 | 0 | 0 | 239 | 1 | 278 | 63 | 4 | 0 | 0 | 346 | 11 | 16 | 19 | 0 | 0 | 0 | 46 | 25 | 7 | 7 | 0 | 0 | 1 | 39 | 670 |
| 8:15 AM | 5 | 196 | 2 | 0 | 0 | 2 | 203 | 2 | 265 | 56 | 5 | 0 | 0 | 328 | 5 | 17 | 12 | 0 | 0 | 0 | 34 | 20 | 6 | 5 | 0 | 0 | 2 | 31 | 596 |
| 8:30 AM | 2 | 193 | 3 | 0 | 0 | 2 | 198 | 2 | 281 | 73 | 6 | 0 | 0 | 362 | 2 | 12 | 17 | 0 | 0 | 0 | 31 | 25 | 5 | 10 | 0 | 0 | 2 | 40 | 631 |
| Total | 14 | 855 | 8 | 1 | 0 | 4 | 878 | 13 | 1113 | 266 | 19 | 0 | 5 | 1411 | 19 | 67 | 67 | 3 | 0 | 0 | 156 | 92 | 38 | 38 | 0 | 0 | 6 | 168 | 2613 |
| Approach % | 1.6 | 97.4 | 0.9 | 0.1 | 0.0 | - | - | 0.9 | 78.9 | 18.9 | 1.3 | 0.0 | - | - | 12.2 | 42.9 | 42.9 | 1.9 | 0.0 | - | - | 54.8 | 22.6 | 22.6 | 0.0 | 0.0 | - | - | - |
| Total % | 0.5 | 32.7 | 0.3 | 0.0 | 0.0 | - | 33.6 | 0.5 | 42.6 | 10.2 | 0.7 | 0.0 | - | 54.0 | 0.7 | 2.6 | 2.6 | 0.1 | 0.0 | - | 6.0 | 3.5 | 1.5 | 1.5 | 0.0 | 0.0 | - | 6.4 | - |
| PHF | 0.583 | 0.913 | 0.667 | 0.250 | 0.000 | - | 0.918 | 0.406 | 0.963 | 0.899 | 0.792 | 0.000 | - | 0.941 | 0.432 | 0.761 | 0.882 | 0.250 | 0.000 | - | 0.848 | 0.920 | 0.475 | 0.594 | 0.000 | 0.000 | - | 0.724 | 0.912 |
| Lights | 14 | 825 | 8 | 1 | 0 | - | 848 | 13 | 1072 | 265 | 19 | 0 | - | 1369 | 19 | 67 | 64 | 3 | 0 | - | 153 | 91 | 36 | 37 | 0 | 0 | - | 164 | 2534 |
| % Lights | 100.0 | 96.5 | 100.0 | 100.0 | - | - | 96.6 | 100.0 | 96.3 | 99.6 | 100.0 | - | - | 97.0 | 100.0 | 100.0 | 95.5 | 100.0 | - | - | 98.1 | 98.9 | 94.7 | 97.4 | - | - | - | 97.6 | 97.0 |
| Buses | 0 | 4 | 0 | 0 | 0 | - | 4 | 0 | 8 | 0 | 0 | 0 | - | 8 | 0 | 0 | 3 | 0 | 0 | - | 3 | 0 | 0 | 0 | 0 | 0 | - | 0 | 15 |
| % Buses | 0.0 | 0.5 | 0.0 | 0.0 | - | - | 0.5 | 0.0 | 0.7 | 0.0 | 0.0 | - | - | 0.6 | 0.0 | 0.0 | 4.5 | 0.0 | - | - | 1.9 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.6 |
| Trucks | 0 | 26 | 0 | 0 | 0 | - | 26 | 0 | 33 | 1 | 0 | 0 | - | 34 | 0 | 0 | 0 | 0 | 0 | - | 0 | 1 | 2 | 1 | 0 | 0 | - | 4 | 64 |
| % Trucks | 0.0 | 3.0 | 0.0 | 0.0 | - | - | 3.0 | 0.0 | 3.0 | 0.4 | 0.0 | - | - | 2.4 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 1.1 | 5.3 | 2.6 | - | - | - | 2.4 | 2.4 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 1 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | 16.7 | - | - |
| Pedestrians | - | - | - | - | - | 4 | - | - | - | - | - | - | 5 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 5 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | 83.3 | - | - |

Radnor, PA
Lancaster Ave & St Davids St
Tuesday, September 11, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids
Site Code:
Start Date: 09/11/2018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Radnor, PA
Lancaster Ave & St Davids St
Tuesday, September 11, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (5:00 PM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | St Davids Road Northbound | | | | | | | Chamounix Road Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 5:00 PM | 7 | 268 | 3 | 0 | 0 | 0 | 278 | 9 | 271 | 36 | 3 | 0 | 4 | 319 | 2 | 2 | 4 | 0 | 0 | 1 | 8 | 20 | 0 | 8 | 0 | 0 | 2 | 28 | 633 |
| 5:15 PM | 11 | 245 | 4 | 0 | 0 | 0 | 260 | 12 | 229 | 31 | 1 | 0 | 1 | 273 | 2 | 11 | 8 | 0 | 0 | 0 | 21 | 15 | 6 | 8 | 0 | 0 | 2 | 29 | 583 |
| 5:30 PM | 11 | 210 | 4 | 1 | 0 | 0 | 226 | 11 | 276 | 27 | 1 | 0 | 3 | 315 | 0 | 4 | 5 | 0 | 0 | 0 | 9 | 15 | 9 | 13 | 0 | 0 | 0 | 37 | 587 |
| 5:45 PM | 6 | 231 | 5 | 0 | 0 | 0 | 242 | 7 | 229 | 41 | 1 | 0 | 0 | 278 | 0 | 8 | 15 | 0 | 0 | 2 | 23 | 24 | 7 | 13 | 0 | 0 | 1 | 44 | 587 |
| Total | 35 | 954 | 16 | 1 | 0 | 0 | 1006 | 39 | 1005 | 135 | 6 | 0 | 8 | 1185 | 4 | 25 | 32 | 0 | 0 | 3 | 61 | 74 | 22 | 42 | 0 | 0 | 5 | 138 | 2390 |
| Approach % | 3.5 | 94.8 | 1.6 | 0.1 | 0.0 | - | - | 3.3 | 84.8 | 11.4 | 0.5 | 0.0 | - | - | 6.6 | 41.0 | 52.5 | 0.0 | 0.0 | - | - | 53.6 | 15.9 | 30.4 | 0.0 | 0.0 | - | - | - |
| Total % | 1.5 | 39.9 | 0.7 | 0.0 | 0.0 | - | 42.1 | 1.6 | 42.1 | 5.6 | 0.3 | 0.0 | - | 49.6 | 0.2 | 1.0 | 1.3 | 0.0 | 0.0 | - | 2.6 | 3.1 | 0.9 | 1.8 | 0.0 | 0.0 | - | 5.8 | - |
| PHF | 0.795 | 0.890 | 0.800 | 0.250 | 0.000 | - | 0.905 | 0.813 | 0.910 | 0.823 | 0.500 | 0.000 | - | 0.929 | 0.500 | 0.568 | 0.533 | 0.000 | 0.000 | - | 0.663 | 0.771 | 0.611 | 0.808 | 0.000 | 0.000 | - | 0.784 | 0.944 |
| Lights | 35 | 944 | 16 | 1 | 0 | - | 996 | 39 | 998 | 134 | 6 | 0 | - | 1177 | 3 | 25 | 31 | 0 | 0 | - | 59 | 74 | 22 | 41 | 0 | 0 | - | 137 | 2369 |
| % Lights | 100.0 | 99.0 | 100.0 | 100.0 | - | - | 99.0 | 100.0 | 99.3 | 99.3 | 100.0 | - | - | 99.3 | 75.0 | 100.0 | 96.9 | - | - | - | 96.7 | 100.0 | 100.0 | 97.6 | - | - | - | 99.3 | 99.1 |
| Buses | 0 | 2 | 0 | 0 | 0 | - | 2 | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 3 |
| % Buses | 0.0 | 0.2 | 0.0 | 0.0 | - | - | 0.2 | 0.0 | 0.1 | 0.0 | 0.0 | - | - | 0.1 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.1 |
| Trucks | 0 | 8 | 0 | 0 | 0 | - | 8 | 0 | 6 | 1 | 0 | 0 | - | 7 | 1 | 0 | 1 | 0 | 0 | - | 2 | 0 | 0 | 1 | 0 | 0 | - | 1 | 18 |
| % Trucks | 0.0 | 0.8 | 0.0 | 0.0 | - | - | 0.8 | 0.0 | 0.6 | 0.7 | 0.0 | - | - | 0.6 | 25.0 | 0.0 | 3.1 | - | - | - | 3.3 | 0.0 | 0.0 | 2.4 | - | - | - | 0.7 | 0.8 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 0 | - | - | - | - | - | - | 8 | - | - | - | - | - | - | 3 | - | - | - | - | - | - | 5 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
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Location: 40.042926, -75.374171

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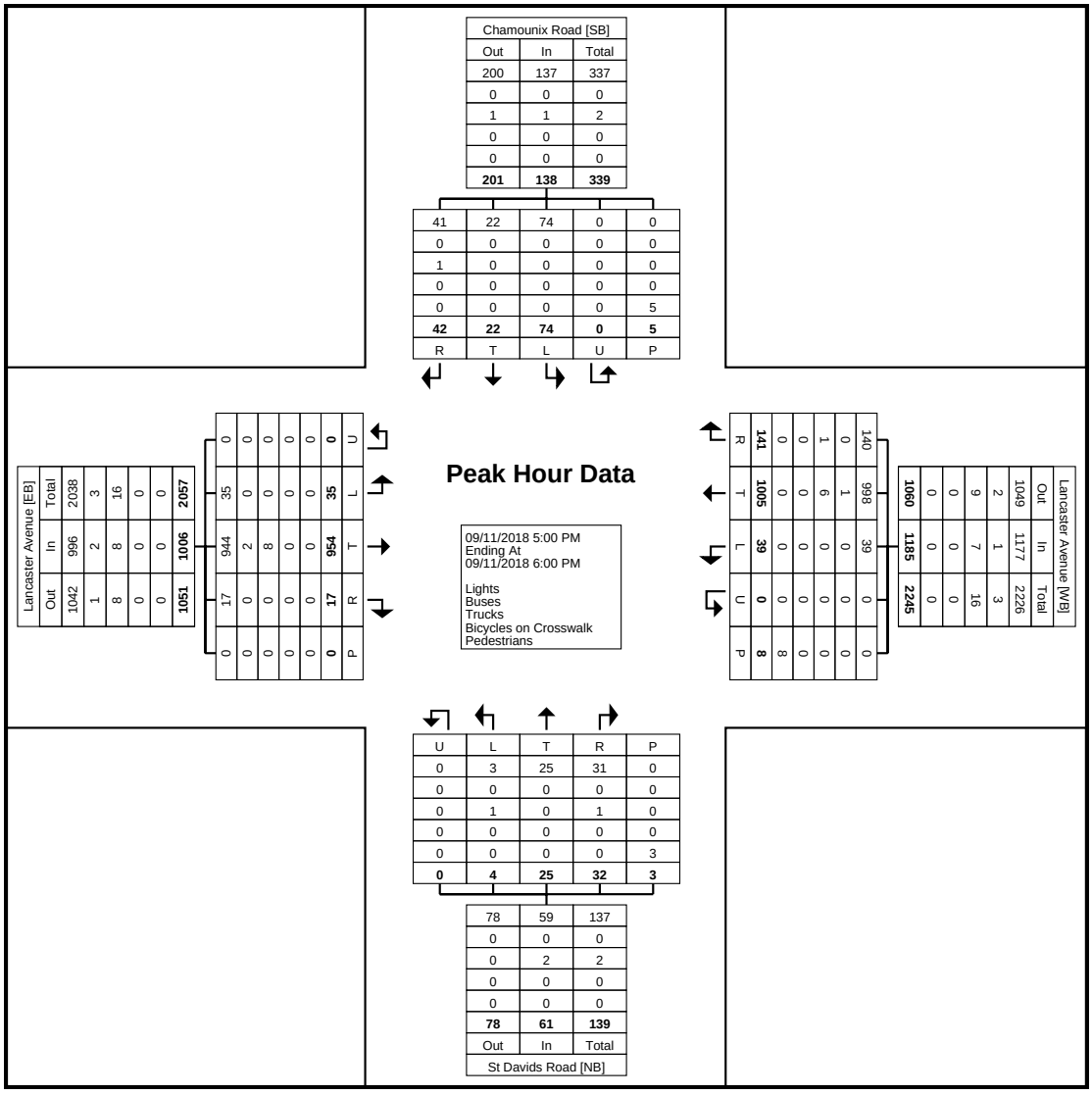
Site Code:
Start Date: 09/11/2018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Radnor, PA
Lancaster Ave & St Davids St
Saturday, September 8, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | St Davids Road Northbound | | | | | | | Chamounix Raod Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 11:00 AM | 8 | 183 | 3 | 0 | 0 | 0 | 194 | 9 | 211 | 9 | 0 | 0 | 3 | 229 | 3 | 2 | 14 | 0 | 0 | 0 | 19 | 12 | 5 | 7 | 5 | 0 | 1 | 29 | 471 |
| 11:15 AM | 7 | 175 | 3 | 0 | 0 | 0 | 185 | 11 | 213 | 11 | 1 | 0 | 0 | 236 | 5 | 5 | 11 | 0 | 0 | 0 | 21 | 8 | 13 | 8 | 1 | 0 | 0 | 30 | 472 |
| 11:30 AM | 6 | 199 | 5 | 0 | 0 | 1 | 210 | 4 | 197 | 10 | 1 | 0 | 1 | 212 | 2 | 3 | 16 | 0 | 0 | 0 | 21 | 10 | 5 | 2 | 3 | 0 | 1 | 20 | 463 |
| 11:45 AM | 6 | 250 | 9 | 0 | 0 | 0 | 265 | 6 | 224 | 8 | 0 | 0 | 0 | 238 | 3 | 0 | 16 | 0 | 0 | 0 | 19 | 11 | 5 | 10 | 1 | 0 | 1 | 27 | 549 |
| Hourly Total | 27 | 807 | 20 | 0 | 0 | 1 | 854 | 30 | 845 | 38 | 2 | 0 | 4 | 915 | 13 | 10 | 57 | 0 | 0 | 0 | 80 | 41 | 28 | 27 | 10 | 0 | 3 | 106 | 1955 |
| 12:00 PM | 8 | 202 | 2 | 1 | 0 | 0 | 213 | 6 | 252 | 18 | 1 | 0 | 0 | 277 | 2 | 4 | 9 | 0 | 0 | 0 | 15 | 14 | 2 | 11 | 2 | 0 | 0 | 29 | 534 |
| 12:15 PM | 11 | 215 | 2 | 0 | 0 | 0 | 228 | 16 | 250 | 17 | 2 | 0 | 2 | 285 | 2 | 4 | 10 | 0 | 0 | 2 | 16 | 16 | 6 | 8 | 1 | 0 | 2 | 31 | 560 |
| 12:30 PM | 5 | 213 | 4 | 0 | 0 | 0 | 222 | 8 | 258 | 17 | 0 | 0 | 2 | 283 | 6 | 9 | 6 | 0 | 0 | 0 | 21 | 14 | 4 | 4 | 1 | 0 | 2 | 23 | 549 |
| 12:45 PM | 6 | 213 | 4 | 0 | 0 | 0 | 223 | 7 | 218 | 8 | 0 | 0 | 3 | 233 | 3 | 5 | 13 | 0 | 0 | 1 | 21 | 10 | 9 | 9 | 2 | 0 | 2 | 30 | 507 |
| Hourly Total | 30 | 843 | 12 | 1 | 0 | 0 | 886 | 37 | 978 | 60 | 3 | 0 | 7 | 1078 | 13 | 22 | 38 | 0 | 0 | 3 | 73 | 54 | 21 | 32 | 6 | 0 | 6 | 113 | 2150 |
| 1:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 57 | 1650 | 32 | 1 | 0 | 1 | 1740 | 67 | 1823 | 98 | 5 | 0 | 11 | 1993 | 26 | 32 | 95 | 0 | 0 | 3 | 153 | 95 | 49 | 59 | 16 | 0 | 9 | 219 | 4105 |
| Approach % | 3.3 | 94.8 | 1.8 | 0.1 | 0.0 | - | - | 3.4 | 91.5 | 4.9 | 0.3 | 0.0 | - | - | 17.0 | 20.9 | 62.1 | 0.0 | 0.0 | - | - | 43.4 | 22.4 | 26.9 | 7.3 | 0.0 | - | - | - |
| Total % | 1.4 | 40.2 | 0.8 | 0.0 | 0.0 | - | 42.4 | 1.6 | 44.4 | 2.4 | 0.1 | 0.0 | - | 48.6 | 0.6 | 0.8 | 2.3 | 0.0 | 0.0 | - | 3.7 | 2.3 | 1.2 | 1.4 | 0.4 | 0.0 | - | 5.3 | - |
| Lights | 57 | 1626 | 32 | 1 | 0 | - | 1716 | 66 | 1799 | 98 | 5 | 0 | - | 1968 | 25 | 32 | 95 | 0 | 0 | - | 152 | 94 | 49 | 59 | 16 | 0 | - | 218 | 4054 |
| % Lights | 100.0 | 98.5 | 100.0 | 100.0 | - | - | 98.6 | 98.5 | 98.7 | 100.0 | 100.0 | - | - | 98.7 | 96.2 | 100.0 | 100.0 | - | - | - | 99.3 | 98.9 | 100.0 | 100.0 | 100.0 | - | - | 99.5 | 98.8 |
| Buses | 0 | 2 | 0 | 0 | 0 | - | 2 | 0 | 3 | 0 | 0 | 0 | - | 3 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 5 |
| % Buses | 0.0 | 0.1 | 0.0 | 0.0 | - | - | 0.1 | 0.0 | 0.2 | 0.0 | 0.0 | - | - | 0.2 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.1 |
| Trucks | 0 | 22 | 0 | 0 | 0 | - | 22 | 1 | 21 | 0 | 0 | 0 | - | 22 | 1 | 0 | 0 | 0 | 0 | - | 1 | 1 | 0 | 0 | 0 | 0 | - | 1 | 46 |
| % Trucks | 0.0 | 1.3 | 0.0 | 0.0 | - | - | 1.3 | 1.5 | 1.2 | 0.0 | 0.0 | - | - | 1.1 | 3.8 | 0.0 | 0.0 | - | - | - | 0.7 | 1.1 | 0.0 | 0.0 | 0.0 | - | - | 0.5 | 1.1 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 1 | - | - | - | - | - | - | 11 | - | - | - | - | - | - | 3 | - | - | - | - | - | - | 9 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

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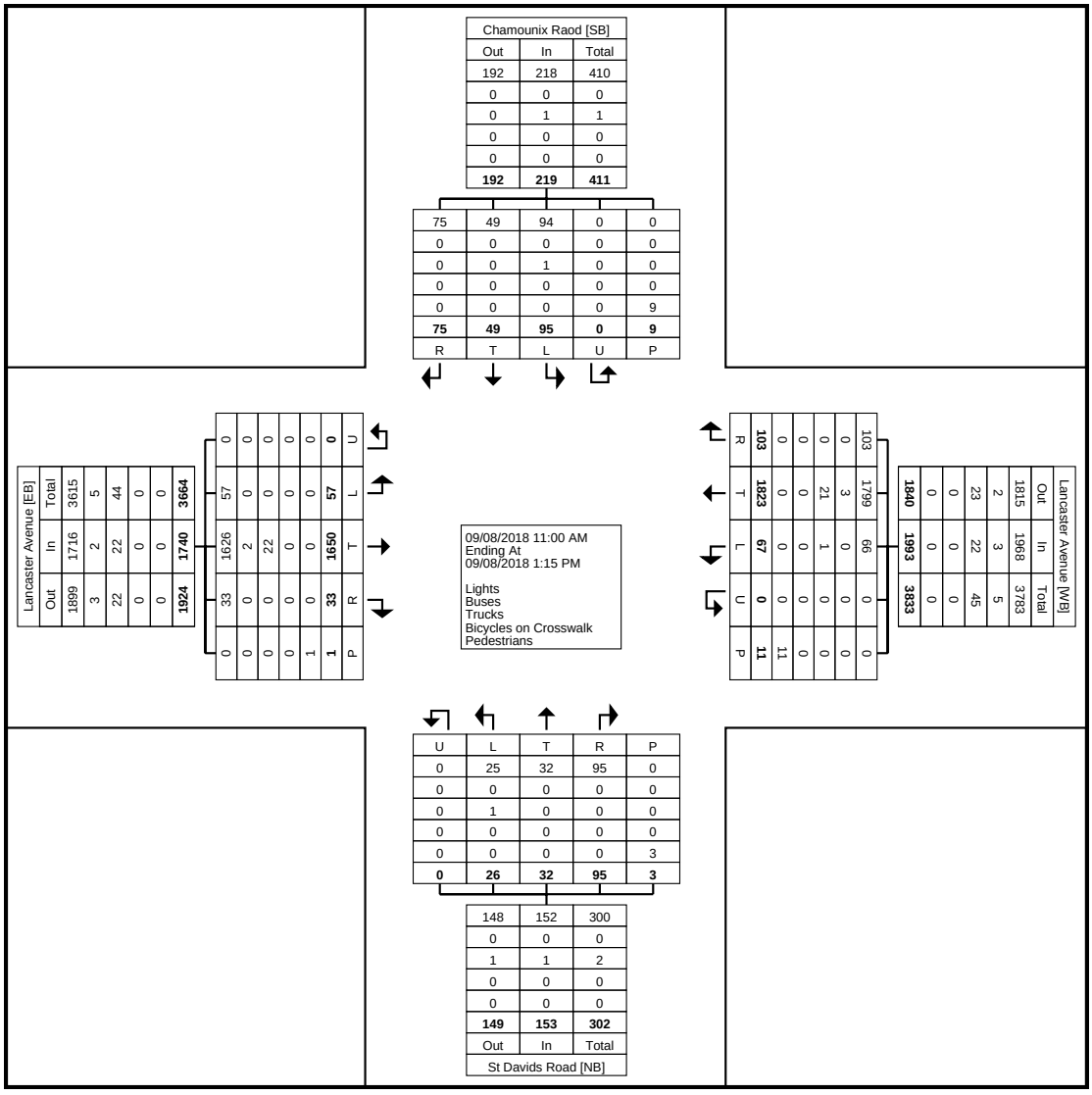
Page No: 2




Turning Movement Data Plot

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Saturday, September 8, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Peak Hour Data (11:45 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | St Davids Road Northbound | | | | | | | Chamounix Raod Southbound | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Int. Total |
| 11:45 AM | 6 | 250 | 9 | 0 | 0 | 0 | 265 | 6 | 224 | 8 | 0 | 0 | 0 | 238 | 3 | 0 | 16 | 0 | 0 | 0 | 19 | 11 | 5 | 10 | 1 | 0 | 1 | 27 | 549 |
| 12:00 PM | 8 | 202 | 2 | 1 | 0 | 0 | 213 | 6 | 252 | 18 | 1 | 0 | 0 | 277 | 2 | 4 | 9 | 0 | 0 | 0 | 15 | 14 | 2 | 11 | 2 | 0 | 0 | 29 | 534 |
| 12:15 PM | 11 | 215 | 2 | 0 | 0 | 0 | 228 | 16 | 250 | 17 | 2 | 0 | 2 | 285 | 2 | 4 | 10 | 0 | 0 | 2 | 16 | 16 | 6 | 8 | 1 | 0 | 2 | 31 | 560 |
| 12:30 PM | 5 | 213 | 4 | 0 | 0 | 0 | 222 | 8 | 258 | 17 | 0 | 0 | 2 | 283 | 6 | 9 | 6 | 0 | 0 | 0 | 21 | 14 | 4 | 4 | 1 | 0 | 2 | 23 | 549 |
| Total | 30 | 880 | 17 | 1 | 0 | 0 | 928 | 36 | 984 | 60 | 3 | 0 | 4 | 1083 | 13 | 17 | 41 | 0 | 0 | 2 | 71 | 55 | 17 | 33 | 5 | 0 | 5 | 110 | 2192 |
| Approach % | 3.2 | 94.8 | 1.8 | 0.1 | 0.0 | - | - | 3.3 | 90.9 | 5.5 | 0.3 | 0.0 | - | - | 18.3 | 23.9 | 57.7 | 0.0 | 0.0 | - | - | 50.0 | 15.5 | 30.0 | 4.5 | 0.0 | - | - | - |
| Total % | 1.4 | 40.1 | 0.8 | 0.0 | 0.0 | - | 42.3 | 1.6 | 44.9 | 2.7 | 0.1 | 0.0 | - | 49.4 | 0.6 | 0.8 | 1.9 | 0.0 | 0.0 | - | 3.2 | 2.5 | 0.8 | 1.5 | 0.2 | 0.0 | - | 5.0 | - |
| PHF | 0.682 | 0.880 | 0.472 | 0.250 | 0.000 | - | 0.875 | 0.563 | 0.953 | 0.833 | 0.375 | 0.000 | - | 0.950 | 0.542 | 0.472 | 0.641 | 0.000 | 0.000 | - | 0.845 | 0.859 | 0.708 | 0.750 | 0.625 | 0.000 | - | 0.887 | 0.979 |
| Lights | 30 | 872 | 17 | 1 | 0 | - | 920 | 36 | 973 | 60 | 3 | 0 | - | 1072 | 12 | 17 | 41 | 0 | 0 | - | 70 | 54 | 17 | 33 | 5 | 0 | - | 109 | 2171 |
| % Lights | 100.0 | 99.1 | 100.0 | 100.0 | - | - | 99.1 | 100.0 | 98.9 | 100.0 | 100.0 | - | - | 99.0 | 92.3 | 100.0 | 100.0 | - | - | - | 98.6 | 98.2 | 100.0 | 100.0 | 100.0 | - | - | 99.1 | 99.0 |
| Buses | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 1 | 0 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 2 |
| % Buses | 0.0 | 0.1 | 0.0 | 0.0 | - | - | 0.1 | 0.0 | 0.1 | 0.0 | 0.0 | - | - | 0.1 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.1 |
| Trucks | 0 | 7 | 0 | 0 | 0 | - | 7 | 0 | 10 | 0 | 0 | 0 | - | 10 | 1 | 0 | 0 | 0 | 0 | - | 1 | 1 | 0 | 0 | 0 | 0 | - | 1 | 19 |
| % Trucks | 0.0 | 0.8 | 0.0 | 0.0 | - | - | 0.8 | 0.0 | 1.0 | 0.0 | 0.0 | - | - | 0.9 | 7.7 | 0.0 | 0.0 | - | - | - | 1.4 | 1.8 | 0.0 | 0.0 | 0.0 | - | - | 0.9 | 0.9 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 0 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | 2 | - | - | - | - | - | - | 5 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

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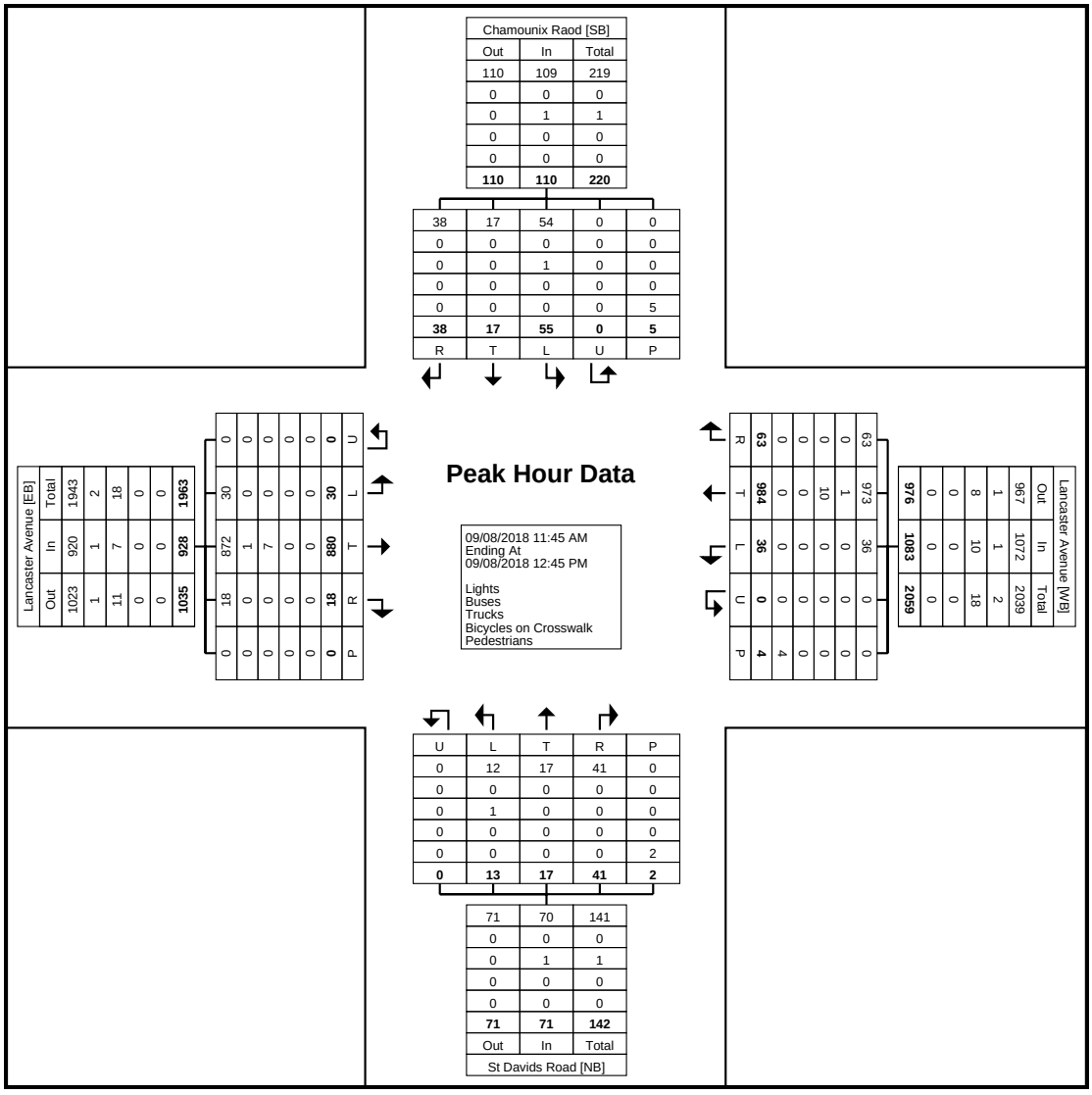
Radnor, PA
Lancaster Ave & St Davids St
Saturday, September 8, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids-Sat
Site Code:
Start Date: 09/08/2018
Page No: 4




Turning Movement Peak Hour Data Plot (11:45 AM)

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184 Baker Rd

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610-466-1469
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Radnor, PA
Lancaster Ave & St Davids St
Sunday, September 9, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Data

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | St Davids Road Northbound | | | | | | | Chamounix Road Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 9:00 AM | 10 | 95 | 0 | 0 | 0 | 1 | 105 | 0 | 118 | 8 | 0 | 0 | 0 | 126 | 0 | 1 | 5 | 0 | 0 | 0 | 6 | 9 | 1 | 13 | 2 | 0 | 1 | 25 | 262 |
| 9:15 AM | 4 | 115 | 1 | 0 | 0 | 0 | 120 | 3 | 95 | 2 | 0 | 0 | 0 | 100 | 5 | 1 | 2 | 0 | 0 | 0 | 8 | 8 | 3 | 2 | 2 | 0 | 0 | 15 | 243 |
| 9:30 AM | 1 | 124 | 0 | 0 | 0 | 0 | 125 | 9 | 128 | 3 | 1 | 0 | 0 | 141 | 1 | 2 | 8 | 2 | 0 | 1 | 13 | 10 | 2 | 5 | 1 | 0 | 1 | 18 | 297 |
| 9:45 AM | 6 | 139 | 1 | 0 | 0 | 1 | 146 | 4 | 134 | 6 | 1 | 0 | 0 | 145 | 3 | 6 | 7 | 0 | 0 | 1 | 16 | 11 | 4 | 7 | 3 | 0 | 4 | 25 | 332 |
| Hourly Total | 21 | 473 | 2 | 0 | 0 | 2 | 496 | 16 | 475 | 19 | 2 | 0 | 0 | 512 | 9 | 10 | 22 | 2 | 0 | 2 | 43 | 38 | 10 | 27 | 8 | 0 | 6 | 83 | 1134 |
| 10:00 AM | 4 | 132 | 1 | 0 | 0 | 0 | 137 | 2 | 117 | 7 | 0 | 0 | 1 | 126 | 5 | 0 | 5 | 0 | 0 | 0 | 10 | 11 | 1 | 3 | 0 | 0 | 0 | 15 | 288 |
| 10:15 AM | 4 | 143 | 0 | 1 | 0 | 0 | 148 | 6 | 123 | 5 | 1 | 0 | 2 | 135 | 4 | 2 | 5 | 0 | 0 | 0 | 11 | 15 | 2 | 5 | 2 | 0 | 0 | 24 | 318 |
| 10:30 AM | 4 | 154 | 3 | 1 | 0 | 0 | 162 | 4 | 174 | 7 | 1 | 0 | 0 | 186 | 1 | 0 | 7 | 0 | 0 | 0 | 8 | 7 | 1 | 5 | 0 | 0 | 0 | 13 | 369 |
| 10:45 AM | 5 | 142 | 0 | 0 | 0 | 0 | 147 | 6 | 144 | 9 | 0 | 0 | 0 | 159 | 6 | 2 | 15 | 0 | 0 | 0 | 23 | 8 | 3 | 2 | 3 | 0 | 0 | 16 | 345 |
| Hourly Total | 17 | 571 | 4 | 2 | 0 | 0 | 594 | 18 | 558 | 28 | 2 | 0 | 3 | 606 | 16 | 4 | 32 | 0 | 0 | 0 | 52 | 41 | 7 | 15 | 5 | 0 | 0 | 68 | 1320 |
| 11:00 AM | 4 | 165 | 1 | 0 | 0 | 0 | 170 | 11 | 146 | 2 | 0 | 0 | 1 | 159 | 2 | 1 | 10 | 0 | 0 | 0 | 13 | 6 | 6 | 2 | 3 | 0 | 0 | 17 | 359 |
| 11:15 AM | 9 | 143 | 2 | 0 | 0 | 0 | 154 | 9 | 170 | 13 | 1 | 0 | 0 | 193 | 2 | 3 | 10 | 0 | 0 | 0 | 15 | 16 | 3 | 8 | 0 | 0 | 0 | 27 | 389 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 51 | 1352 | 9 | 2 | 0 | 2 | 1414 | 54 | 1349 | 62 | 5 | 0 | 4 | 1470 | 29 | 18 | 74 | 2 | 0 | 2 | 123 | 101 | 26 | 52 | 16 | 0 | 6 | 195 | 3202 |
| Approach % | 3.6 | 95.6 | 0.6 | 0.1 | 0.0 | - | - | 3.7 | 91.8 | 4.2 | 0.3 | 0.0 | - | - | 23.6 | 14.6 | 60.2 | 1.6 | 0.0 | - | - | 51.8 | 13.3 | 26.7 | 8.2 | 0.0 | - | - | - |
| Total % | 1.6 | 42.2 | 0.3 | 0.1 | 0.0 | - | 44.2 | 1.7 | 42.1 | 1.9 | 0.2 | 0.0 | - | 45.9 | 0.9 | 0.6 | 2.3 | 0.1 | 0.0 | - | 3.8 | 3.2 | 0.8 | 1.6 | 0.5 | 0.0 | - | 6.1 | - |
| Lights | 51 | 1344 | 9 | 2 | 0 | - | 1406 | 54 | 1346 | 61 | 5 | 0 | - | 1466 | 29 | 18 | 73 | 2 | 0 | - | 122 | 101 | 26 | 52 | 16 | 0 | - | 195 | 3189 |
| % Lights | 100.0 | 99.4 | 100.0 | 100.0 | - | - | 99.4 | 100.0 | 99.8 | 98.4 | 100.0 | - | - | 99.7 | 100.0 | 100.0 | 98.6 | 100.0 | - | - | 99.2 | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 99.6 |
| Buses | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Buses | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 1.6 | 0.0 | - | - | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Trucks | 0 | 8 | 0 | 0 | 0 | - | 8 | 0 | 3 | 0 | 0 | 0 | - | 3 | 0 | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 12 |
| % Trucks | 0.0 | 0.6 | 0.0 | 0.0 | - | - | 0.6 | 0.0 | 0.2 | 0.0 | 0.0 | - | - | 0.2 | 0.0 | 0.0 | 1.4 | 0.0 | - | - | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.4 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | - | 2 | - | - | - | - | - | - | 4 | - | - | - | - | - | - | 2 | - | - | - | - | - | - | 6 | - | - |
| % Pedestrians | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | 100.0 | - | - |

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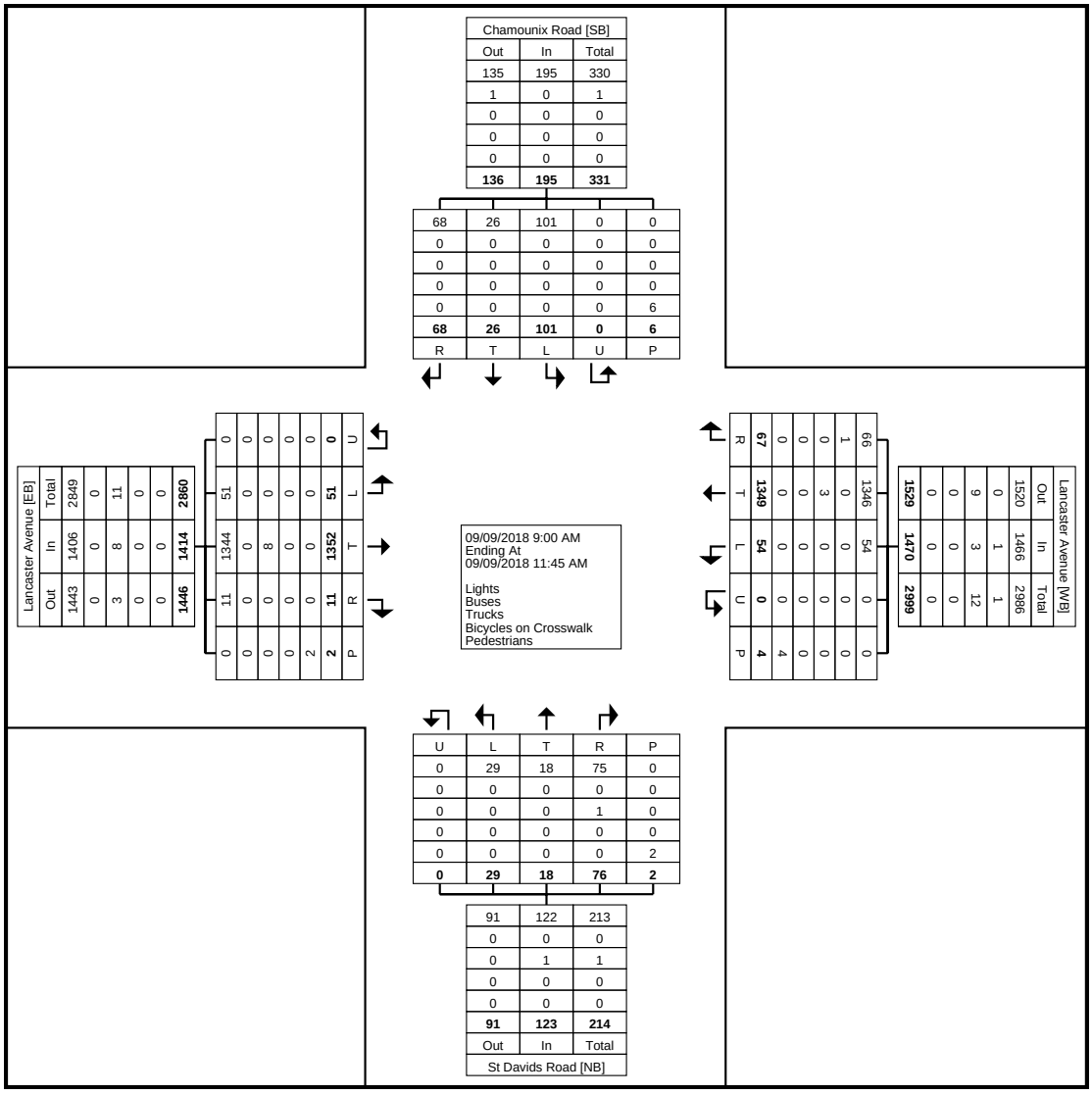
Radnor, PA
Lancaster Ave & St Davids St
Sunday, September 9, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Data Plot

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Radnor, PA
Lancaster Ave & St Davids St
Sunday, September 9, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Peak Hour Data (10:30 AM)

| Start Time | Lancaster Avenue Eastbound | | | | | | | Lancaster Avenue Westbound | | | | | | | St Davids Road Northbound | | | | | | | Chamounix Road Southbound | | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | Left | Thru | Right | Right on Red | U-Turn | Peds | App. Total | |
| 10:30 AM | 4 | 154 | 3 | 1 | 0 | 0 | 162 | 4 | 174 | 7 | 1 | 0 | 0 | 186 | 1 | 0 | 7 | 0 | 0 | 0 | 8 | 7 | 1 | 5 | 0 | 0 | 0 | 13 | 369 |
| 10:45 AM | 5 | 142 | 0 | 0 | 0 | 0 | 147 | 6 | 144 | 9 | 0 | 0 | 0 | 159 | 6 | 2 | 15 | 0 | 0 | 0 | 23 | 8 | 3 | 2 | 3 | 0 | 0 | 16 | 345 |
| 11:00 AM | 4 | 165 | 1 | 0 | 0 | 0 | 170 | 11 | 146 | 2 | 0 | 0 | 1 | 159 | 2 | 1 | 10 | 0 | 0 | 0 | 13 | 6 | 6 | 2 | 3 | 0 | 0 | 17 | 359 |
| 11:15 AM | 9 | 143 | 2 | 0 | 0 | 0 | 154 | 9 | 170 | 13 | 1 | 0 | 0 | 193 | 2 | 3 | 10 | 0 | 0 | 0 | 15 | 16 | 3 | 8 | 0 | 0 | 0 | 27 | 389 |
| Total | 22 | 604 | 6 | 1 | 0 | 0 | 633 | 30 | 634 | 31 | 2 | 0 | 1 | 697 | 11 | 6 | 42 | 0 | 0 | 0 | 59 | 37 | 13 | 17 | 6 | 0 | 0 | 73 | 1462 |
| Approach % | 3.5 | 95.4 | 0.9 | 0.2 | 0.0 | - | - | 4.3 | 91.0 | 4.4 | 0.3 | 0.0 | - | - | 18.6 | 10.2 | 71.2 | 0.0 | 0.0 | - | - | 50.7 | 17.8 | 23.3 | 8.2 | 0.0 | - | - | - |
| Total % | 1.5 | 41.3 | 0.4 | 0.1 | 0.0 | - | 43.3 | 2.1 | 43.4 | 2.1 | 0.1 | 0.0 | - | 47.7 | 0.8 | 0.4 | 2.9 | 0.0 | 0.0 | - | 4.0 | 2.5 | 0.9 | 1.2 | 0.4 | 0.0 | - | 5.0 | - |
| PHF | 0.611 | 0.915 | 0.500 | 0.250 | 0.000 | - | 0.931 | 0.682 | 0.911 | 0.596 | 0.500 | 0.000 | - | 0.903 | 0.458 | 0.500 | 0.700 | 0.000 | 0.000 | - | 0.641 | 0.578 | 0.542 | 0.531 | 0.500 | 0.000 | - | 0.676 | 0.940 |
| Lights | 22 | 602 | 6 | 1 | 0 | - | 631 | 30 | 632 | 31 | 2 | 0 | - | 695 | 11 | 6 | 41 | 0 | 0 | - | 58 | 37 | 13 | 17 | 6 | 0 | - | 73 | 1457 |
| % Lights | 100.0 | 99.7 | 100.0 | 100.0 | - | - | 99.7 | 100.0 | 99.7 | 100.0 | 100.0 | - | - | 99.7 | 100.0 | 100.0 | 97.6 | - | - | - | 98.3 | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 99.7 |
| Buses | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Trucks | 0 | 2 | 0 | 0 | 0 | - | 2 | 0 | 2 | 0 | 0 | 0 | - | 2 | 0 | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | - | 0 | 5 |
| % Trucks | 0.0 | 0.3 | 0.0 | 0.0 | - | - | 0.3 | 0.0 | 0.3 | 0.0 | 0.0 | - | - | 0.3 | 0.0 | 0.0 | 2.4 | - | - | - | 1.7 | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.3 |
| Bicycles on Crosswalk | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | - | - | - | - | - | - | - | - | 0.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Pedestrians | - | - | - | - | - | 0 | - | - | - | - | - | - | 1 | - | - | - | - | - | - | 0 | - | - | - | - | - | - | 0 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |

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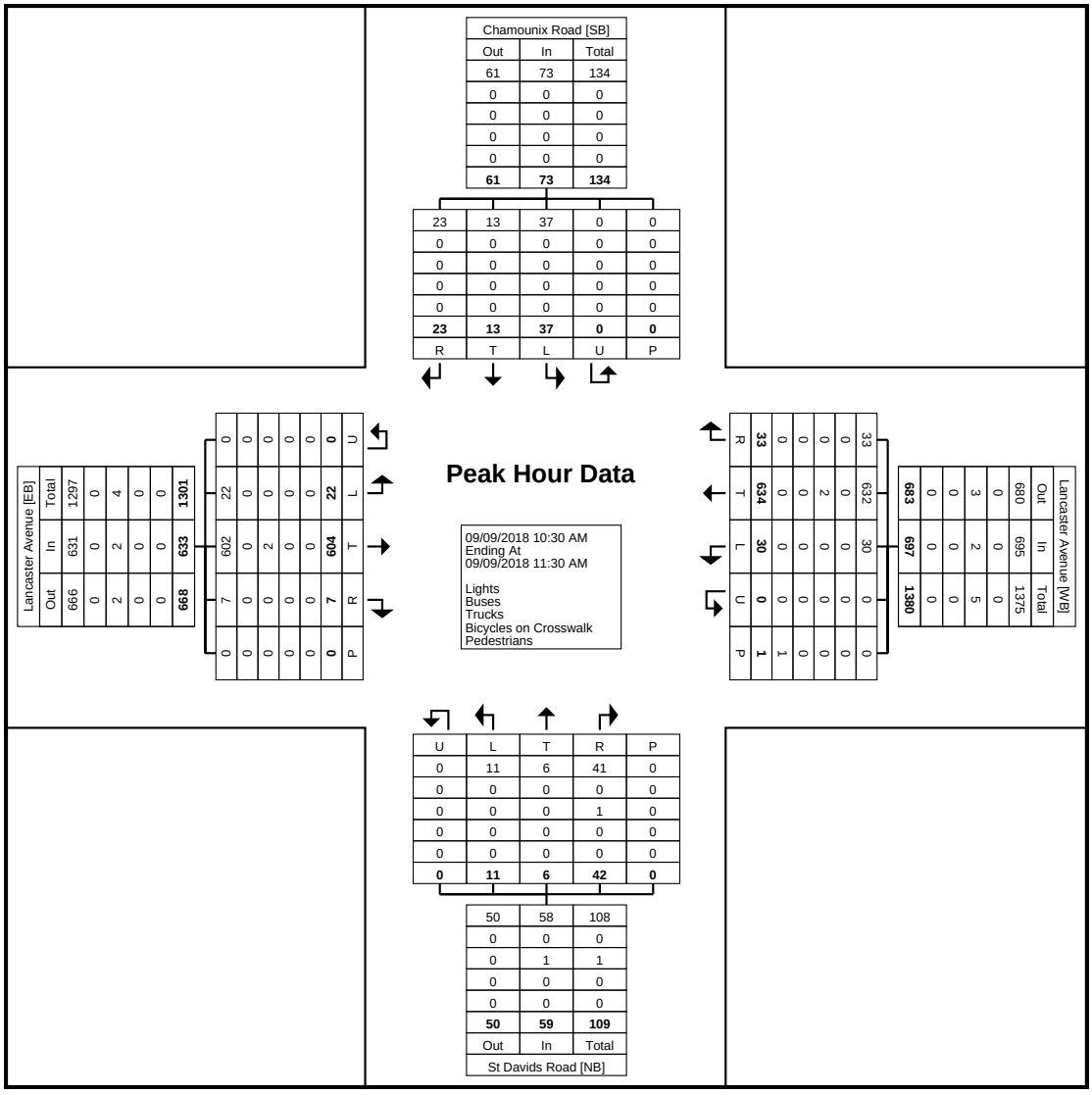
Sunday, September 9, 2018
Location: 40.042926, -75.374171

Count Name: Lancaster Ave/St Davids-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Peak Hour Data Plot (10:30 AM)

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Radnor, PA
Midland Ave & Aberdeen Ave
Tuesday, September 11, 2018
Location: 40.042444, -75.381426

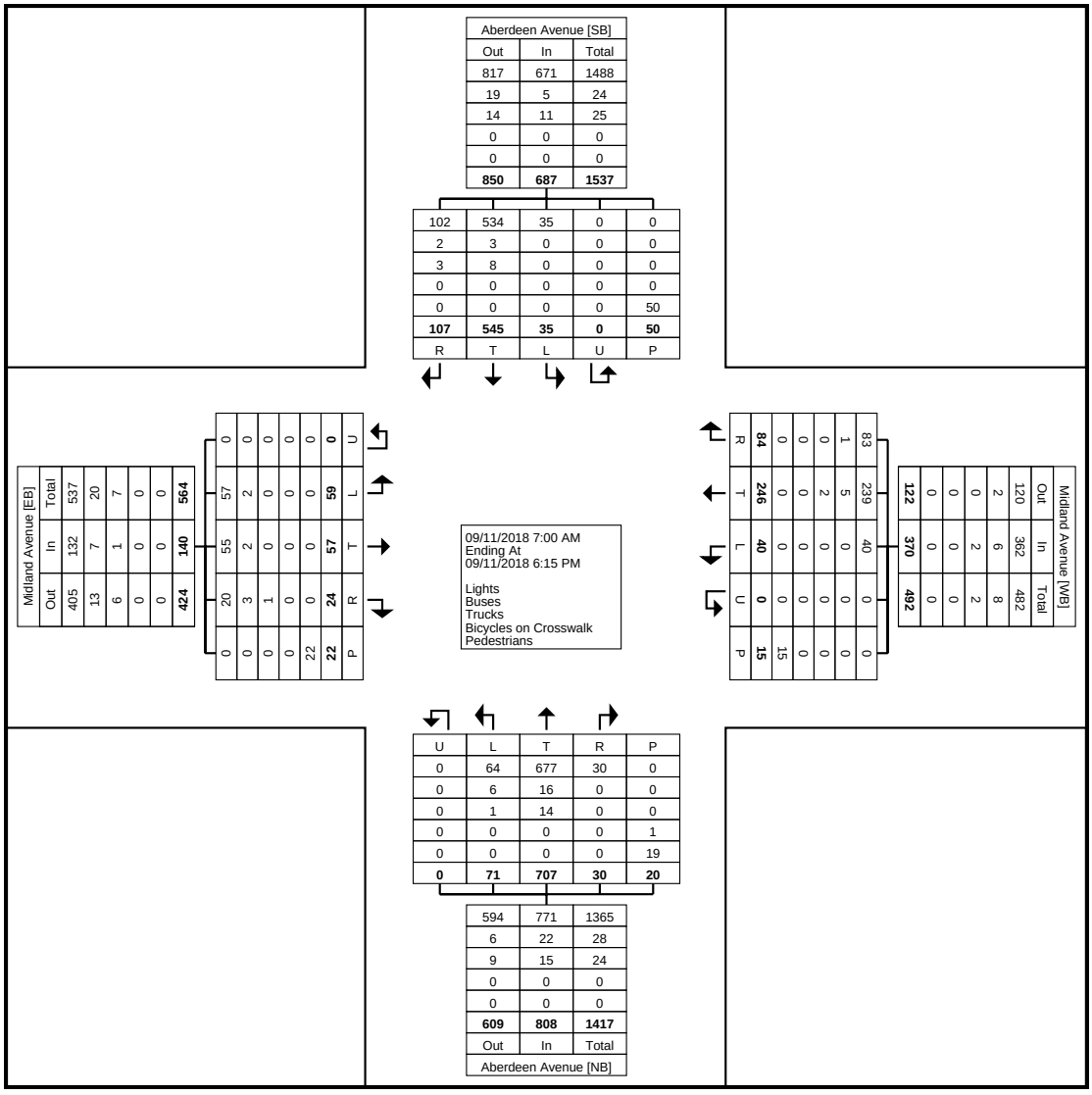
Count Name: Midland Ave/Aberdeen Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Data

| Start Time | Midland Avenue Eastbound | | | | | | Midland Avenue Westbound | | | | | | Aberdeen Avenue Northbound | | | | | | Aberdeen Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | |
| 7:00 AM | 2 | 5 | 1 | 0 | 0 | 8 | 1 | 1 | 1 | 0 | 0 | 3 | 0 | 23 | 1 | 0 | 0 | 24 | 2 | 15 | 3 | 0 | 2 | 20 | 55 |
| 7:15 AM | 1 | 2 | 0 | 0 | 2 | 3 | 4 | 5 | 2 | 0 | 0 | 11 | 1 | 22 | 1 | 0 | 3 | 24 | 0 | 20 | 2 | 0 | 0 | 22 | 60 |
| 7:30 AM | 1 | 3 | 2 | 0 | 2 | 6 | 1 | 11 | 1 | 0 | 0 | 13 | 4 | 28 | 3 | 0 | 1 | 35 | 0 | 21 | 6 | 0 | 5 | 27 | 81 |
| 7:45 AM | 2 | 10 | 2 | 0 | 3 | 14 | 1 | 42 | 7 | 0 | 0 | 50 | 13 | 45 | 2 | 0 | 0 | 60 | 0 | 18 | 10 | 0 | 0 | 28 | 152 |
| Hourly Total | 6 | 20 | 5 | 0 | 7 | 31 | 7 | 59 | 11 | 0 | 0 | 77 | 18 | 118 | 7 | 0 | 4 | 143 | 2 | 74 | 21 | 0 | 7 | 97 | 348 |
| 8:00 AM | 1 | 2 | 0 | 0 | 4 | 3 | 2 | 34 | 1 | 0 | 0 | 37 | 8 | 62 | 6 | 0 | 1 | 76 | 1 | 10 | 2 | 0 | 2 | 13 | 129 |
| 8:15 AM | 1 | 2 | 2 | 0 | 1 | 5 | 1 | 5 | 3 | 0 | 0 | 9 | 3 | 37 | 0 | 0 | 1 | 40 | 2 | 12 | 1 | 0 | 0 | 15 | 69 |
| 8:30 AM | 9 | 4 | 1 | 0 | 0 | 14 | 1 | 1 | 1 | 0 | 1 | 3 | 2 | 31 | 1 | 0 | 1 | 34 | 0 | 17 | 6 | 0 | 7 | 23 | 74 |
| 8:45 AM | 1 | 0 | 3 | 0 | 0 | 4 | 1 | 6 | 4 | 0 | 1 | 11 | 3 | 33 | 2 | 0 | 0 | 38 | 2 | 11 | 3 | 0 | 0 | 16 | 69 |
| Hourly Total | 12 | 8 | 6 | 0 | 5 | 26 | 5 | 46 | 9 | 0 | 2 | 60 | 16 | 163 | 9 | 0 | 3 | 188 | 5 | 50 | 12 | 0 | 9 | 67 | 341 |
| 9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 6 | 8 | 0 | 1 | 15 | 2 | 24 | 0 | 0 | 0 | 26 | 0 | 18 | 4 | 0 | 0 | 22 | 65 |
| 2:15 PM | 3 | 2 | 0 | 0 | 0 | 5 | 1 | 5 | 5 | 0 | 0 | 11 | 2 | 22 | 1 | 0 | 0 | 25 | 3 | 17 | 4 | 0 | 1 | 24 | 65 |
| 2:30 PM | 3 | 2 | 0 | 0 | 1 | 5 | 2 | 8 | 1 | 0 | 0 | 11 | 1 | 26 | 1 | 0 | 1 | 28 | 5 | 19 | 1 | 0 | 1 | 25 | 69 |
| 2:45 PM | 4 | 2 | 2 | 0 | 0 | 8 | 2 | 23 | 3 | 0 | 0 | 28 | 4 | 20 | 1 | 0 | 0 | 25 | 2 | 25 | 2 | 0 | 3 | 29 | 90 |
| Hourly Total | 11 | 7 | 2 | 0 | 1 | 20 | 6 | 42 | 17 | 0 | 1 | 65 | 9 | 92 | 3 | 0 | 1 | 104 | 10 | 79 | 11 | 0 | 5 | 100 | 289 |
| 3:00 PM | 5 | 3 | 1 | 0 | 4 | 9 | 2 | 33 | 4 | 0 | 4 | 39 | 1 | 44 | 2 | 0 | 7 | 47 | 3 | 15 | 2 | 0 | 4 | 20 | 115 |
| 3:15 PM | 5 | 3 | 1 | 0 | 1 | 9 | 1 | 10 | 2 | 0 | 1 | 13 | 2 | 28 | 2 | 0 | 0 | 32 | 1 | 25 | 2 | 0 | 4 | 28 | 82 |
| 3:30 PM | 1 | 1 | 1 | 0 | 2 | 3 | 2 | 4 | 2 | 0 | 0 | 8 | 2 | 27 | 1 | 0 | 0 | 30 | 0 | 34 | 8 | 0 | 4 | 42 | 83 |
| 3:45 PM | 1 | 1 | 1 | 0 | 0 | 3 | 1 | 7 | 3 | 0 | 2 | 11 | 2 | 25 | 0 | 0 | 0 | 27 | 1 | 26 | 7 | 0 | 0 | 34 | 75 |
| Hourly Total | 12 | 8 | 4 | 0 | 7 | 24 | 6 | 54 | 11 | 0 | 7 | 71 | 7 | 124 | 5 | 0 | 7 | 136 | 5 | 100 | 19 | 0 | 12 | 124 | 355 |
| 4:00 PM | 2 | 1 | 1 | 0 | 0 | 4 | 1 | 4 | 8 | 0 | 0 | 13 | 0 | 17 | 2 | 0 | 0 | 19 | 0 | 19 | 4 | 0 | 1 | 23 | 59 |
| 4:15 PM | 0 | 2 | 1 | 0 | 0 | 3 | 1 | 11 | 4 | 0 | 2 | 16 | 4 | 25 | 0 | 0 | 0 | 29 | 3 | 25 | 8 | 0 | 4 | 36 | 84 |
| 4:30 PM | 3 | 2 | 0 | 0 | 0 | 5 | 3 | 5 | 5 | 0 | 2 | 13 | 2 | 27 | 0 | 0 | 0 | 29 | 1 | 31 | 8 | 0 | 2 | 40 | 87 |
| 4:45 PM | 4 | 2 | 0 | 0 | 1 | 6 | 2 | 4 | 8 | 0 | 0 | 14 | 7 | 28 | 2 | 0 | 1 | 37 | 1 | 38 | 8 | 0 | 1 | 47 | 104 |
| Hourly Total | 9 | 7 | 2 | 0 | 1 | 18 | 7 | 24 | 25 | 0 | 4 | 56 | 13 | 97 | 4 | 0 | 1 | 114 | 5 | 113 | 28 | 0 | 8 | 146 | 334 |
| 5:00 PM | 3 | 2 | 4 | 0 | 0 | 9 | 2 | 5 | 3 | 0 | 0 | 10 | 2 | 29 | 0 | 0 | 0 | 31 | 2 | 32 | 7 | 0 | 3 | 41 | 91 |
| 5:15 PM | 1 | 1 | 0 | 0 | 0 | 2 | 3 | 5 | 3 | 0 | 1 | 11 | 3 | 27 | 2 | 0 | 0 | 32 | 1 | 30 | 2 | 0 | 3 | 33 | 78 |
| 5:30 PM | 1 | 1 | 0 | 0 | 0 | 2 | 1 | 5 | 2 | 0 | 0 | 8 | 3 | 23 | 0 | 0 | 3 | 26 | 4 | 32 | 2 | 0 | 2 | 38 | 74 |
| 5:45 PM | 4 | 3 | 1 | 0 | 1 | 8 | 3 | 6 | 3 | 0 | 0 | 12 | 0 | 34 | 0 | 0 | 1 | 34 | 1 | 35 | 5 | 0 | 1 | 41 | 95 |
| Hourly Total | 9 | 7 | 5 | 0 | 1 | 21 | 9 | 21 | 11 | 0 | 1 | 41 | 8 | 113 | 2 | 0 | 4 | 123 | 8 | 129 | 16 | 0 | 9 | 153 | 338 |
| 6:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 59 | 57 | 24 | 0 | 22 | 140 | 40 | 246 | 84 | 0 | 15 | 370 | 71 | 707 | 30 | 0 | 20 | 808 | 35 | 545 | 107 | 0 | 50 | 687 | 2005 |
| Approach % | 42.1 | 40.7 | 17.1 | 0.0 | - | - | 10.8 | 66.5 | 22.7 | 0.0 | - | - | 8.8 | 87.5 | 3.7 | 0.0 | - | - | 5.1 | 79.3 | 15.6 | 0.0 | - | - | - |
| Total % | 2.9 | 2.8 | 1.2 | 0.0 | - | 7.0 | 2.0 | 12.3 | 4.2 | 0.0 | - | 18.5 | 3.5 | 35.3 | 1.5 | 0.0 | - | 40.3 | 1.7 | 27.2 | 5.3 | 0.0 | - | 34.3 | - |
| Lights | 57 | 55 | 20 | 0 | - | 132 | 40 | 239 | 83 | 0 | - | 362 | 64 | 677 | 30 | 0 | - | 771 | 35 | 534 | 102 | 0 | - | 671 | 1936 |
| % Lights | 96.6 | 96.5 | 83.3 | - | - | 94.3 | 100.0 | 97.2 | 98.8 | - | - | 97.8 | 90.1 | 95.8 | 100.0 | - | - | 95.4 | 100.0 | 98.0 | 95.3 | - | - | 97.7 | 96.6 |
| Buses | 2 | 2 | 3 | 0 | - | 7 | 0 | 5 | 1 | 0 | - | 6 | 6 | 16 | 0 | 0 | - | 22 | 0 | 3 | 2 | 0 | - | 5 | 40 |
| % Buses | 3.4 | 3.5 | 12.5 | - | - | 5.0 | 0.0 | 2.0 | 1.2 | - | - | 1.6 | 8.5 | 2.3 | 0.0 | - | - | 2.7 | 0.0 | 0.6 | 1.9 | - | - | 0.7 | 2.0 |
| Trucks | 0 | 0 | 1 | 0 | - | 1 | 0 | 2 | 0 | 0 | - | 2 | 1 | 14 | 0 | 0 | - | 15 | 0 | 8 | 3 | 0 | - | 11 | 29 |
| % Trucks | 0.0 | 0.0 | 4.2 | - | - | 0.7 | 0.0 | 0.8 | 0.0 | - | - | 0.5 | 1.4 | 2.0 | 0.0 | - | - | 1.9 | 0.0 | 1.5 | 2.8 | - | - | 1.6 | 1.4 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 1 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 5.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 22 | - | - | - | - | - | 15 | - | - | - | - | - | 19 | - | - | - | - | - | 50 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 95.0 | - | - | - | - | - | 100.0 | - | - |

Radnor, PA
Midland Ave & Aberdeen Ave
Tuesday, September 11, 2018
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave
Site Code:
Start Date: 09/11/2018


Turning Movement Data Plot

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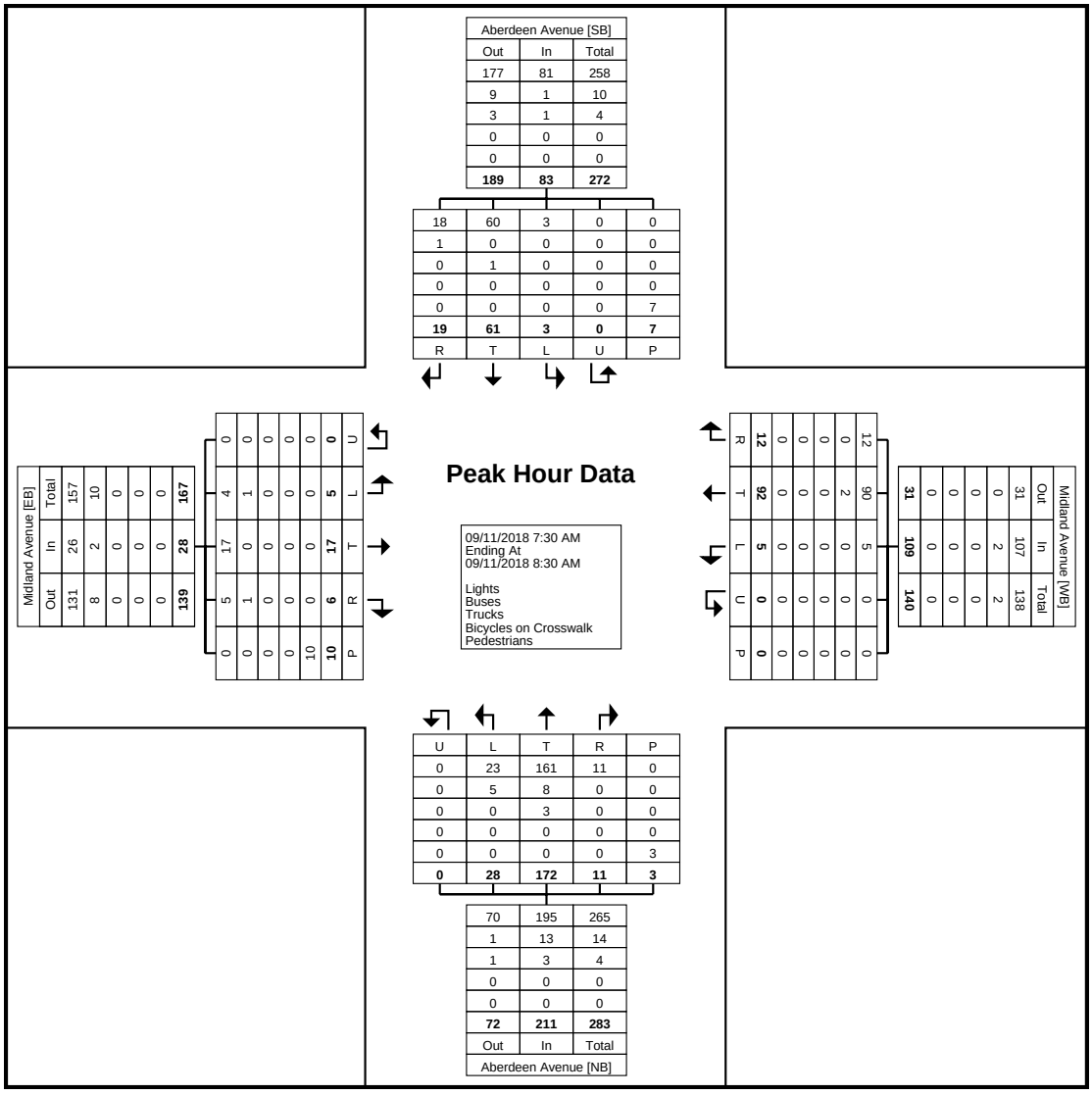
Radnor, PA
Midland Ave & Aberdeen Ave
Tuesday, September 11, 2018
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (7:30 AM)

| Start Time | Midland Avenue Eastbound | | | | | | Midland Avenue Westbound | | | | | | Aberdeen Avenue Northbound | | | | | | Aberdeen Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | |
| 7:30 AM | 1 | 3 | 2 | 0 | 2 | 6 | 1 | 11 | 1 | 0 | 0 | 13 | 4 | 28 | 3 | 0 | 1 | 35 | 0 | 21 | 6 | 0 | 5 | 27 | 81 |
| 7:45 AM | 2 | 10 | 2 | 0 | 3 | 14 | 1 | 42 | 7 | 0 | 0 | 50 | 13 | 45 | 2 | 0 | 0 | 60 | 0 | 18 | 10 | 0 | 0 | 28 | 152 |
| 8:00 AM | 1 | 2 | 0 | 0 | 4 | 3 | 2 | 34 | 1 | 0 | 0 | 37 | 8 | 62 | 6 | 0 | 1 | 76 | 1 | 10 | 2 | 0 | 2 | 13 | 129 |
| 8:15 AM | 1 | 2 | 2 | 0 | 1 | 5 | 1 | 5 | 3 | 0 | 0 | 9 | 3 | 37 | 0 | 0 | 1 | 40 | 2 | 12 | 1 | 0 | 0 | 15 | 69 |
| Total | 5 | 17 | 6 | 0 | 10 | 28 | 5 | 92 | 12 | 0 | 0 | 109 | 28 | 172 | 11 | 0 | 3 | 211 | 3 | 61 | 19 | 0 | 7 | 83 | 431 |
| Approach % | 17.9 | 60.7 | 21.4 | 0.0 | - | - | 4.6 | 84.4 | 11.0 | 0.0 | - | - | 13.3 | 81.5 | 5.2 | 0.0 | - | - | 3.6 | 73.5 | 22.9 | 0.0 | - | - | - |
| Total % | 1.2 | 3.9 | 1.4 | 0.0 | - | 6.5 | 1.2 | 21.3 | 2.8 | 0.0 | - | 25.3 | 6.5 | 39.9 | 2.6 | 0.0 | - | 49.0 | 0.7 | 14.2 | 4.4 | 0.0 | - | 19.3 | - |
| PHF | 0.625 | 0.425 | 0.750 | 0.000 | - | 0.500 | 0.625 | 0.548 | 0.429 | 0.000 | - | 0.545 | 0.538 | 0.694 | 0.458 | 0.000 | - | 0.694 | 0.375 | 0.726 | 0.475 | 0.000 | - | 0.741 | 0.709 |
| Lights | 4 | 17 | 5 | 0 | - | 26 | 5 | 90 | 12 | 0 | - | 107 | 23 | 161 | 11 | 0 | - | 195 | 3 | 60 | 18 | 0 | - | 81 | 409 |
| % Lights | 80.0 | 100.0 | 83.3 | - | - | 92.9 | 100.0 | 97.8 | 100.0 | - | - | 98.2 | 82.1 | 93.6 | 100.0 | - | - | 92.4 | 100.0 | 98.4 | 94.7 | - | - | 97.6 | 94.9 |
| Buses | 1 | 0 | 1 | 0 | - | 2 | 0 | 2 | 0 | 0 | - | 2 | 5 | 8 | 0 | 0 | - | 13 | 0 | 0 | 1 | 0 | - | 1 | 18 |
| % Buses | 20.0 | 0.0 | 16.7 | - | - | 7.1 | 0.0 | 2.2 | 0.0 | - | - | 1.8 | 17.9 | 4.7 | 0.0 | - | - | 6.2 | 0.0 | 0.0 | 5.3 | - | - | 1.2 | 4.2 |
| Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 3 | 0 | 0 | - | 3 | 0 | 1 | 0 | 0 | - | 1 | 4 |
| % Trucks | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 1.7 | 0.0 | - | - | 1.4 | 0.0 | 1.6 | 0.0 | - | - | 1.2 | 0.9 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | - | - | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 10 | - | - | - | - | - | 0 | - | - | - | - | - | 3 | - | - | - | - | - | 7 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |




Turning Movement Peak Hour Data Plot (7:30 AM)

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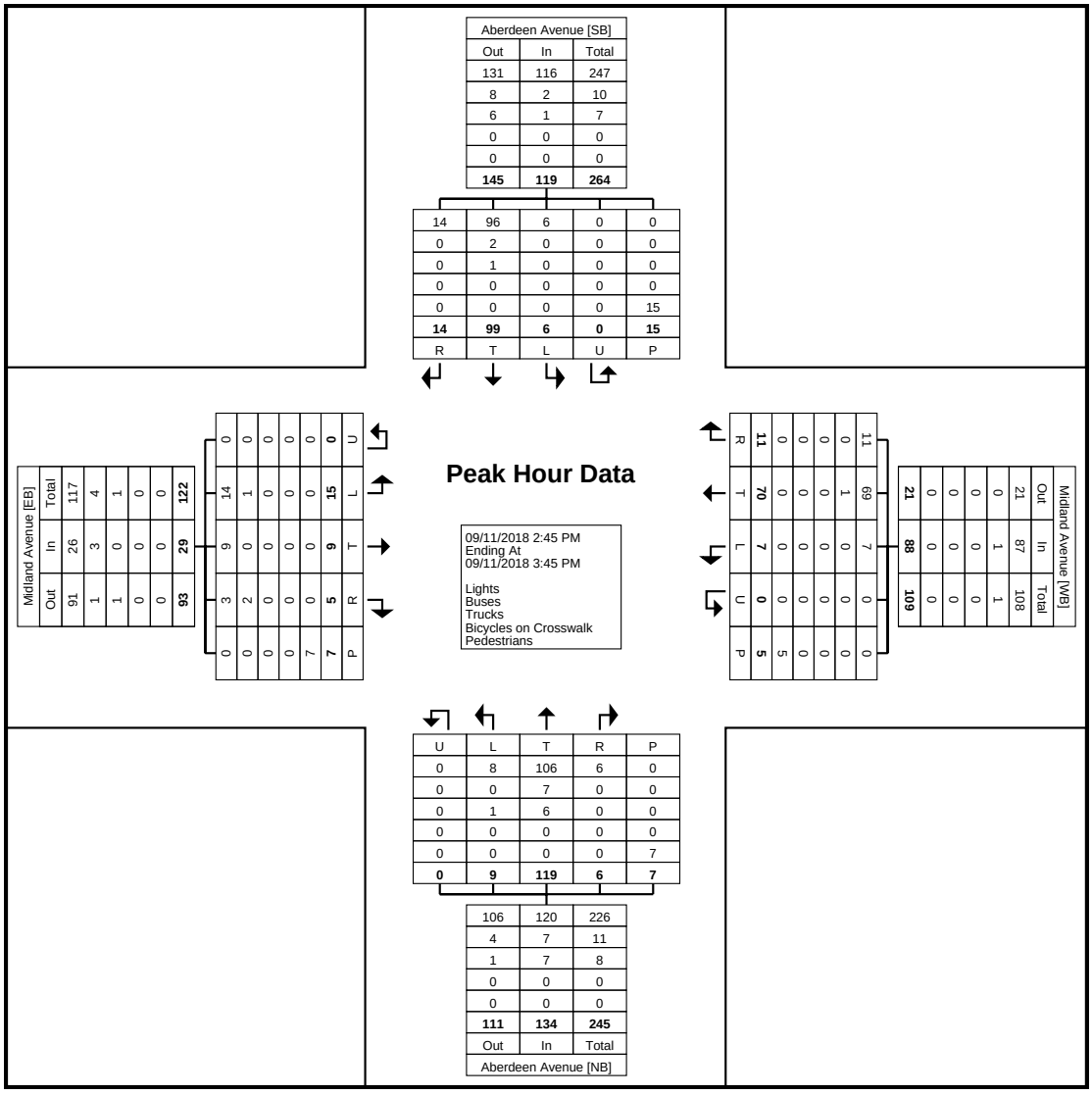
Radnor, PA
Midland Ave & Aberdeen Ave
Tuesday, September 11, 2018
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (2:45 PM)

| Start Time | Midland Avenue Eastbound | | | | | | Midland Avenue Westbound | | | | | | Aberdeen Avenue Northbound | | | | | | Aberdeen Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | |
| 2:45 PM | 4 | 2 | 2 | 0 | 0 | 8 | 2 | 23 | 3 | 0 | 0 | 28 | 4 | 20 | 1 | 0 | 0 | 25 | 2 | 25 | 2 | 0 | 3 | 29 | 90 |
| 3:00 PM | 5 | 3 | 1 | 0 | 4 | 9 | 2 | 33 | 4 | 0 | 4 | 39 | 1 | 44 | 2 | 0 | 7 | 47 | 3 | 15 | 2 | 0 | 4 | 20 | 115 |
| 3:15 PM | 5 | 3 | 1 | 0 | 1 | 9 | 1 | 10 | 2 | 0 | 1 | 13 | 2 | 28 | 2 | 0 | 0 | 32 | 1 | 25 | 2 | 0 | 4 | 28 | 82 |
| 3:30 PM | 1 | 1 | 1 | 0 | 2 | 3 | 2 | 4 | 2 | 0 | 0 | 8 | 2 | 27 | 1 | 0 | 0 | 30 | 0 | 34 | 8 | 0 | 4 | 42 | 83 |
| Total | 15 | 9 | 5 | 0 | 7 | 29 | 7 | 70 | 11 | 0 | 5 | 88 | 9 | 119 | 6 | 0 | 7 | 134 | 6 | 99 | 14 | 0 | 15 | 119 | 370 |
| Approach % | 51.7 | 31.0 | 17.2 | 0.0 | - | - | 8.0 | 79.5 | 12.5 | 0.0 | - | - | 6.7 | 88.8 | 4.5 | 0.0 | - | - | 5.0 | 83.2 | 11.8 | 0.0 | - | - | - |
| Total % | 4.1 | 2.4 | 1.4 | 0.0 | - | 7.8 | 1.9 | 18.9 | 3.0 | 0.0 | - | 23.8 | 2.4 | 32.2 | 1.6 | 0.0 | - | 36.2 | 1.6 | 26.8 | 3.8 | 0.0 | - | 32.2 | - |
| PHF | 0.750 | 0.750 | 0.625 | 0.000 | - | 0.806 | 0.875 | 0.530 | 0.688 | 0.000 | - | 0.564 | 0.563 | 0.676 | 0.750 | 0.000 | - | 0.713 | 0.500 | 0.728 | 0.438 | 0.000 | - | 0.708 | 0.804 |
| Lights | 14 | 9 | 3 | 0 | - | 26 | 7 | 69 | 11 | 0 | - | 87 | 8 | 106 | 6 | 0 | - | 120 | 6 | 96 | 14 | 0 | - | 116 | 349 |
| % Lights | 93.3 | 100.0 | 60.0 | - | - | 89.7 | 100.0 | 98.6 | 100.0 | - | - | 98.9 | 88.9 | 89.1 | 100.0 | - | - | 89.6 | 100.0 | 97.0 | 100.0 | - | - | 97.5 | 94.3 |
| Buses | 1 | 0 | 2 | 0 | - | 3 | 0 | 1 | 0 | 0 | - | 1 | 0 | 7 | 0 | 0 | - | 7 | 0 | 2 | 0 | 0 | - | 2 | 13 |
| % Buses | 6.7 | 0.0 | 40.0 | - | - | 10.3 | 0.0 | 1.4 | 0.0 | - | - | 1.1 | 0.0 | 5.9 | 0.0 | - | - | 5.2 | 0.0 | 2.0 | 0.0 | - | - | 1.7 | 3.5 |
| Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 1 | 6 | 0 | 0 | - | 7 | 0 | 1 | 0 | 0 | - | 1 | 8 |
| % Trucks | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 11.1 | 5.0 | 0.0 | - | - | 5.2 | 0.0 | 1.0 | 0.0 | - | - | 0.8 | 2.2 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 7 | - | - | - | - | - | 5 | - | - | - | - | - | 7 | - | - | - | - | - | 15 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |




Turning Movement Peak Hour Data Plot (2:45 PM)

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Radnor, PA
Midland Ave & Aberdeen Ave
Saturday, September 8, 2018
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Data

| Start Time | Midland Avenue Eastbound | | | | | | Midland Avenue Westbound | | | | | | Aberdeen Avenue Northbound | | | | | | Aberdeen Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | |
| 11:00 AM | 1 | 2 | 0 | 0 | 2 | 3 | 0 | 6 | 4 | 0 | 1 | 10 | 1 | 23 | 3 | 0 | 2 | 27 | 3 | 18 | 5 | 0 | 1 | 26 | 66 |
| 11:15 AM | 1 | 4 | 0 | 0 | 0 | 5 | 1 | 5 | 3 | 0 | 0 | 9 | 2 | 26 | 0 | 0 | 0 | 28 | 2 | 36 | 4 | 0 | 2 | 42 | 84 |
| 11:30 AM | 4 | 5 | 1 | 0 | 0 | 10 | 1 | 10 | 4 | 0 | 2 | 15 | 0 | 21 | 4 | 0 | 4 | 25 | 0 | 17 | 3 | 0 | 1 | 20 | 70 |
| 11:45 AM | 1 | 3 | 2 | 0 | 0 | 6 | 2 | 6 | 7 | 0 | 1 | 15 | 0 | 40 | 4 | 0 | 0 | 44 | 1 | 30 | 6 | 0 | 2 | 37 | 102 |
| Hourly Total | 7 | 14 | 3 | 0 | 2 | 24 | 4 | 27 | 18 | 0 | 4 | 49 | 3 | 110 | 11 | 0 | 6 | 124 | 6 | 101 | 18 | 0 | 6 | 125 | 322 |
| 12:00 PM | 3 | 1 | 1 | 0 | 0 | 5 | 2 | 7 | 0 | 0 | 1 | 9 | 1 | 18 | 1 | 0 | 0 | 20 | 1 | 24 | 1 | 0 | 2 | 26 | 60 |
| 12:15 PM | 4 | 4 | 0 | 0 | 0 | 8 | 2 | 15 | 5 | 0 | 0 | 22 | 1 | 25 | 0 | 0 | 2 | 26 | 3 | 15 | 7 | 0 | 0 | 25 | 81 |
| 12:30 PM | 6 | 1 | 0 | 0 | 0 | 7 | 2 | 7 | 5 | 0 | 0 | 14 | 1 | 19 | 0 | 0 | 0 | 20 | 2 | 21 | 7 | 0 | 3 | 30 | 71 |
| 12:45 PM | 1 | 2 | 0 | 0 | 0 | 3 | 1 | 2 | 6 | 0 | 1 | 9 | 0 | 24 | 2 | 0 | 4 | 26 | 2 | 21 | 7 | 0 | 5 | 30 | 68 |
| Hourly Total | 14 | 8 | 1 | 0 | 0 | 23 | 7 | 31 | 16 | 0 | 2 | 54 | 3 | 86 | 3 | 0 | 6 | 92 | 8 | 81 | 22 | 0 | 10 | 111 | 280 |
| 1:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 21 | 22 | 4 | 0 | 2 | 47 | 11 | 58 | 34 | 0 | 6 | 103 | 6 | 196 | 14 | 0 | 12 | 216 | 14 | 182 | 40 | 0 | 16 | 236 | 602 |
| Approach % | 44.7 | 46.8 | 8.5 | 0.0 | - | - | 10.7 | 56.3 | 33.0 | 0.0 | - | - | 2.8 | 90.7 | 6.5 | 0.0 | - | - | 5.9 | 77.1 | 16.9 | 0.0 | - | - | - |
| Total % | 3.5 | 3.7 | 0.7 | 0.0 | - | 7.8 | 1.8 | 9.6 | 5.6 | 0.0 | - | 17.1 | 1.0 | 32.6 | 2.3 | 0.0 | - | 35.9 | 2.3 | 30.2 | 6.6 | 0.0 | - | 39.2 | - |
| Lights | 20 | 22 | 4 | 0 | - | 46 | 11 | 58 | 33 | 0 | - | 102 | 6 | 196 | 14 | 0 | - | 216 | 14 | 181 | 37 | 0 | - | 232 | 596 |
| % Lights | 95.2 | 100.0 | 100.0 | - | - | 97.9 | 100.0 | 100.0 | 97.1 | - | - | 99.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 99.5 | 92.5 | - | - | 98.3 | 99.0 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Trucks | 1 | 0 | 0 | 0 | - | 1 | 0 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 3 | 0 | - | 4 | 6 |
| % Trucks | 4.8 | 0.0 | 0.0 | - | - | 2.1 | 0.0 | 0.0 | 2.9 | - | - | 1.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.5 | 7.5 | - | - | 1.7 | 1.0 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 2 | - | - | - | - | - | 2 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 16.7 | - | - | - | - | - | 12.5 | - | - |
| Pedestrians | - | - | - | - | 2 | - | - | - | - | - | 6 | - | - | - | - | - | 10 | - | - | - | - | - | 14 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 83.3 | - | - | - | - | - | 87.5 | - | - |

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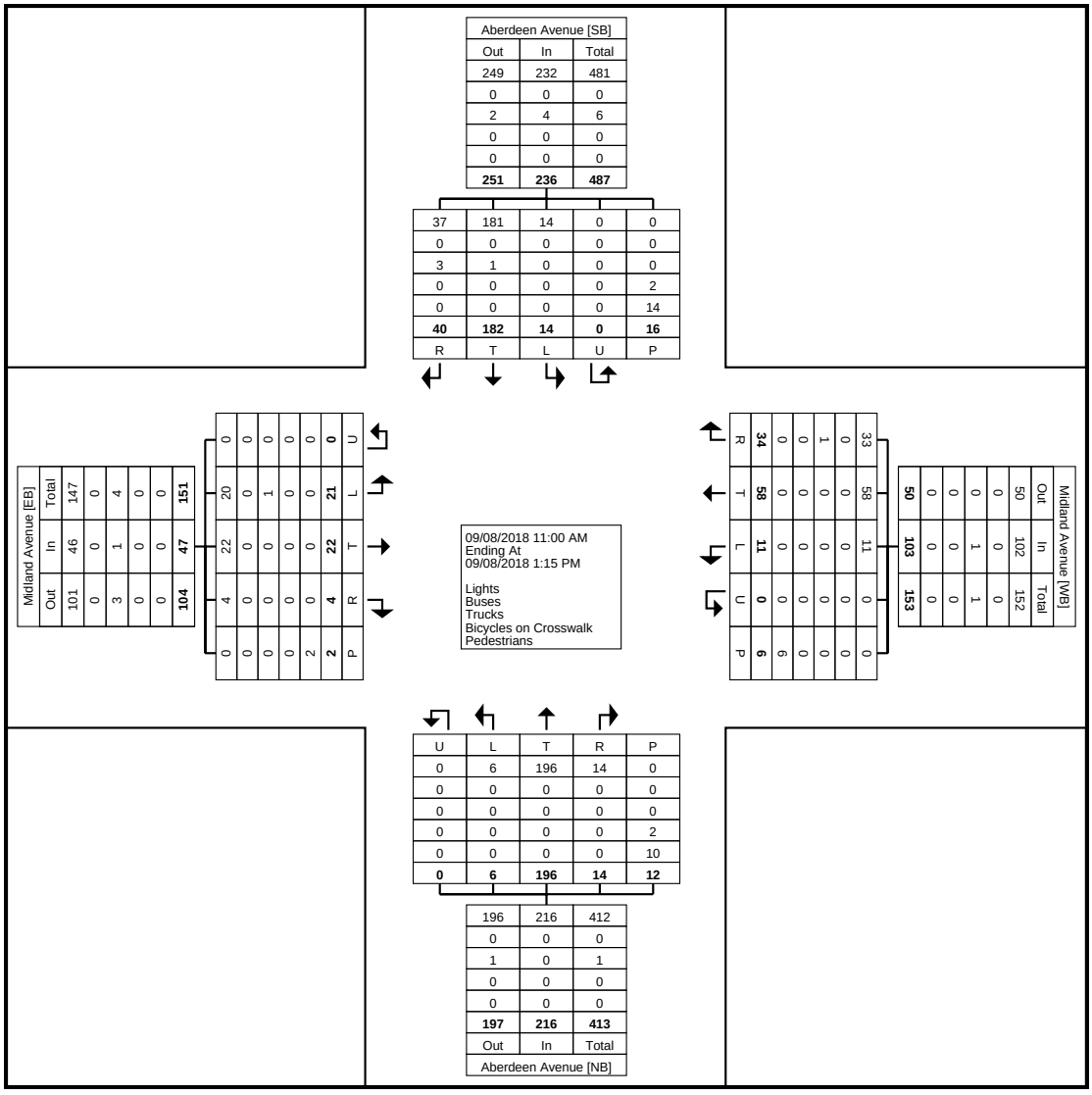
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave-Sat
Site Code:
Start Date: 09/08/2018


Turning Movement Data Plot

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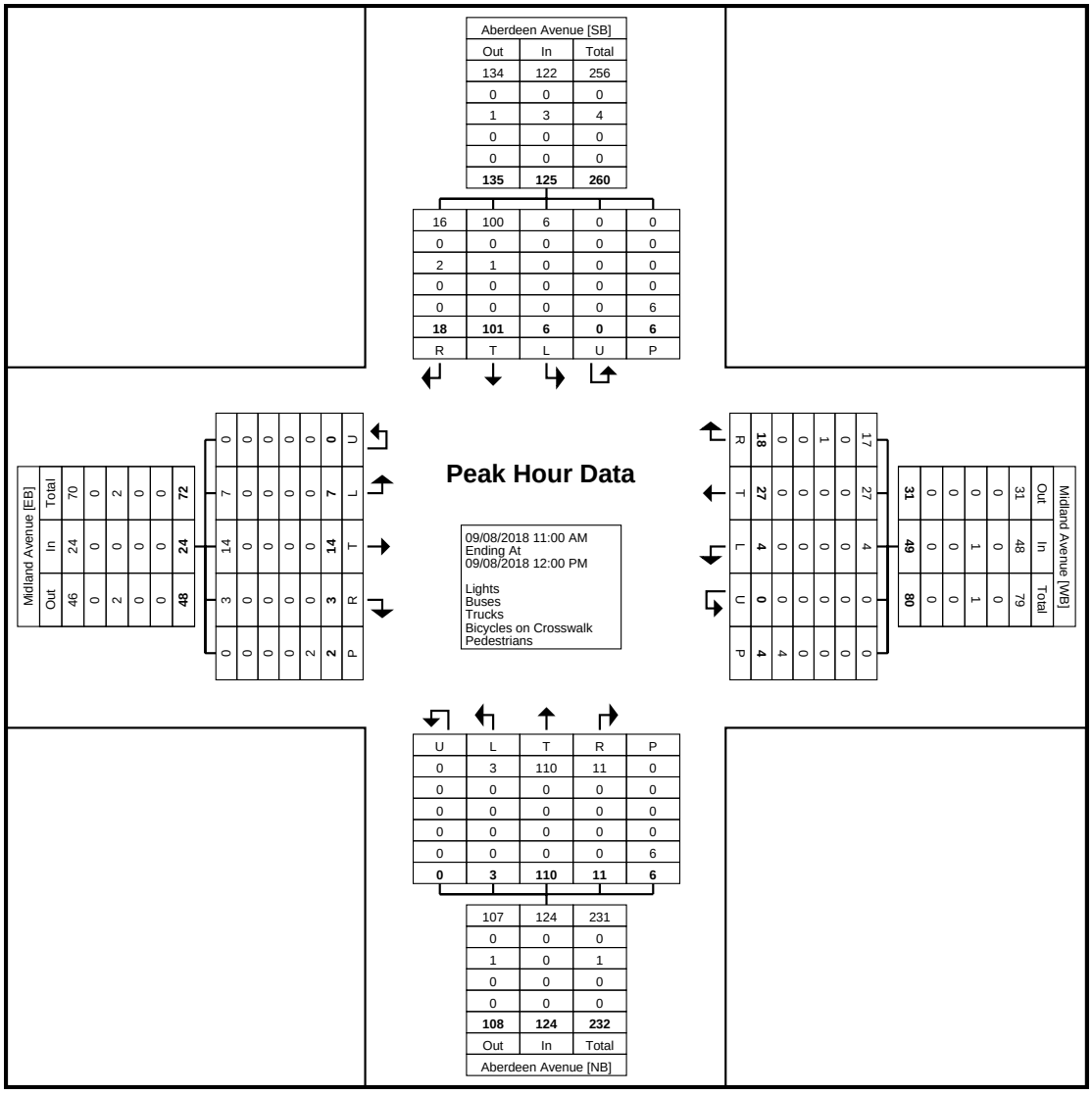
Radnor, PA
Midland Ave & Aberdeen Ave
Saturday, September 8, 2018
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Peak Hour Data (11:00 AM)

| Start Time | Midland Avenue Eastbound | | | | | | Midland Avenue Westbound | | | | | | Aberdeen Avenue Northbound | | | | | | Aberdeen Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | |
| 11:00 AM | 1 | 2 | 0 | 0 | 2 | 3 | 0 | 6 | 4 | 0 | 1 | 10 | 1 | 23 | 3 | 0 | 2 | 27 | 3 | 18 | 5 | 0 | 1 | 26 | 66 |
| 11:15 AM | 1 | 4 | 0 | 0 | 0 | 5 | 1 | 5 | 3 | 0 | 0 | 9 | 2 | 26 | 0 | 0 | 0 | 28 | 2 | 36 | 4 | 0 | 2 | 42 | 84 |
| 11:30 AM | 4 | 5 | 1 | 0 | 0 | 10 | 1 | 10 | 4 | 0 | 2 | 15 | 0 | 21 | 4 | 0 | 4 | 25 | 0 | 17 | 3 | 0 | 1 | 20 | 70 |
| 11:45 AM | 1 | 3 | 2 | 0 | 0 | 6 | 2 | 6 | 7 | 0 | 1 | 15 | 0 | 40 | 4 | 0 | 0 | 44 | 1 | 30 | 6 | 0 | 2 | 37 | 102 |
| Total | 7 | 14 | 3 | 0 | 2 | 24 | 4 | 27 | 18 | 0 | 4 | 49 | 3 | 110 | 11 | 0 | 6 | 124 | 6 | 101 | 18 | 0 | 6 | 125 | 322 |
| Approach % | 29.2 | 58.3 | 12.5 | 0.0 | - | - | 8.2 | 55.1 | 36.7 | 0.0 | - | - | 2.4 | 88.7 | 8.9 | 0.0 | - | - | 4.8 | 80.8 | 14.4 | 0.0 | - | - | - |
| Total % | 2.2 | 4.3 | 0.9 | 0.0 | - | 7.5 | 1.2 | 8.4 | 5.6 | 0.0 | - | 15.2 | 0.9 | 34.2 | 3.4 | 0.0 | - | 38.5 | 1.9 | 31.4 | 5.6 | 0.0 | - | 38.8 | - |
| PHF | 0.438 | 0.700 | 0.375 | 0.000 | - | 0.600 | 0.500 | 0.675 | 0.643 | 0.000 | - | 0.817 | 0.375 | 0.688 | 0.688 | 0.000 | - | 0.705 | 0.500 | 0.701 | 0.750 | 0.000 | - | 0.744 | 0.789 |
| Lights | 7 | 14 | 3 | 0 | - | 24 | 4 | 27 | 17 | 0 | - | 48 | 3 | 110 | 11 | 0 | - | 124 | 6 | 100 | 16 | 0 | - | 122 | 318 |
| % Lights | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 100.0 | 94.4 | - | - | 98.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 99.0 | 88.9 | - | - | 97.6 | 98.8 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 2 | 0 | - | 3 | 4 |
| % Trucks | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 5.6 | - | - | 2.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 1.0 | 11.1 | - | - | 2.4 | 1.2 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 2 | - | - | - | - | - | 4 | - | - | - | - | - | 6 | - | - | - | - | - | 6 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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Midland Ave & Aberdeen Ave
Saturday, September 9, 2018
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Data

| Start Time | Midland Avenue Eastbound | | | | | | Midland Avenue Westbound | | | | | | Aberdeen Avenue Northbound | | | | | | Aberdeen Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | |
| 9:00 AM | 2 | 2 | 0 | 0 | 0 | 4 | 1 | 0 | 2 | 0 | 0 | 3 | 1 | 11 | 1 | 0 | 1 | 13 | 0 | 7 | 2 | 0 | 1 | 9 | 29 |
| 9:15 AM | 2 | 1 | 0 | 0 | 1 | 3 | 0 | 2 | 9 | 0 | 2 | 11 | 6 | 32 | 2 | 0 | 0 | 40 | 0 | 9 | 7 | 1 | 2 | 17 | 71 |
| 9:30 AM | 3 | 0 | 0 | 0 | 6 | 3 | 0 | 3 | 0 | 0 | 1 | 3 | 3 | 14 | 0 | 0 | 1 | 17 | 1 | 11 | 6 | 0 | 1 | 18 | 41 |
| 9:45 AM | 0 | 1 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 1 | 19 | 0 | 0 | 0 | 20 | 0 | 11 | 1 | 0 | 2 | 12 | 34 |
| Hourly Total | 7 | 4 | 0 | 0 | 9 | 11 | 1 | 6 | 11 | 0 | 3 | 18 | 11 | 76 | 3 | 0 | 2 | 90 | 1 | 38 | 16 | 1 | 6 | 56 | 175 |
| 10:00 AM | 0 | 2 | 2 | 0 | 3 | 4 | 0 | 1 | 3 | 0 | 1 | 4 | 0 | 21 | 0 | 0 | 1 | 21 | 1 | 6 | 2 | 0 | 0 | 9 | 38 |
| 10:15 AM | 14 | 2 | 8 | 0 | 5 | 24 | 1 | 1 | 2 | 0 | 5 | 4 | 0 | 14 | 3 | 0 | 1 | 17 | 0 | 8 | 4 | 0 | 1 | 12 | 57 |
| 10:30 AM | 10 | 1 | 1 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 3 | 1 | 0 | 17 | 0 | 0 | 0 | 17 | 0 | 13 | 6 | 0 | 1 | 19 | 49 |
| 10:45 AM | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 11 | 0 | 0 | 1 | 11 | 2 | 12 | 0 | 0 | 0 | 14 | 29 |
| Hourly Total | 26 | 5 | 11 | 0 | 8 | 42 | 3 | 3 | 5 | 0 | 9 | 11 | 0 | 63 | 3 | 0 | 3 | 66 | 3 | 39 | 12 | 0 | 2 | 54 | 173 |
| 11:00 AM | 5 | 0 | 0 | 0 | 2 | 5 | 0 | 3 | 3 | 0 | 0 | 6 | 0 | 23 | 1 | 0 | 1 | 24 | 1 | 11 | 0 | 0 | 0 | 12 | 47 |
| 11:15 AM | 7 | 1 | 1 | 0 | 4 | 9 | 1 | 6 | 6 | 0 | 0 | 13 | 5 | 21 | 1 | 0 | 0 | 27 | 1 | 7 | 6 | 2 | 0 | 16 | 65 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| Grand Total | 45 | 10 | 12 | 0 | 23 | 67 | 5 | 18 | 25 | 0 | 12 | 48 | 16 | 184 | 8 | 0 | 6 | 208 | 6 | 95 | 34 | 3 | 8 | 138 | 461 |
| Approach % | 67.2 | 14.9 | 17.9 | 0.0 | - | - | 10.4 | 37.5 | 52.1 | 0.0 | - | - | 7.7 | 88.5 | 3.8 | 0.0 | - | - | 4.3 | 68.8 | 24.6 | 2.2 | - | - | - |
| Total % | 9.8 | 2.2 | 2.6 | 0.0 | - | 14.5 | 1.1 | 3.9 | 5.4 | 0.0 | - | 10.4 | 3.5 | 39.9 | 1.7 | 0.0 | - | 45.1 | 1.3 | 20.6 | 7.4 | 0.7 | - | 29.9 | - |
| Lights | 45 | 10 | 12 | 0 | - | 67 | 5 | 18 | 25 | 0 | - | 48 | 16 | 183 | 8 | 0 | - | 207 | 6 | 95 | 33 | 3 | - | 137 | 459 |
| % Lights | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 99.5 | 100.0 | - | - | 99.5 | 100.0 | 100.0 | 97.1 | 100.0 | - | 99.3 | 99.6 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 1 | 0 | - | 1 | 2 |
| % Trucks | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.5 | 0.0 | - | - | 0.5 | 0.0 | 0.0 | 2.9 | 0.0 | - | 0.7 | 0.4 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 23 | - | - | - | - | - | 12 | - | - | - | - | - | 6 | - | - | - | - | - | 8 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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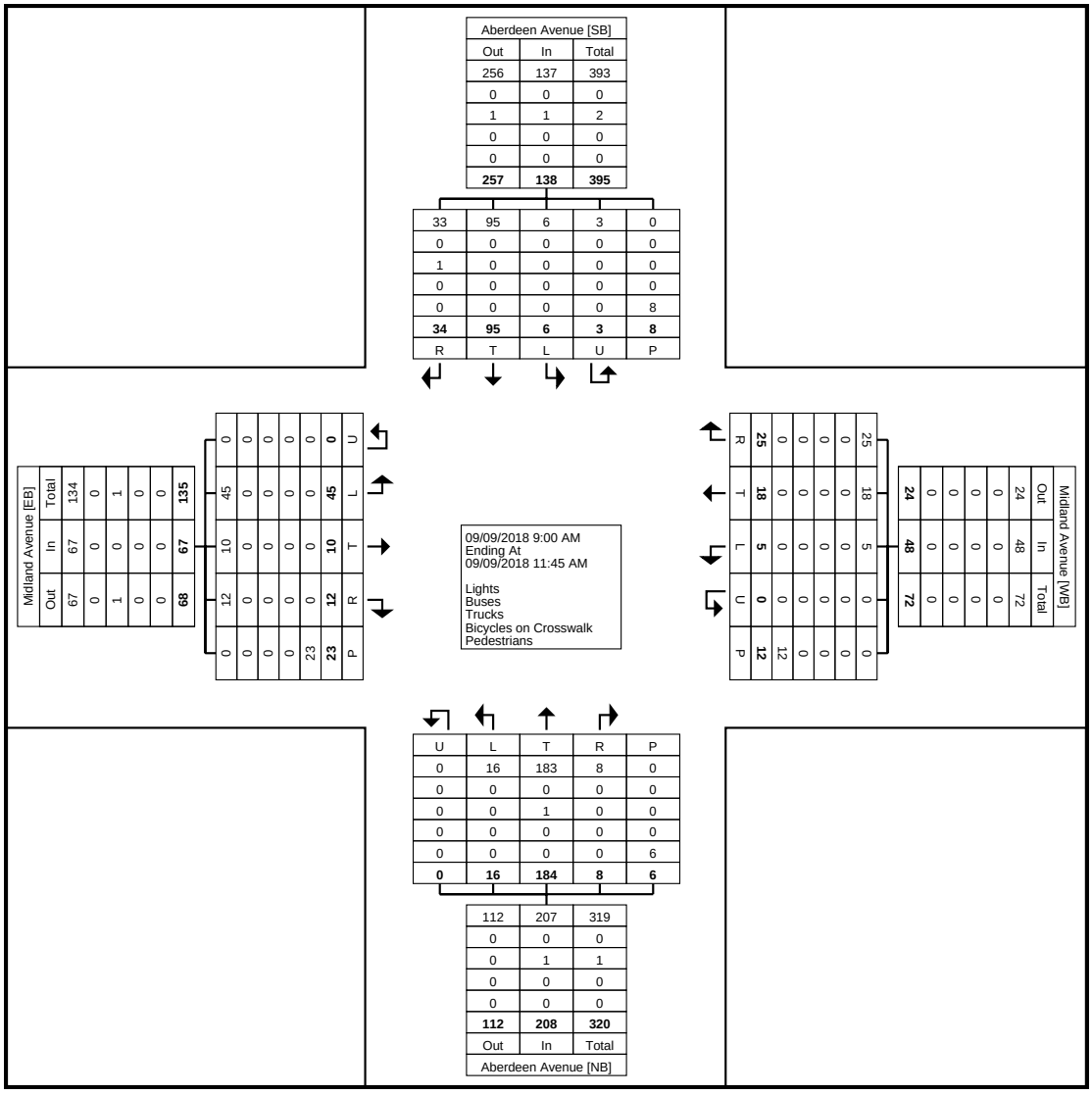
Radnor, PA
Midland Ave & Aberdeen Ave
Saturday, September 9, 2018
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave-Sun
Site Code:
Start Date: 09/09/2018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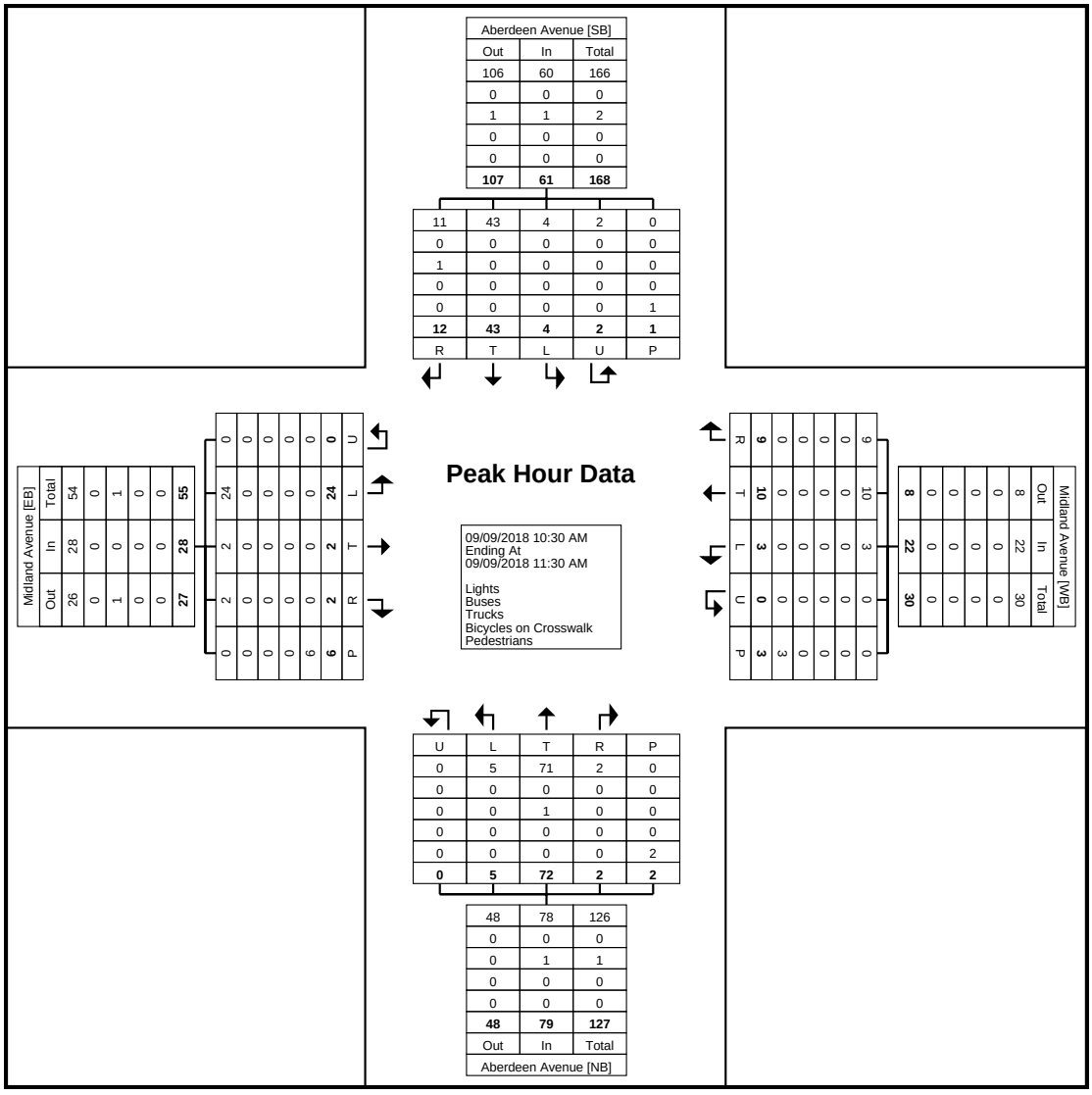
Radnor, PA
Midland Ave & Aberdeen Ave
Saturday, September 9, 2018
Location: 40.042444, -75.381426

Count Name: Midland Ave/Aberdeen Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Peak Hour Data (10:30 AM)

| Start Time | Midland Avenue Eastbound | | | | | | Midland Avenue Westbound | | | | | | Aberdeen Avenue Northbound | | | | | | Aberdeen Avenue Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | Right | U-Turn | Peds | App. Total | |
| 10:30 AM | 10 | 1 | 1 | 0 | 0 | 12 | 1 | 0 | 0 | 0 | 3 | 1 | 0 | 17 | 0 | 0 | 0 | 17 | 0 | 13 | 6 | 0 | 1 | 19 | 49 |
| 10:45 AM | 2 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 2 | 0 | 11 | 0 | 0 | 1 | 11 | 2 | 12 | 0 | 0 | 0 | 14 | 29 |
| 11:00 AM | 5 | 0 | 0 | 0 | 2 | 5 | 0 | 3 | 3 | 0 | 0 | 6 | 0 | 23 | 1 | 0 | 1 | 24 | 1 | 11 | 0 | 0 | 0 | 12 | 47 |
| 11:15 AM | 7 | 1 | 1 | 0 | 4 | 9 | 1 | 6 | 6 | 0 | 0 | 13 | 5 | 21 | 1 | 0 | 0 | 27 | 1 | 7 | 6 | 2 | 0 | 16 | 65 |
| Total | 24 | 2 | 2 | 0 | 6 | 28 | 3 | 10 | 9 | 0 | 3 | 22 | 5 | 72 | 2 | 0 | 2 | 79 | 4 | 43 | 12 | 2 | 1 | 61 | 190 |
| Approach % | 85.7 | 7.1 | 7.1 | 0.0 | - | - | 13.6 | 45.5 | 40.9 | 0.0 | - | - | 6.3 | 91.1 | 2.5 | 0.0 | - | - | 6.6 | 70.5 | 19.7 | 3.3 | - | - | - |
| Total % | 12.6 | 1.1 | 1.1 | 0.0 | - | 14.7 | 1.6 | 5.3 | 4.7 | 0.0 | - | 11.6 | 2.6 | 37.9 | 1.1 | 0.0 | - | 41.6 | 2.1 | 22.6 | 6.3 | 1.1 | - | 32.1 | - |
| PHF | 0.600 | 0.500 | 0.500 | 0.000 | - | 0.583 | 0.750 | 0.417 | 0.375 | 0.000 | - | 0.423 | 0.250 | 0.783 | 0.500 | 0.000 | - | 0.731 | 0.500 | 0.827 | 0.500 | 0.250 | - | 0.803 | 0.731 |
| Lights | 24 | 2 | 2 | 0 | - | 28 | 3 | 10 | 9 | 0 | - | 22 | 5 | 71 | 2 | 0 | - | 78 | 4 | 43 | 11 | 2 | - | 60 | 188 |
| % Lights | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 98.6 | 100.0 | - | - | 98.7 | 100.0 | 100.0 | 91.7 | 100.0 | - | 98.4 | 98.9 |
| Buses | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Trucks | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | 0 | - | 1 | 0 | 0 | 1 | 0 | - | 1 | 2 |
| % Trucks | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 1.4 | 0.0 | - | - | 1.3 | 0.0 | 0.0 | 8.3 | 0.0 | - | 1.6 | 1.1 |
| Bicycles on Crosswalk | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | - | 6 | - | - | - | - | - | 3 | - | - | - | - | - | 2 | - | - | - | - | - | 1 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |




Turning Movement Peak Hour Data Plot (10:30 AM)

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Radnor, PA
Midland Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Data

| Start Time | Midland Ave Westbound | | | | | Louella Ave Northbound | | | | | Louella Ave Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | U-Turn | Peds | App. Total | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Int. Total |
| 7:00 AM | 1 | 3 | 0 | 1 | 4 | 9 | 1 | 0 | 0 | 10 | 2 | 4 | 0 | 2 | 6 | 20 |
| 7:15 AM | 0 | 6 | 0 | 1 | 6 | 9 | 2 | 0 | 0 | 11 | 5 | 8 | 0 | 1 | 13 | 30 |
| 7:30 AM | 1 | 14 | 0 | 2 | 15 | 20 | 5 | 0 | 0 | 25 | 4 | 9 | 0 | 6 | 13 | 53 |
| 7:45 AM | 3 | 6 | 0 | 4 | 9 | 41 | 20 | 0 | 0 | 61 | 7 | 21 | 0 | 6 | 28 | 98 |
| Hourly Total | 5 | 29 | 0 | 8 | 34 | 79 | 28 | 0 | 0 | 107 | 18 | 42 | 0 | 15 | 60 | 201 |
| 8:00 AM | 1 | 3 | 0 | 0 | 4 | 18 | 4 | 0 | 0 | 22 | 1 | 4 | 0 | 1 | 5 | 31 |
| 8:15 AM | 1 | 8 | 0 | 0 | 9 | 9 | 0 | 0 | 0 | 9 | 0 | 6 | 0 | 6 | 6 | 24 |
| 8:30 AM | 1 | 12 | 0 | 0 | 13 | 13 | 1 | 0 | 0 | 14 | 4 | 7 | 0 | 2 | 11 | 38 |
| 8:45 AM | 1 | 15 | 0 | 0 | 16 | 13 | 0 | 0 | 0 | 13 | 8 | 7 | 0 | 3 | 15 | 44 |
| Hourly Total | 4 | 38 | 0 | 0 | 42 | 53 | 5 | 0 | 0 | 58 | 13 | 24 | 0 | 12 | 37 | 137 |
| 9:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| *** BREAK *** | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - |
| Hourly Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2:00 PM | 0 | 11 | 0 | 1 | 11 | 14 | 1 | 0 | 0 | 15 | 4 | 5 | 0 | 0 | 9 | 35 |
| 2:15 PM | 0 | 8 | 0 | 0 | 8 | 8 | 2 | 0 | 0 | 10 | 2 | 7 | 0 | 0 | 9 | 27 |
| 2:30 PM | 0 | 11 | 0 | 0 | 11 | 10 | 0 | 0 | 0 | 10 | 6 | 11 | 0 | 0 | 17 | 38 |
| 2:45 PM | 1 | 6 | 0 | 0 | 7 | 17 | 2 | 0 | 0 | 19 | 6 | 18 | 0 | 1 | 24 | 50 |
| Hourly Total | 1 | 36 | 0 | 1 | 37 | 49 | 5 | 0 | 0 | 54 | 18 | 41 | 0 | 1 | 59 | 150 |
| 3:00 PM | 2 | 14 | 0 | 6 | 16 | 28 | 3 | 0 | 1 | 31 | 4 | 14 | 0 | 17 | 18 | 65 |
| 3:15 PM | 1 | 15 | 0 | 4 | 16 | 22 | 2 | 0 | 0 | 24 | 5 | 12 | 0 | 4 | 17 | 57 |
| 3:30 PM | 5 | 9 | 0 | 0 | 14 | 18 | 4 | 1 | 0 | 23 | 1 | 16 | 0 | 2 | 17 | 54 |
| 3:45 PM | 2 | 10 | 0 | 0 | 12 | 9 | 2 | 0 | 0 | 11 | 1 | 16 | 0 | 0 | 17 | 40 |
| Hourly Total | 10 | 48 | 0 | 10 | 58 | 77 | 11 | 1 | 1 | 89 | 11 | 58 | 0 | 23 | 69 | 216 |
| 4:00 PM | 1 | 8 | 0 | 1 | 9 | 14 | 1 | 0 | 0 | 15 | 4 | 8 | 0 | 1 | 12 | 36 |
| 4:15 PM | 3 | 17 | 0 | 0 | 20 | 10 | 2 | 0 | 0 | 12 | 0 | 8 | 0 | 1 | 8 | 40 |
| 4:30 PM | 4 | 8 | 0 | 1 | 12 | 10 | 0 | 0 | 1 | 10 | 3 | 13 | 0 | 0 | 16 | 38 |
| 4:45 PM | 1 | 11 | 0 | 0 | 12 | 5 | 1 | 0 | 1 | 6 | 5 | 5 | 0 | 1 | 10 | 28 |
| Hourly Total | 9 | 44 | 0 | 2 | 53 | 39 | 4 | 0 | 2 | 43 | 12 | 34 | 0 | 3 | 46 | 142 |
| 5:00 PM | 3 | 8 | 0 | 0 | 11 | 6 | 0 | 0 | 0 | 6 | 2 | 9 | 0 | 3 | 11 | 28 |
| 5:15 PM | 2 | 7 | 0 | 0 | 9 | 3 | 0 | 0 | 1 | 3 | 3 | 11 | 0 | 0 | 14 | 26 |
| 5:30 PM | 0 | 11 | 0 | 0 | 11 | 11 | 0 | 0 | 0 | 11 | 2 | 14 | 0 | 0 | 16 | 38 |
| 5:45 PM | 2 | 12 | 0 | 3 | 14 | 6 | 0 | 0 | 0 | 6 | 1 | 4 | 0 | 0 | 5 | 25 |
| Hourly Total | 7 | 38 | 0 | 3 | 45 | 26 | 0 | 0 | 1 | 26 | 8 | 38 | 0 | 3 | 46 | 117 |
| Grand Total | 36 | 233 | 0 | 24 | 269 | 323 | 53 | 1 | 4 | 377 | 80 | 237 | 0 | 57 | 317 | 963 |
| Approach % | 13.4 | 86.6 | 0.0 | - | - | 85.7 | 14.1 | 0.3 | - | - | 25.2 | 74.8 | 0.0 | - | - | - |
| Total % | 3.7 | 24.2 | 0.0 | - | 27.9 | 33.5 | 5.5 | 0.1 | - | 39.1 | 8.3 | 24.6 | 0.0 | - | 32.9 | - |
| Lights | 35 | 229 | 0 | - | 264 | 316 | 40 | 1 | - | 357 | 68 | 230 | 0 | - | 298 | 919 |
| % Lights | 97.2 | 98.3 | - | - | 98.1 | 97.8 | 75.5 | 100.0 | - | 94.7 | 85.0 | 97.0 | - | - | 94.0 | 95.4 |
| Buses | 0 | 0 | 0 | - | 0 | 3 | 12 | 0 | - | 15 | 12 | 2 | 0 | - | 14 | 29 |
| % Buses | 0.0 | 0.0 | - | - | 0.0 | 0.9 | 22.6 | 0.0 | - | 4.0 | 15.0 | 0.8 | - | - | 4.4 | 3.0 |
| Trucks | 1 | 4 | 0 | - | 5 | 4 | 1 | 0 | - | 5 | 0 | 5 | 0 | - | 5 | 15 |
| % Trucks | 2.8 | 1.7 | - | - | 1.9 | 1.2 | 1.9 | 0.0 | - | 1.3 | 0.0 | 2.1 | - | - | 1.6 | 1.6 |
| Bicycles on Crosswalk | - | - | - | 0 | - | - | - | - | 1 | - | - | - | - | 4 | - | - |
| % Bicycles on Crosswalk | - | - | - | 0.0 | - | - | - | - | 25.0 | - | - | - | - | 7.0 | - | - |
| Pedestrians | - | - | - | 24 | - | - | - | - | 3 | - | - | - | - | 53 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 75.0 | - | - | - | - | 93.0 | - | - |

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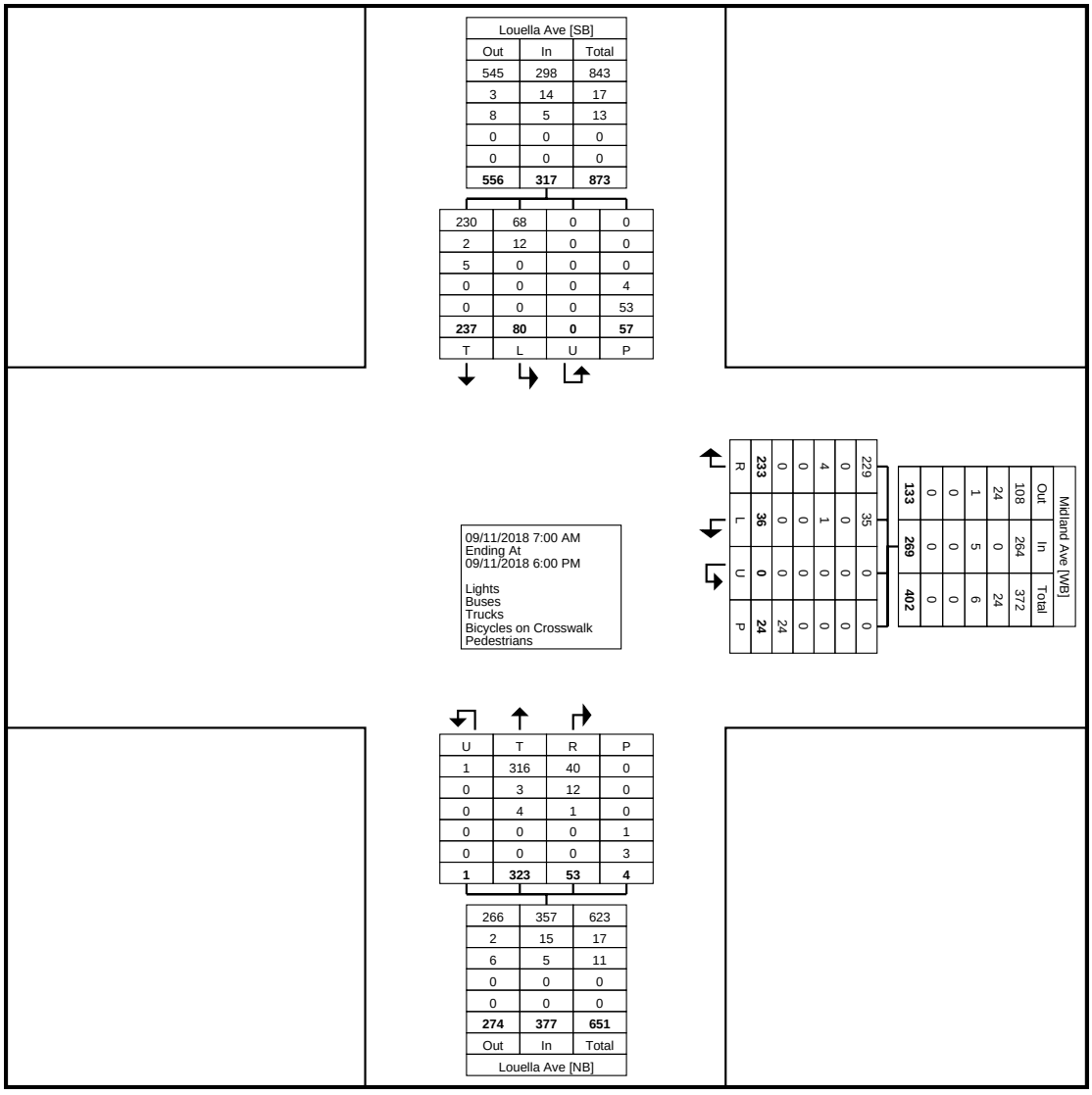
Midland Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave
Site Code:
Start Date: 09/11/2018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Midland Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (7:15 AM)

| Start Time | Midland Ave Westbound | | | | | Louella Ave Northbound | | | | | Louella Ave Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | U-Turn | Peds | App. Total | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Int. Total |
| 7:15 AM | 0 | 6 | 0 | 1 | 6 | 9 | 2 | 0 | 0 | 11 | 5 | 8 | 0 | 1 | 13 | 30 |
| 7:30 AM | 1 | 14 | 0 | 2 | 15 | 20 | 5 | 0 | 0 | 25 | 4 | 9 | 0 | 6 | 13 | 53 |
| 7:45 AM | 3 | 6 | 0 | 4 | 9 | 41 | 20 | 0 | 0 | 61 | 7 | 21 | 0 | 6 | 28 | 98 |
| 8:00 AM | 1 | 3 | 0 | 0 | 4 | 18 | 4 | 0 | 0 | 22 | 1 | 4 | 0 | 1 | 5 | 31 |
| Total | 5 | 29 | 0 | 7 | 34 | 88 | 31 | 0 | 0 | 119 | 17 | 42 | 0 | 14 | 59 | 212 |
| Approach % | 14.7 | 85.3 | 0.0 | - | - | 73.9 | 26.1 | 0.0 | - | - | 28.8 | 71.2 | 0.0 | - | - | - |
| Total % | 2.4 | 13.7 | 0.0 | - | 16.0 | 41.5 | 14.6 | 0.0 | - | 56.1 | 8.0 | 19.8 | 0.0 | - | 27.8 | - |
| PHF | 0.417 | 0.518 | 0.000 | - | 0.567 | 0.537 | 0.388 | 0.000 | - | 0.488 | 0.607 | 0.500 | 0.000 | - | 0.527 | 0.541 |
| Lights | 5 | 28 | 0 | - | 33 | 88 | 21 | 0 | - | 109 | 13 | 38 | 0 | - | 51 | 193 |
| % Lights | 100.0 | 96.6 | - | - | 97.1 | 100.0 | 67.7 | - | - | 91.6 | 76.5 | 90.5 | - | - | 86.4 | 91.0 |
| Buses | 0 | 0 | 0 | - | 0 | 0 | 10 | 0 | - | 10 | 4 | 0 | 0 | - | 4 | 14 |
| % Buses | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 32.3 | - | - | 8.4 | 23.5 | 0.0 | - | - | 6.8 | 6.6 |
| Trucks | 0 | 1 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 0 | 4 | 0 | - | 4 | 5 |
| % Trucks | 0.0 | 3.4 | - | - | 2.9 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 9.5 | - | - | 6.8 | 2.4 |
| Bicycles on Crosswalk | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 3 | - | - |
| % Bicycles on Crosswalk | - | - | - | 0.0 | - | - | - | - | - | - | - | - | - | 21.4 | - | - |
| Pedestrians | - | - | - | 7 | - | - | - | - | 0 | - | - | - | - | 11 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | 78.6 | - | - |

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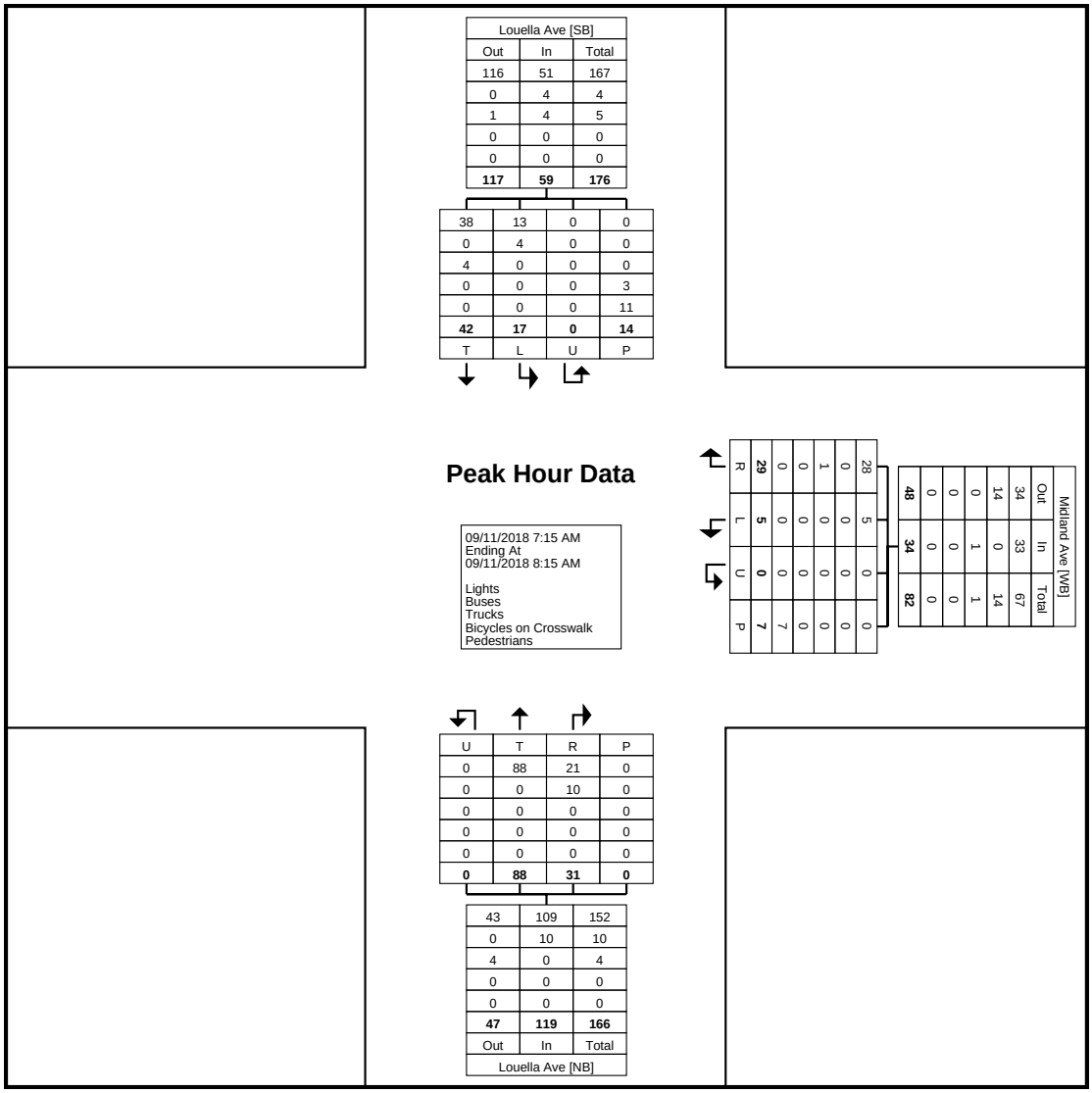


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Midland Ave & Louella Ave
Tuesday, September 11, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave
Site Code:
Start Date: 09/11/2018


# Turning Movement Peak Hour Data (2:45 PM)

| Start Time | Midland Ave Westbound | | | | | Louella Ave Northbound | | | | | Louella Ave Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | U-Turn | Peds | App. Total | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Int. Total |
| 2:45 PM | 1 | 6 | 0 | 0 | 7 | 17 | 2 | 0 | 0 | 19 | 6 | 18 | 0 | 1 | 24 | 50 |
| 3:00 PM | 2 | 14 | 0 | 6 | 16 | 28 | 3 | 0 | 1 | 31 | 4 | 14 | 0 | 17 | 18 | 65 |
| 3:15 PM | 1 | 15 | 0 | 4 | 16 | 22 | 2 | 0 | 0 | 24 | 5 | 12 | 0 | 4 | 17 | 57 |
| 3:30 PM | 5 | 9 | 0 | 0 | 14 | 18 | 4 | 1 | 0 | 23 | 1 | 16 | 0 | 2 | 17 | 54 |
| Total | 9 | 44 | 0 | 10 | 53 | 85 | 11 | 1 | 1 | 97 | 16 | 60 | 0 | 24 | 76 | 226 |
| Approach % | 17.0 | 83.0 | 0.0 | - | - | 87.6 | 11.3 | 1.0 | - | - | 21.1 | 78.9 | 0.0 | - | - | - |
| Total % | 4.0 | 19.5 | 0.0 | - | 23.5 | 37.6 | 4.9 | 0.4 | - | 42.9 | 7.1 | 26.5 | 0.0 | - | 33.6 | - |
| PHF | 0.450 | 0.733 | 0.000 | - | 0.828 | 0.759 | 0.688 | 0.250 | - | 0.782 | 0.667 | 0.833 | 0.000 | - | 0.792 | 0.869 |
| Lights | 9 | 43 | 0 | - | 52 | 83 | 11 | 1 | - | 95 | 13 | 59 | 0 | - | 72 | 219 |
| % Lights | 100.0 | 97.7 | - | - | 98.1 | 97.6 | 100.0 | 100.0 | - | 97.9 | 81.3 | 98.3 | - | - | 94.7 | 96.9 |
| Buses | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | - | 1 | 3 | 1 | 0 | - | 4 | 5 |
| % Buses | 0.0 | 0.0 | - | - | 0.0 | 1.2 | 0.0 | 0.0 | - | 1.0 | 18.8 | 1.7 | - | - | 5.3 | 2.2 |
| Trucks | 0 | 1 | 0 | - | 1 | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 2 |
| % Trucks | 0.0 | 2.3 | - | - | 1.9 | 1.2 | 0.0 | 0.0 | - | 1.0 | 0.0 | 0.0 | - | - | 0.0 | 0.9 |
| Bicycles on Crosswalk | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 1 | - | - |
| % Bicycles on Crosswalk | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | 4.2 | - | - |
| Pedestrians | - | - | - | 10 | - | - | - | - | 1 | - | - | - | - | 23 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 95.8 | - | - |

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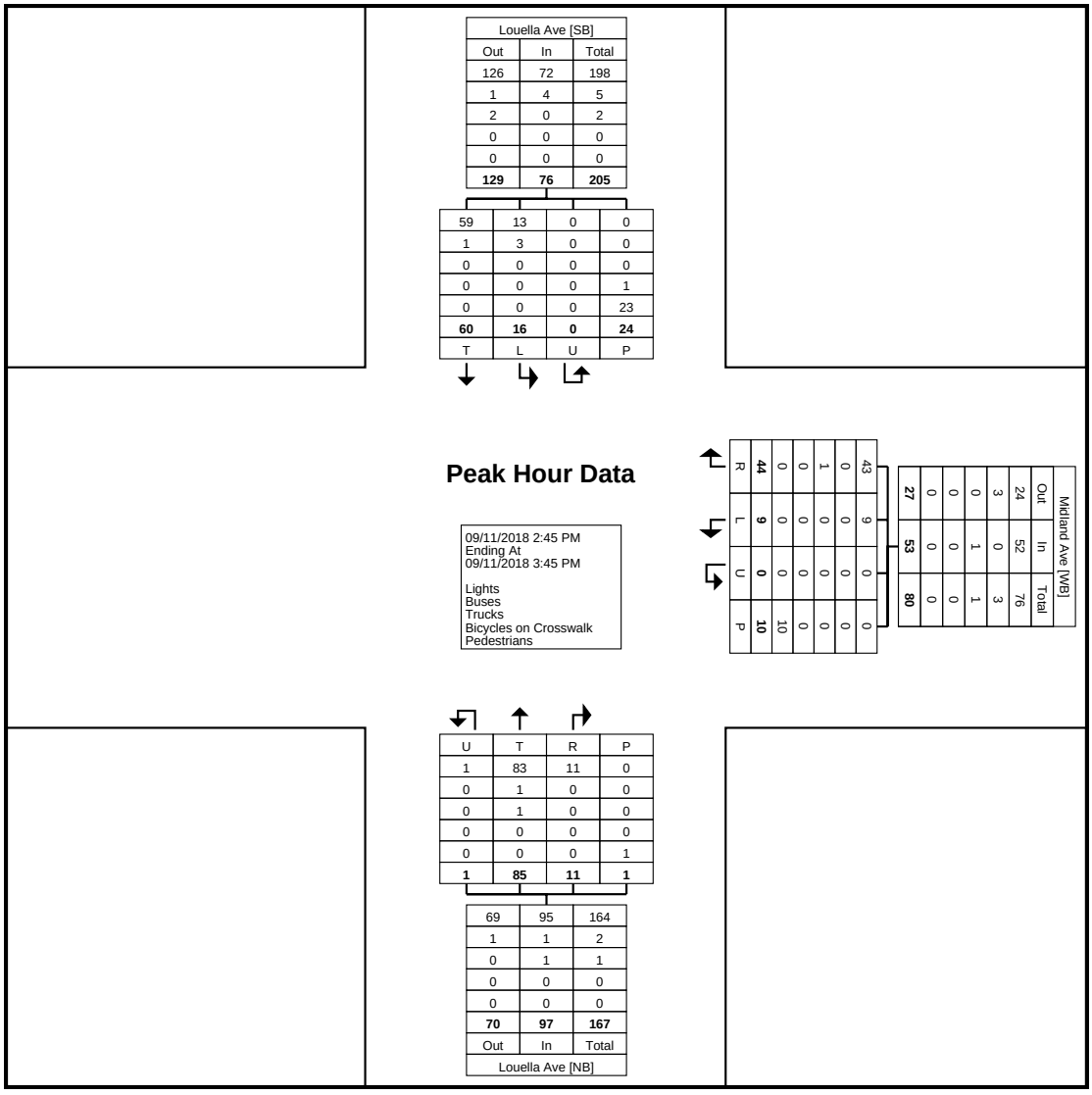
Start Date: 09/11/2018


Turning Movement Peak Hour Data Plot (2:45 PM)

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184 Baker Rd

Coatesville, Pennsylvania, United States 19320
610-466-1469
Serving Transportation Professionals Since 1995

Radnor, PA
Midland Ave & Louella Ave
Saturday, September 8, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Data

| Start Time | Midland Avenue Westbound | | | | | Louella Avenue Northbound | | | | | Louella Avenue Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | U-Turn | Peds | App. Total | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Int. Total |
| 11:00 AM | 1 | 11 | 0 | 7 | 12 | 7 | 1 | 0 | 0 | 8 | 3 | 8 | 0 | 3 | 11 | 31 |
| 11:15 AM | 2 | 14 | 0 | 2 | 16 | 11 | 3 | 0 | 0 | 14 | 2 | 12 | 0 | 3 | 14 | 44 |
| 11:30 AM | 0 | 13 | 0 | 1 | 13 | 35 | 4 | 0 | 1 | 39 | 6 | 10 | 0 | 4 | 16 | 68 |
| 11:45 AM | 2 | 10 | 0 | 3 | 12 | 16 | 1 | 0 | 0 | 17 | 4 | 6 | 0 | 4 | 10 | 39 |
| Hourly Total | 5 | 48 | 0 | 13 | 53 | 69 | 9 | 0 | 1 | 78 | 15 | 36 | 0 | 14 | 51 | 182 |
| 12:00 PM | 1 | 11 | 0 | 1 | 12 | 11 | 0 | 0 | 0 | 11 | 1 | 9 | 1 | 2 | 11 | 34 |
| 12:15 PM | 6 | 16 | 0 | 0 | 22 | 12 | 3 | 0 | 0 | 15 | 6 | 11 | 0 | 3 | 17 | 54 |
| 12:30 PM | 4 | 11 | 0 | 0 | 15 | 16 | 1 | 0 | 1 | 17 | 6 | 14 | 0 | 0 | 20 | 52 |
| 12:45 PM | 2 | 4 | 0 | 2 | 6 | 5 | 0 | 0 | 1 | 5 | 4 | 11 | 0 | 5 | 15 | 26 |
| Hourly Total | 13 | 42 | 0 | 3 | 55 | 44 | 4 | 0 | 2 | 48 | 17 | 45 | 1 | 10 | 63 | 166 |
| 1:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 18 | 90 | 0 | 16 | 108 | 113 | 13 | 0 | 3 | 126 | 32 | 81 | 1 | 24 | 114 | 348 |
| Approach % | 16.7 | 83.3 | 0.0 | - | - | 89.7 | 10.3 | 0.0 | - | - | 28.1 | 71.1 | 0.9 | - | - | - |
| Total % | 5.2 | 25.9 | 0.0 | - | 31.0 | 32.5 | 3.7 | 0.0 | - | 36.2 | 9.2 | 23.3 | 0.3 | - | 32.8 | - |
| Lights | 17 | 90 | 0 | - | 107 | 113 | 13 | 0 | - | 126 | 31 | 80 | 1 | - | 112 | 345 |
| % Lights | 94.4 | 100.0 | - | - | 99.1 | 100.0 | 100.0 | - | - | 100.0 | 96.9 | 98.8 | 100.0 | - | 98.2 | 99.1 |
| Buses | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | - | 1 | 1 |
| % Buses | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 3.1 | 0.0 | 0.0 | - | 0.9 | 0.3 |
| Trucks | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | - | 1 | 2 |
| % Trucks | 5.6 | 0.0 | - | - | 0.9 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 1.2 | 0.0 | - | 0.9 | 0.6 |
| Bicycles on Crosswalk | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 6 | - | - |
| % Bicycles on Crosswalk | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | 25.0 | - | - |
| Pedestrians | - | - | - | 16 | - | - | - | - | 3 | - | - | - | - | 18 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 75.0 | - | - |

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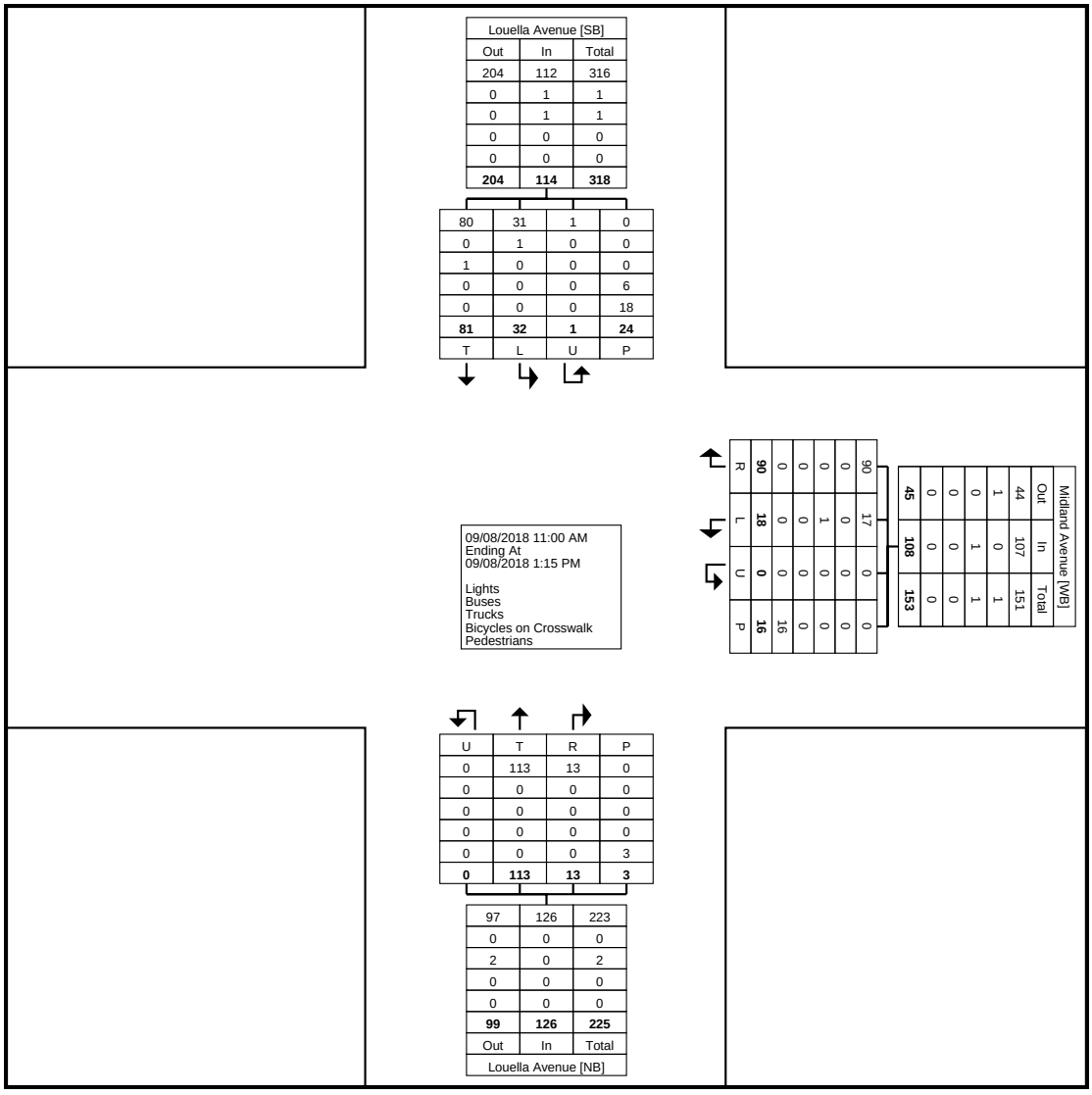
Radnor, PA
Midland Ave & Louella Ave
Saturday, September 8, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave-Sat
Site Code:
Start Date: 09/08/2018


Turning Movement Data Plot

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Radnor, PA
Midland Ave & Louella Ave
Saturday, September 8, 2018
Location: 40.042589, -75.385454

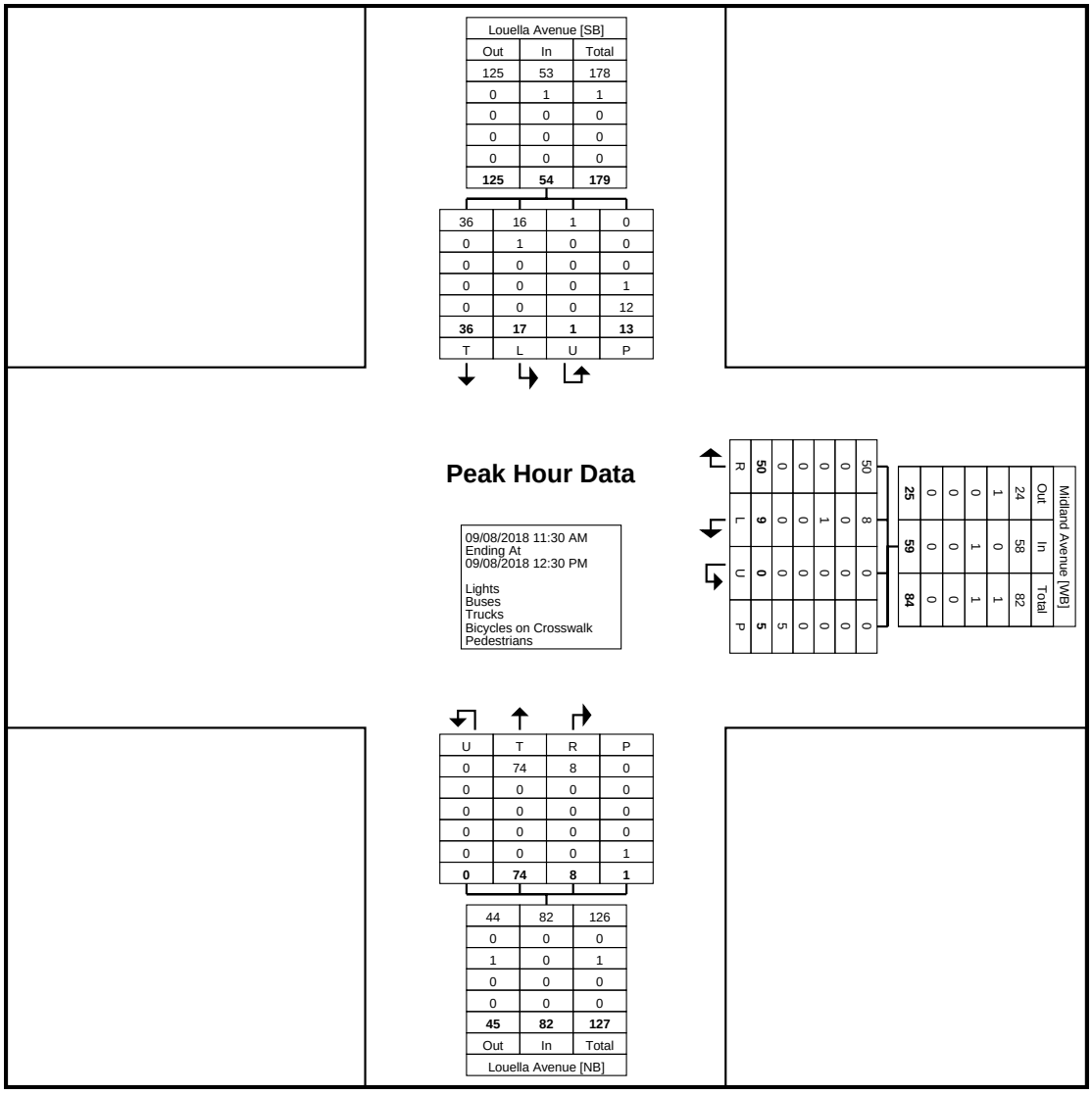
Count Name: Midland Ave/Louella Ave-Sat
Site Code:
Start Date: 09/08/2018


# Turning Movement Peak Hour Data (11:30 AM)

| Start Time | Midland Avenue Westbound | | | | | Louella Avenue Northbound | | | | | Louella Avenue Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | U-Turn | Peds | App. Total | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Int. Total |
| 11:30 AM | 0 | 13 | 0 | 1 | 13 | 35 | 4 | 0 | 1 | 39 | 6 | 10 | 0 | 4 | 16 | 68 |
| 11:45 AM | 2 | 10 | 0 | 3 | 12 | 16 | 1 | 0 | 0 | 17 | 4 | 6 | 0 | 4 | 10 | 39 |
| 12:00 PM | 1 | 11 | 0 | 1 | 12 | 11 | 0 | 0 | 0 | 11 | 1 | 9 | 1 | 2 | 11 | 34 |
| 12:15 PM | 6 | 16 | 0 | 0 | 22 | 12 | 3 | 0 | 0 | 15 | 6 | 11 | 0 | 3 | 17 | 54 |
| Total | 9 | 50 | 0 | 5 | 59 | 74 | 8 | 0 | 1 | 82 | 17 | 36 | 1 | 13 | 54 | 195 |
| Approach % | 15.3 | 84.7 | 0.0 | - | - | 90.2 | 9.8 | 0.0 | - | - | 31.5 | 66.7 | 1.9 | - | - | - |
| Total % | 4.6 | 25.6 | 0.0 | - | 30.3 | 37.9 | 4.1 | 0.0 | - | 42.1 | 8.7 | 18.5 | 0.5 | - | 27.7 | - |
| PHF | 0.375 | 0.781 | 0.000 | - | 0.670 | 0.529 | 0.500 | 0.000 | - | 0.526 | 0.708 | 0.818 | 0.250 | - | 0.794 | 0.717 |
| Lights | 8 | 50 | 0 | - | 58 | 74 | 8 | 0 | - | 82 | 16 | 36 | 1 | - | 53 | 193 |
| % Lights | 88.9 | 100.0 | - | - | 98.3 | 100.0 | 100.0 | - | - | 100.0 | 94.1 | 100.0 | 100.0 | - | 98.1 | 99.0 |
| Buses | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | - | 1 | 1 |
| % Buses | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 5.9 | 0.0 | 0.0 | - | 1.9 | 0.5 |
| Trucks | 1 | 0 | 0 | - | 1 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 1 |
| % Trucks | 11.1 | 0.0 | - | - | 1.7 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.5 |
| Bicycles on Crosswalk | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 1 | - | - |
| % Bicycles on Crosswalk | - | - | - | 0.0 | - | - | - | - | 0.0 | - | - | - | - | 7.7 | - | - |
| Pedestrians | - | - | - | 5 | - | - | - | - | 1 | - | - | - | - | 12 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 92.3 | - | - |

Radnor, PA
Midland Ave & Louella Ave
Saturday, September 8, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave-Sat
Site Code:
Start Date: 09/08/2018


Turning Movement Peak Hour Data Plot (11:30 AM)

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Radnor, PA
Midland Ave & Louella Ave
Sunday, September 8, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Data

| Start Time | Midland Avenue Westbound | | | | | Louella Avenue Northbound | | | | | Louella Avenue Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | U-Turn | Peds | App. Total | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Int. Total |
| 9:00 AM | 1 | 6 | 0 | 0 | 7 | 3 | 0 | 0 | 0 | 3 | 2 | 5 | 0 | 1 | 7 | 17 |
| 9:15 AM | 1 | 2 | 0 | 1 | 3 | 6 | 7 | 0 | 0 | 13 | 1 | 5 | 0 | 0 | 6 | 22 |
| 9:30 AM | 1 | 2 | 0 | 0 | 3 | 6 | 4 | 0 | 0 | 10 | 2 | 8 | 1 | 0 | 11 | 24 |
| 9:45 AM | 0 | 1 | 0 | 3 | 1 | 11 | 0 | 0 | 0 | 11 | 2 | 7 | 0 | 4 | 9 | 21 |
| Hourly Total | 3 | 11 | 0 | 4 | 14 | 26 | 11 | 0 | 0 | 37 | 7 | 25 | 1 | 5 | 33 | 84 |
| 10:00 AM | 1 | 5 | 0 | 1 | 6 | 4 | 2 | 0 | 0 | 6 | 0 | 7 | 0 | 0 | 7 | 19 |
| 10:15 AM | 1 | 18 | 0 | 0 | 19 | 1 | 0 | 0 | 0 | 1 | 2 | 5 | 0 | 0 | 7 | 27 |
| 10:30 AM | 2 | 12 | 0 | 0 | 14 | 4 | 1 | 0 | 0 | 5 | 6 | 10 | 0 | 1 | 16 | 35 |
| 10:45 AM | 0 | 5 | 0 | 0 | 5 | 3 | 0 | 0 | 0 | 3 | 1 | 3 | 0 | 0 | 4 | 12 |
| Hourly Total | 4 | 40 | 0 | 1 | 44 | 12 | 3 | 0 | 0 | 15 | 9 | 25 | 0 | 1 | 34 | 93 |
| 11:00 AM | 1 | 3 | 0 | 1 | 4 | 6 | 0 | 0 | 0 | 6 | 0 | 4 | 0 | 0 | 4 | 14 |
| 11:15 AM | 0 | 8 | 0 | 0 | 8 | 6 | 2 | 0 | 0 | 8 | 4 | 13 | 0 | 0 | 17 | 33 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 8 | 62 | 0 | 6 | 70 | 50 | 16 | 0 | 0 | 66 | 20 | 67 | 1 | 6 | 88 | 224 |
| Approach % | 11.4 | 88.6 | 0.0 | - | - | 75.8 | 24.2 | 0.0 | - | - | 22.7 | 76.1 | 1.1 | - | - | - |
| Total % | 3.6 | 27.7 | 0.0 | - | 31.3 | 22.3 | 7.1 | 0.0 | - | 29.5 | 8.9 | 29.9 | 0.4 | - | 39.3 | - |
| Lights | 8 | 62 | 0 | - | 70 | 50 | 16 | 0 | - | 66 | 20 | 67 | 1 | - | 88 | 224 |
| % Lights | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 100.0 | 100.0 | - | 100.0 | 100.0 |
| Buses | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Trucks | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Bicycles on Crosswalk | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | 0.0 | - | - | - | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | 6 | - | - | - | - | 0 | - | - | - | - | 6 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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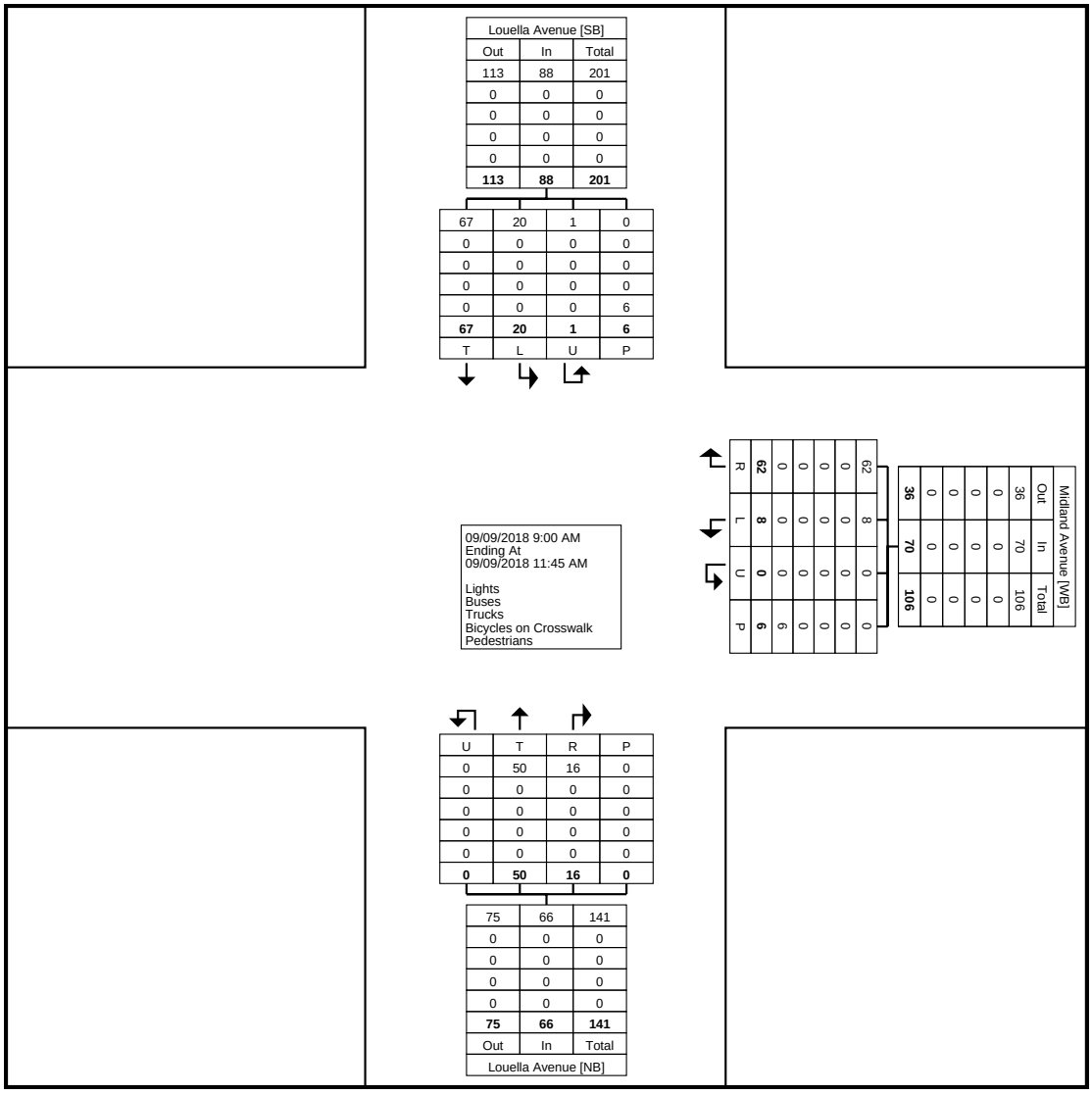
Midland Ave & Louella Ave
Sunday, September 8, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave-Sun
Site Code:
Start Date: 09/09/2018


Turning Movement Data Plot

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Radnor, PA
Midland Ave & Louella Ave
Sunday, September 8, 2018
Location: 40.042589, -75.385454

Count Name: Midland Ave/Louella Ave-Sun
Site Code:
Start Date: 09/09/2018


# Turning Movement Peak Hour Data (9:45 AM)

| Start Time | Midland Avenue Westbound | | | | | Louella Avenue Northbound | | | | | Louella Avenue Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | U-Turn | Peds | App. Total | Thru | Right | U-Turn | Peds | App. Total | Left | Thru | U-Turn | Peds | App. Total | Int. Total |
| 9:45 AM | 0 | 1 | 0 | 3 | 1 | 11 | 0 | 0 | 0 | 11 | 2 | 7 | 0 | 4 | 9 | 21 |
| 10:00 AM | 1 | 5 | 0 | 1 | 6 | 4 | 2 | 0 | 0 | 6 | 0 | 7 | 0 | 0 | 7 | 19 |
| 10:15 AM | 1 | 18 | 0 | 0 | 19 | 1 | 0 | 0 | 0 | 1 | 2 | 5 | 0 | 0 | 7 | 27 |
| 10:30 AM | 2 | 12 | 0 | 0 | 14 | 4 | 1 | 0 | 0 | 5 | 6 | 10 | 0 | 1 | 16 | 35 |
| Total | 4 | 36 | 0 | 4 | 40 | 20 | 3 | 0 | 0 | 23 | 10 | 29 | 0 | 5 | 39 | 102 |
| Approach % | 10.0 | 90.0 | 0.0 | - | - | 87.0 | 13.0 | 0.0 | - | - | 25.6 | 74.4 | 0.0 | - | - | - |
| Total % | 3.9 | 35.3 | 0.0 | - | 39.2 | 19.6 | 2.9 | 0.0 | - | 22.5 | 9.8 | 28.4 | 0.0 | - | 38.2 | - |
| PHF | 0.500 | 0.500 | 0.000 | - | 0.526 | 0.455 | 0.375 | 0.000 | - | 0.523 | 0.417 | 0.725 | 0.000 | - | 0.609 | 0.729 |
| Lights | 4 | 36 | 0 | - | 40 | 20 | 3 | 0 | - | 23 | 10 | 29 | 0 | - | 39 | 102 |
| % Lights | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 | 100.0 | - | - | 100.0 | 100.0 |
| Buses | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Buses | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Trucks | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Trucks | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Bicycles on Crosswalk | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 0 | - | - |
| % Bicycles on Crosswalk | - | - | - | 0.0 | - | - | - | - | - | - | - | - | - | 0.0 | - | - |
| Pedestrians | - | - | - | 4 | - | - | - | - | 0 | - | - | - | - | 5 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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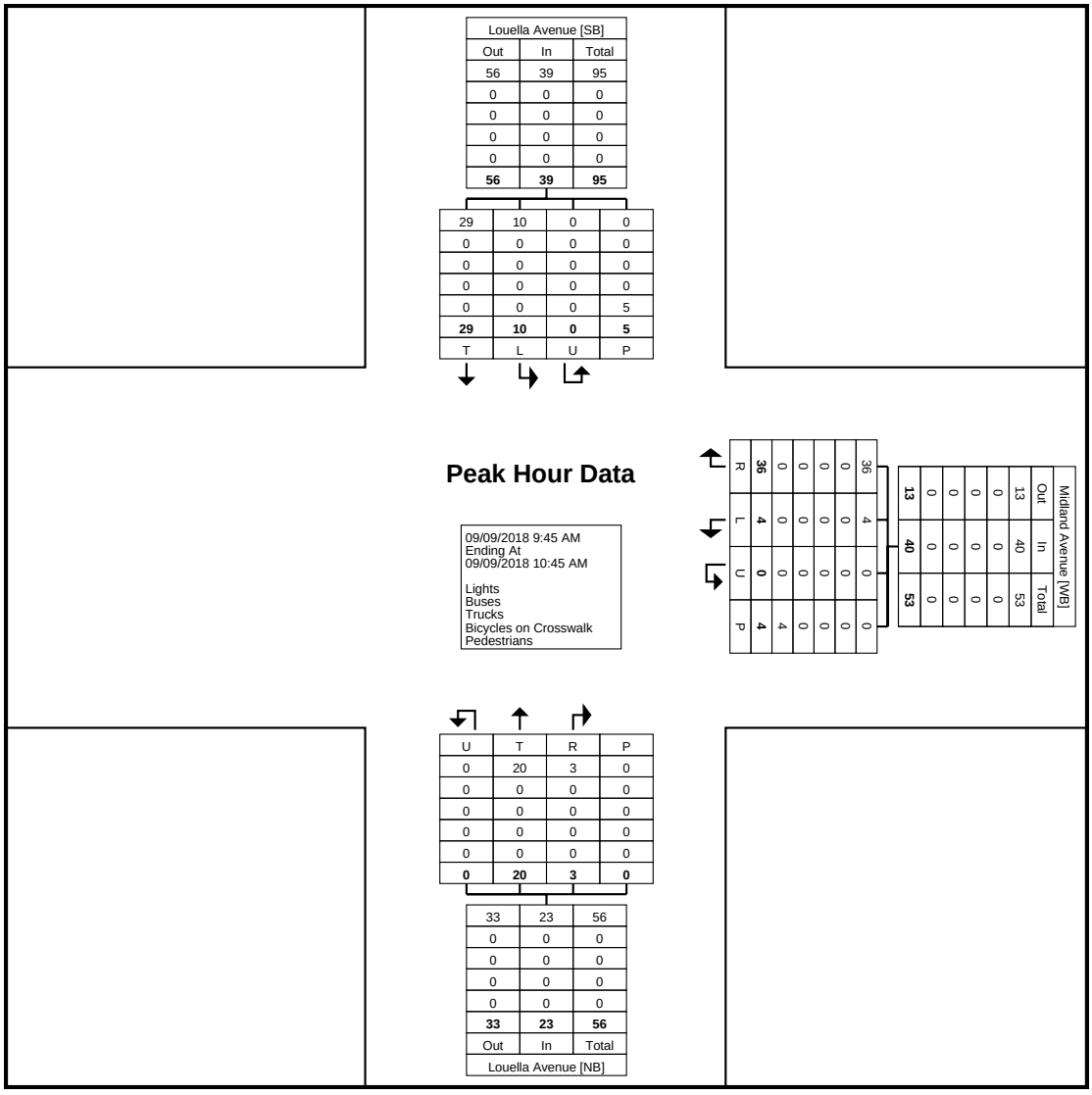


Turning Movement Peak Hour Data Plot (9:45 AM)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Aberdeen Ave & Lancaster Ave
Site Code:
Start Date: 12/13/2018


# Turning Movement Data

| Start Time | Lancaster Ave Eastbound | | | | | | Lancaster Ave Westbound | | | | | | Aberdeen Ave Northbound | | | | | | Aberdeen Ave Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | |
| 11:00 | 11 | 179 | 5 | 0 | 2 | 195 | 3 | 191 | 14 | 0 | 1 | 208 | 14 | 10 | 10 | 0 | 2 | 34 | 20 | 21 | 20 | 0 | 3 | 61 | 498 |
| 11:15 | 10 | 175 | 9 | 0 | 0 | 194 | 2 | 200 | 12 | 0 | 0 | 214 | 15 | 15 | 9 | 0 | 0 | 39 | 23 | 13 | 21 | 1 | 0 | 58 | 505 |
| 11:30 | 8 | 163 | 10 | 0 | 4 | 181 | 4 | 205 | 16 | 0 | 0 | 225 | 6 | 17 | 11 | 0 | 4 | 34 | 27 | 10 | 20 | 0 | 0 | 57 | 497 |
| 11:45 | 12 | 148 | 10 | 0 | 1 | 170 | 4 | 208 | 23 | 0 | 0 | 235 | 10 | 16 | 8 | 0 | 2 | 34 | 35 | 18 | 24 | 0 | 0 | 77 | 516 |
| Hourly Total | 41 | 665 | 34 | 0 | 7 | 740 | 13 | 804 | 65 | 0 | 1 | 882 | 45 | 58 | 38 | 0 | 8 | 141 | 105 | 62 | 85 | 1 | 3 | 253 | 2016 |
| 12:00 | 8 | 208 | 8 | 0 | 0 | 224 | 5 | 192 | 21 | 0 | 0 | 218 | 10 | 15 | 6 | 0 | 0 | 31 | 28 | 20 | 13 | 2 | 0 | 63 | 536 |
| 12:15 | 12 | 162 | 6 | 0 | 3 | 180 | 8 | 170 | 15 | 0 | 0 | 193 | 4 | 10 | 5 | 0 | 0 | 19 | 32 | 11 | 14 | 0 | 0 | 57 | 449 |
| 12:30 | 9 | 194 | 7 | 0 | 2 | 210 | 7 | 173 | 14 | 0 | 0 | 194 | 4 | 16 | 4 | 0 | 0 | 24 | 29 | 14 | 11 | 0 | 2 | 54 | 482 |
| 12:45 | 13 | 185 | 11 | 0 | 0 | 209 | 7 | 209 | 14 | 0 | 0 | 230 | 8 | 13 | 11 | 0 | 2 | 32 | 35 | 7 | 20 | 0 | 3 | 62 | 533 |
| Hourly Total | 42 | 749 | 32 | 0 | 5 | 823 | 27 | 744 | 64 | 0 | 0 | 835 | 26 | 54 | 26 | 0 | 2 | 106 | 124 | 52 | 58 | 2 | 5 | 236 | 2000 |
| Grand Total | 83 | 1414 | 66 | 0 | 12 | 1563 | 40 | 1548 | 129 | 0 | 1 | 1717 | 71 | 112 | 64 | 0 | 10 | 247 | 229 | 114 | 143 | 3 | 8 | 489 | 4016 |
| Approach % | 5.3 | 90.5 | 4.2 | 0.0 | - | - | 2.3 | 90.2 | 7.5 | 0.0 | - | - | 28.7 | 45.3 | 25.9 | 0.0 | - | - | 46.8 | 23.3 | 29.2 | 0.6 | - | - | - |
| Total % | 2.1 | 35.2 | 1.6 | 0.0 | - | 38.9 | 1.0 | 38.5 | 3.2 | 0.0 | - | 42.8 | 1.8 | 2.8 | 1.6 | 0.0 | - | 6.2 | 5.7 | 2.8 | 3.6 | 0.1 | - | 12.2 | - |
| Lights | 81 | 1355 | 66 | 0 | - | 1502 | 40 | 1494 | 127 | 0 | - | 1661 | 70 | 110 | 63 | 0 | - | 243 | 223 | 109 | 139 | 3 | - | 474 | 3880 |
| % Lights | 97.6 | 95.8 | 100.0 | - | - | 96.1 | 100.0 | 96.5 | 98.4 | - | - | 96.7 | 98.6 | 98.2 | 98.4 | - | - | 98.4 | 97.4 | 95.6 | 97.2 | 100.0 | - | 96.9 | 96.6 |
| Other Vehicles | 2 | 59 | 0 | 0 | - | 61 | 0 | 54 | 2 | 0 | - | 56 | 1 | 2 | 1 | 0 | - | 4 | 6 | 5 | 4 | 0 | - | 15 | 136 |
| % Other Vehicles | 2.4 | 4.2 | 0.0 | - | - | 3.9 | 0.0 | 3.5 | 1.6 | - | - | 3.3 | 1.4 | 1.8 | 1.6 | - | - | 1.6 | 2.6 | 4.4 | 2.8 | 0.0 | - | 3.1 | 3.4 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 12 | - | - | - | - | - | 1 | - | - | - | - | - | 10 | - | - | - | - | - | 8 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
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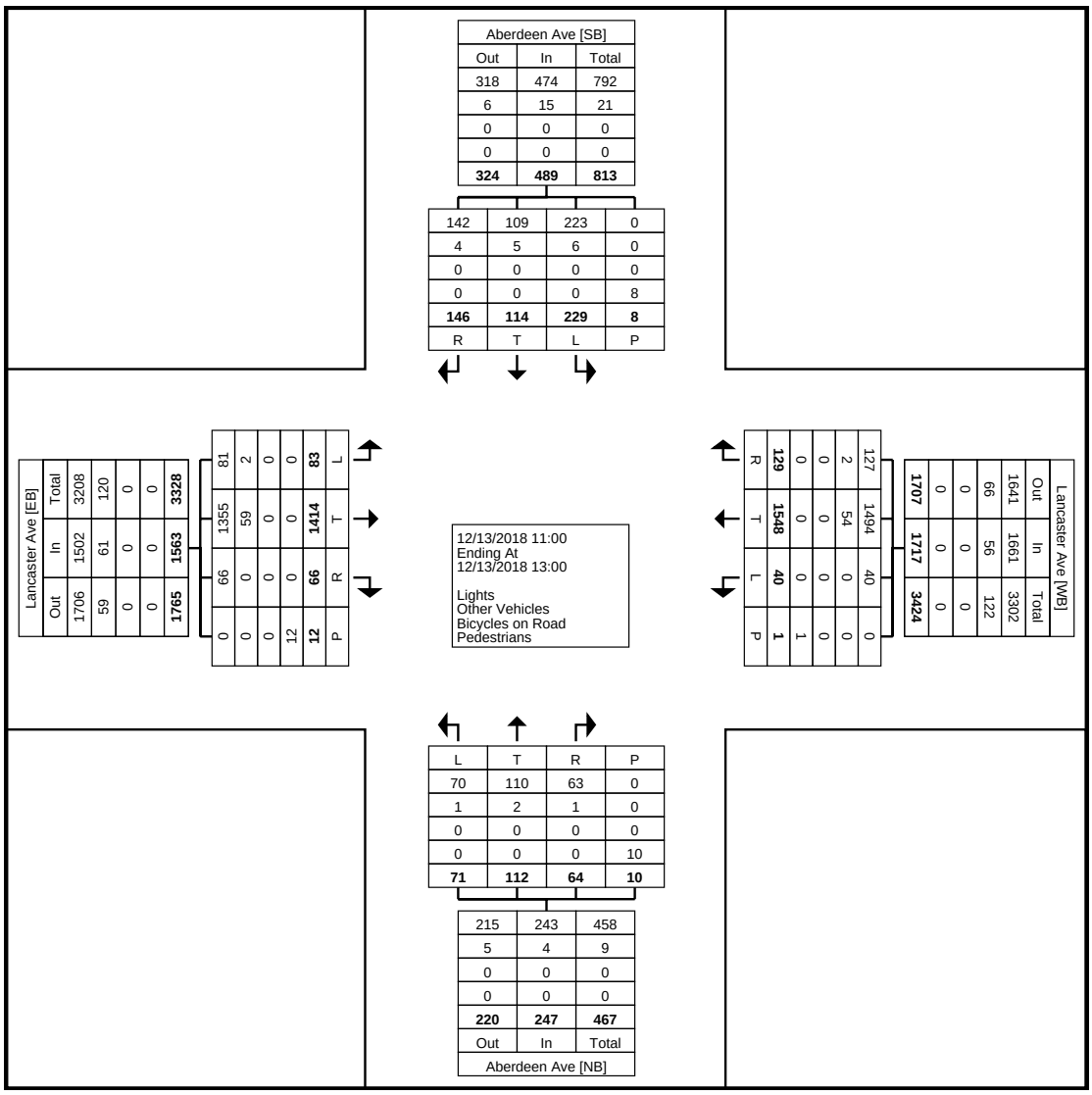
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Aberdeen Ave & Lancaster Ave
Site Code:
Start Date: 12/13/2018


Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Aberdeen Ave & Lancaster Ave
Site Code:
Start Date: 12/13/2018

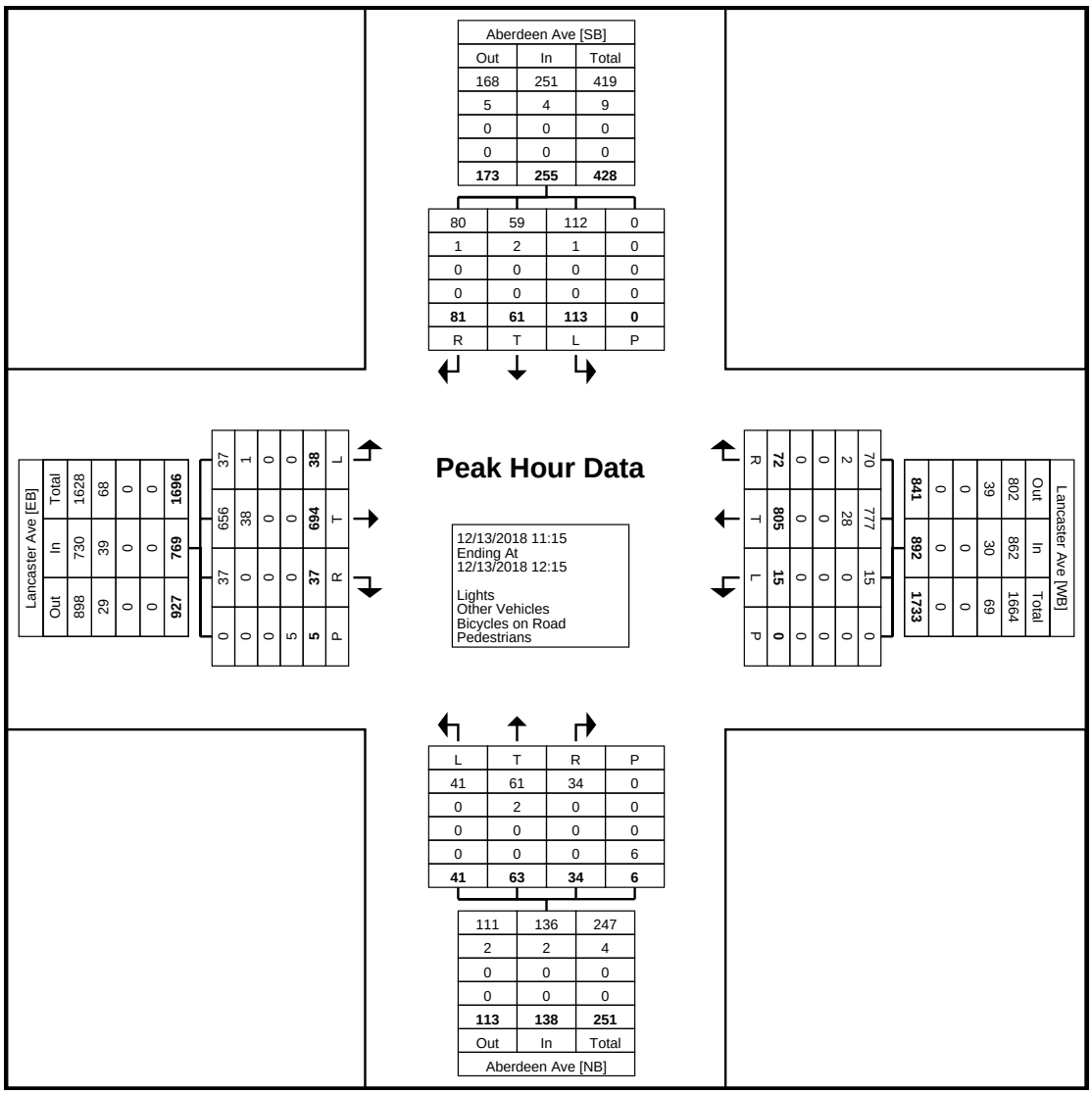

# Turning Movement Peak Hour Data (11:15)

| Start Time | Lancaster Ave Eastbound | | | | | | Lancaster Ave Westbound | | | | | | Aberdeen Ave Northbound | | | | | | Aberdeen Ave Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | |
| 11:15 | 10 | 175 | 9 | 0 | 0 | 194 | 2 | 200 | 12 | 0 | 0 | 214 | 15 | 15 | 9 | 0 | 0 | 39 | 23 | 13 | 21 | 1 | 0 | 58 | 505 |
| 11:30 | 8 | 163 | 10 | 0 | 4 | 181 | 4 | 205 | 16 | 0 | 0 | 225 | 6 | 17 | 11 | 0 | 4 | 34 | 27 | 10 | 20 | 0 | 0 | 57 | 497 |
| 11:45 | 12 | 148 | 10 | 0 | 1 | 170 | 4 | 208 | 23 | 0 | 0 | 235 | 10 | 16 | 8 | 0 | 2 | 34 | 35 | 18 | 24 | 0 | 0 | 77 | 516 |
| 12:00 | 8 | 208 | 8 | 0 | 0 | 224 | 5 | 192 | 21 | 0 | 0 | 218 | 10 | 15 | 6 | 0 | 0 | 31 | 28 | 20 | 13 | 2 | 0 | 63 | 536 |
| Total | 38 | 694 | 37 | 0 | 5 | 769 | 15 | 805 | 72 | 0 | 0 | 892 | 41 | 63 | 34 | 0 | 6 | 138 | 113 | 61 | 78 | 3 | 0 | 255 | 2054 |
| Approach % | 4.9 | 90.2 | 4.8 | 0.0 | - | - | 1.7 | 90.2 | 8.1 | 0.0 | - | - | 29.7 | 45.7 | 24.6 | 0.0 | - | - | 44.3 | 23.9 | 30.6 | 1.2 | - | - | - |
| Total % | 1.9 | 33.8 | 1.8 | 0.0 | - | 37.4 | 0.7 | 39.2 | 3.5 | 0.0 | - | 43.4 | 2.0 | 3.1 | 1.7 | 0.0 | - | 6.7 | 5.5 | 3.0 | 3.8 | 0.1 | - | 12.4 | - |
| PHF | 0.792 | 0.834 | 0.925 | 0.000 | - | 0.858 | 0.750 | 0.968 | 0.783 | 0.000 | - | 0.949 | 0.683 | 0.926 | 0.773 | 0.000 | - | 0.885 | 0.807 | 0.763 | 0.813 | 0.375 | - | 0.828 | 0.958 |
| Lights | 37 | 656 | 37 | 0 | - | 730 | 15 | 777 | 70 | 0 | - | 862 | 41 | 61 | 34 | 0 | - | 136 | 112 | 59 | 77 | 3 | - | 251 | 1979 |
| % Lights | 97.4 | 94.5 | 100.0 | - | - | 94.9 | 100.0 | 96.5 | 97.2 | - | - | 96.6 | 100.0 | 96.8 | 100.0 | - | - | 98.6 | 99.1 | 96.7 | 98.7 | 100.0 | - | 98.4 | 96.3 |
| Other Vehicles | 1 | 38 | 0 | 0 | - | 39 | 0 | 28 | 2 | 0 | - | 30 | 0 | 2 | 0 | 0 | - | 2 | 1 | 2 | 1 | 0 | - | 4 | 75 |
| % Other Vehicles | 2.6 | 5.5 | 0.0 | - | - | 5.1 | 0.0 | 3.5 | 2.8 | - | - | 3.4 | 0.0 | 3.2 | 0.0 | - | - | 1.4 | 0.9 | 3.3 | 1.3 | 0.0 | - | 1.6 | 3.7 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 5 | - | - | - | - | - | 0 | - | - | - | - | - | 6 | - | - | - | - | - | 0 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Aberdeen Ave & Lancaster Ave
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (11:15)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 2B Driveway
Site Code:
Start Date: 12/13/2018

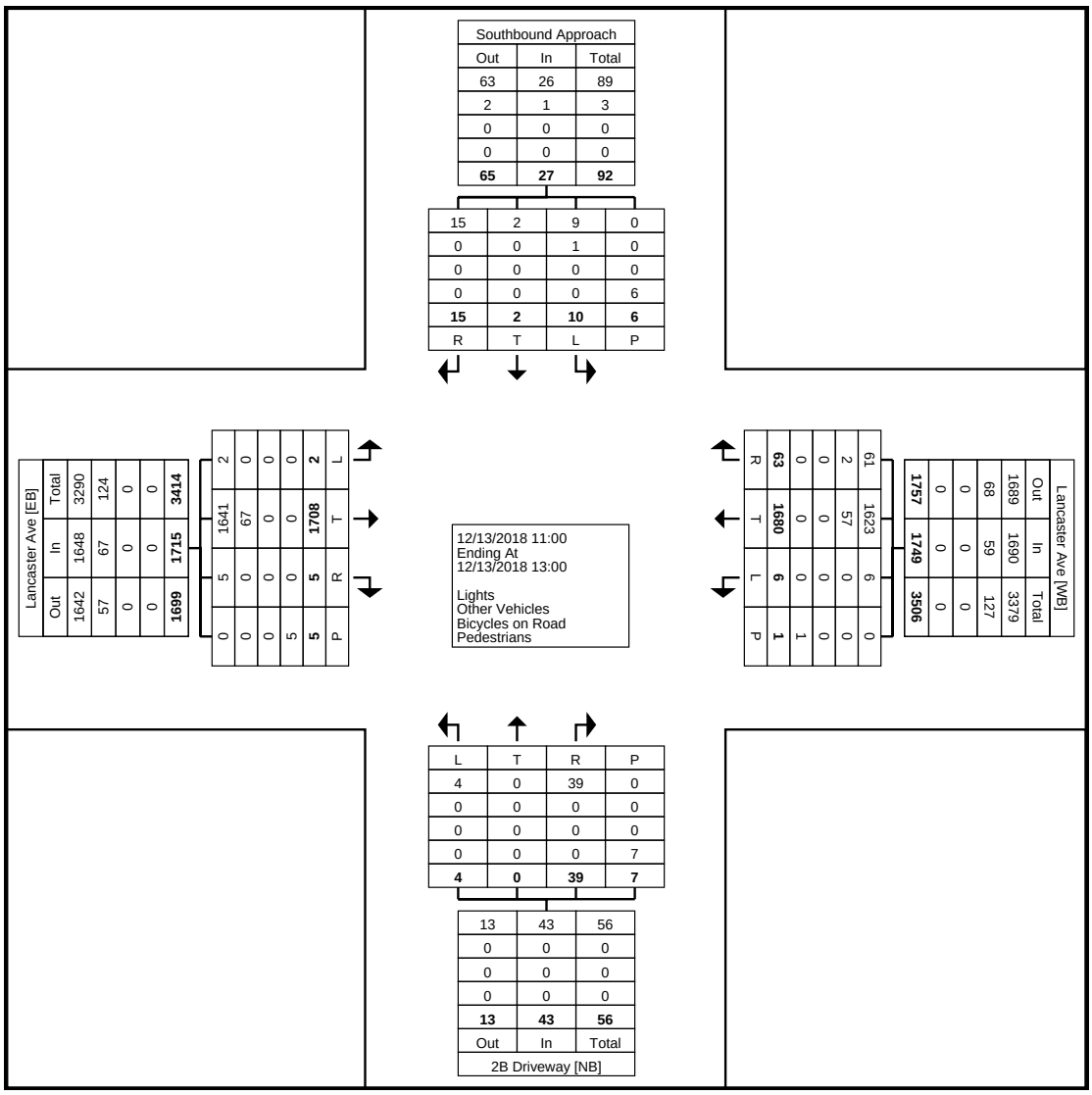

# Turning Movement Data

| Start Time | Lancaster Ave Eastbound | | | | | Lancaster Ave Westbound | | | | | 2B Driveway Northbound | | | | | Southbound Approach Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 11:00 | 1 | 205 | 3 | 2 | 209 | 1 | 198 | 13 | 0 | 212 | 1 | 0 | 4 | 0 | 5 | 1 | 0 | 2 | 1 | 3 | 429 |
| 11:15 | 0 | 201 | 0 | 0 | 201 | 1 | 210 | 8 | 0 | 219 | 0 | 0 | 4 | 0 | 4 | 2 | 2 | 3 | 0 | 7 | 431 |
| 11:30 | 0 | 200 | 0 | 0 | 200 | 0 | 218 | 9 | 0 | 227 | 1 | 0 | 6 | 3 | 7 | 0 | 0 | 2 | 0 | 2 | 436 |
| 11:45 | 0 | 181 | 0 | 1 | 181 | 1 | 237 | 7 | 0 | 245 | 1 | 0 | 5 | 2 | 6 | 0 | 0 | 2 | 0 | 2 | 434 |
| Hourly Total | 1 | 787 | 3 | 3 | 791 | 3 | 863 | 37 | 0 | 903 | 3 | 0 | 19 | 5 | 22 | 3 | 2 | 9 | 1 | 14 | 1730 |
| 12:00 | 0 | 228 | 0 | 0 | 228 | 1 | 196 | 9 | 0 | 206 | 0 | 0 | 3 | 0 | 3 | 5 | 0 | 2 | 0 | 7 | 444 |
| 12:15 | 0 | 225 | 2 | 2 | 227 | 1 | 208 | 5 | 0 | 214 | 0 | 0 | 9 | 0 | 9 | 1 | 0 | 1 | 0 | 2 | 452 |
| 12:30 | 1 | 231 | 0 | 0 | 232 | 1 | 192 | 6 | 1 | 199 | 0 | 0 | 5 | 0 | 5 | 1 | 0 | 2 | 2 | 3 | 439 |
| 12:45 | 0 | 237 | 0 | 0 | 237 | 0 | 221 | 6 | 0 | 227 | 1 | 0 | 3 | 2 | 4 | 0 | 0 | 1 | 3 | 1 | 469 |
| Hourly Total | 1 | 921 | 2 | 2 | 924 | 3 | 817 | 26 | 1 | 846 | 1 | 0 | 20 | 2 | 21 | 7 | 0 | 6 | 5 | 13 | 1804 |
| Grand Total | 2 | 1708 | 5 | 5 | 1715 | 6 | 1680 | 63 | 1 | 1749 | 4 | 0 | 39 | 7 | 43 | 10 | 2 | 15 | 6 | 27 | 3534 |
| Approach % | 0.1 | 99.6 | 0.3 | - | - | 0.3 | 96.1 | 3.6 | - | - | 9.3 | 0.0 | 90.7 | - | - | 37.0 | 7.4 | 55.6 | - | - | - |
| Total % | 0.1 | 48.3 | 0.1 | - | 48.5 | 0.2 | 47.5 | 1.8 | - | 49.5 | 0.1 | 0.0 | 1.1 | - | 1.2 | 0.3 | 0.1 | 0.4 | - | 0.8 | - |
| Lights | 2 | 1641 | 5 | - | 1648 | 6 | 1623 | 61 | - | 1690 | 4 | 0 | 39 | - | 43 | 9 | 2 | 15 | - | 26 | 3407 |
| % Lights | 100.0 | 96.1 | 100.0 | - | 96.1 | 100.0 | 96.6 | 96.8 | - | 96.6 | 100.0 | - | 100.0 | - | 100.0 | 90.0 | 100.0 | 100.0 | - | 96.3 | 96.4 |
| Other Vehicles | 0 | 67 | 0 | - | 67 | 0 | 57 | 2 | - | 59 | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | - | 1 | 127 |
| % Other Vehicles | 0.0 | 3.9 | 0.0 | - | 3.9 | 0.0 | 3.4 | 3.2 | - | 3.4 | 0.0 | - | 0.0 | - | 0.0 | 10.0 | 0.0 | 0.0 | - | 3.7 | 3.6 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 5 | - | - | - | - | 1 | - | - | - | - | 7 | - | - | - | - | 6 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 2B Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 2B Driveway
Site Code:
Start Date: 12/13/2018

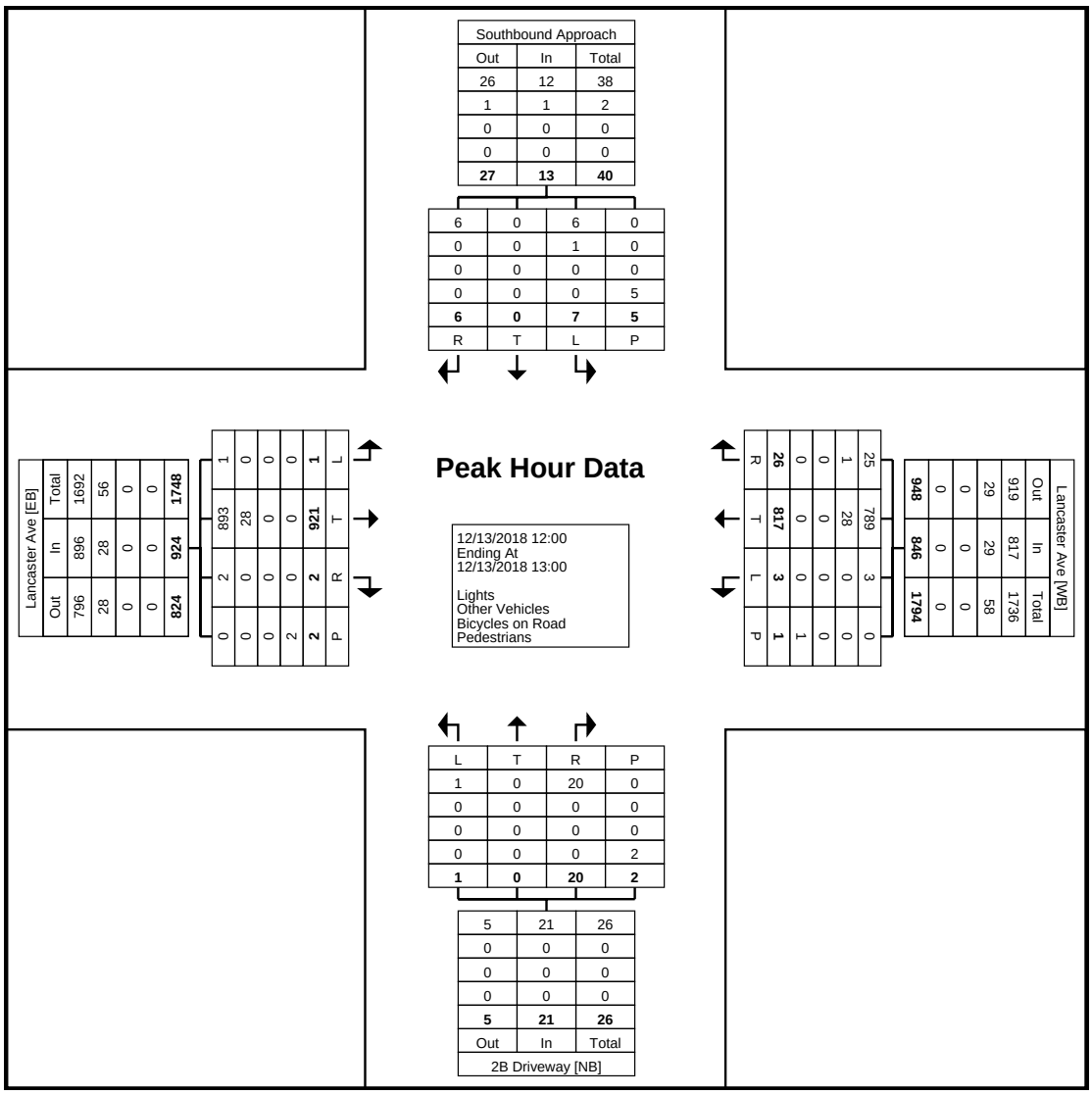

# Turning Movement Peak Hour Data (12:00)

| Start Time | Lancaster Ave Eastbound | | | | | Lancaster Ave Westbound | | | | | 2B Driveway Northbound | | | | | Southbound Approach Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 12:00 | 0 | 228 | 0 | 0 | 228 | 1 | 196 | 9 | 0 | 206 | 0 | 0 | 3 | 0 | 3 | 5 | 0 | 2 | 0 | 7 | 444 |
| 12:15 | 0 | 225 | 2 | 2 | 227 | 1 | 208 | 5 | 0 | 214 | 0 | 0 | 9 | 0 | 9 | 1 | 0 | 1 | 0 | 2 | 452 |
| 12:30 | 1 | 231 | 0 | 0 | 232 | 1 | 192 | 6 | 1 | 199 | 0 | 0 | 5 | 0 | 5 | 1 | 0 | 2 | 2 | 3 | 439 |
| 12:45 | 0 | 237 | 0 | 0 | 237 | 0 | 221 | 6 | 0 | 227 | 1 | 0 | 3 | 2 | 4 | 0 | 0 | 1 | 3 | 1 | 469 |
| Total | 1 | 921 | 2 | 2 | 924 | 3 | 817 | 26 | 1 | 846 | 1 | 0 | 20 | 2 | 21 | 7 | 0 | 6 | 5 | 13 | 1804 |
| Approach % | 0.1 | 99.7 | 0.2 | - | - | 0.4 | 96.6 | 3.1 | - | - | 4.8 | 0.0 | 95.2 | - | - | 53.8 | 0.0 | 46.2 | - | - | - |
| Total % | 0.1 | 51.1 | 0.1 | - | 51.2 | 0.2 | 45.3 | 1.4 | - | 46.9 | 0.1 | 0.0 | 1.1 | - | 1.2 | 0.4 | 0.0 | 0.3 | - | 0.7 | - |
| PHF | 0.250 | 0.972 | 0.250 | - | 0.975 | 0.750 | 0.924 | 0.722 | - | 0.932 | 0.250 | 0.000 | 0.556 | - | 0.583 | 0.350 | 0.000 | 0.750 | - | 0.464 | 0.962 |
| Lights | 1 | 893 | 2 | - | 896 | 3 | 789 | 25 | - | 817 | 1 | 0 | 20 | - | 21 | 6 | 0 | 6 | - | 12 | 1746 |
| % Lights | 100.0 | 97.0 | 100.0 | - | 97.0 | 100.0 | 96.6 | 96.2 | - | 96.6 | 100.0 | - | 100.0 | - | 100.0 | 85.7 | - | 100.0 | - | 92.3 | 96.8 |
| Other Vehicles | 0 | 28 | 0 | - | 28 | 0 | 28 | 1 | - | 29 | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | - | 1 | 58 |
| % Other Vehicles | 0.0 | 3.0 | 0.0 | - | 3.0 | 0.0 | 3.4 | 3.8 | - | 3.4 | 0.0 | - | 0.0 | - | 0.0 | 14.3 | - | 0.0 | - | 7.7 | 3.2 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 2 | - | - | - | - | 1 | - | - | - | - | 2 | - | - | - | - | 5 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 2B Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (12:00)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 3A Driveway
Site Code:
Start Date: 12/13/2018

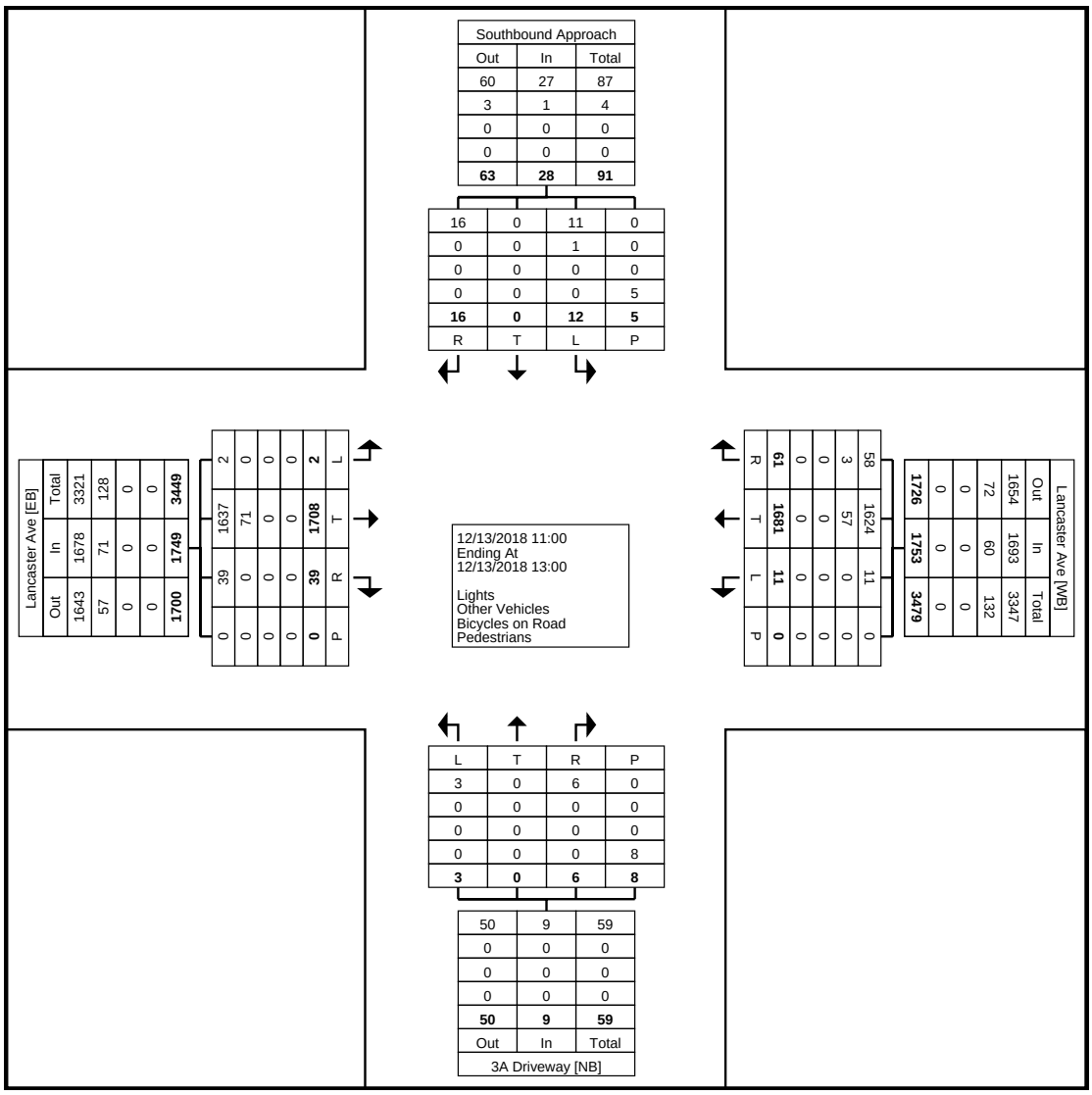

# Turning Movement Data

| Start Time | Lancaster Ave Eastbound | | | | | Lancaster Ave Westbound | | | | | 3A Driveway Northbound | | | | | Southbound Approach Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 11:00 | 1 | 203 | 5 | 0 | 209 | 2 | 199 | 13 | 0 | 214 | 1 | 0 | 0 | 0 | 1 | 2 | 0 | 2 | 1 | 4 | 428 |
| 11:15 | 0 | 196 | 4 | 0 | 200 | 1 | 210 | 7 | 0 | 218 | 1 | 0 | 1 | 0 | 2 | 2 | 0 | 3 | 0 | 5 | 425 |
| 11:30 | 0 | 200 | 6 | 0 | 206 | 1 | 218 | 8 | 0 | 227 | 0 | 0 | 2 | 4 | 2 | 0 | 0 | 2 | 0 | 2 | 437 |
| 11:45 | 0 | 184 | 6 | 0 | 190 | 1 | 237 | 7 | 0 | 245 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 3 | 438 |
| Hourly Total | 1 | 783 | 21 | 0 | 805 | 5 | 864 | 35 | 0 | 904 | 2 | 0 | 3 | 6 | 5 | 4 | 0 | 10 | 1 | 14 | 1728 |
| 12:00 | 0 | 229 | 3 | 0 | 232 | 1 | 200 | 9 | 0 | 210 | 0 | 0 | 1 | 0 | 1 | 5 | 0 | 2 | 0 | 7 | 450 |
| 12:15 | 0 | 226 | 7 | 0 | 233 | 1 | 208 | 5 | 0 | 214 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 3 | 451 |
| 12:30 | 1 | 237 | 1 | 0 | 239 | 4 | 187 | 6 | 0 | 197 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 3 | 439 |
| 12:45 | 0 | 233 | 7 | 0 | 240 | 0 | 222 | 6 | 0 | 228 | 1 | 0 | 1 | 2 | 2 | 0 | 0 | 1 | 2 | 1 | 471 |
| Hourly Total | 1 | 925 | 18 | 0 | 944 | 6 | 817 | 26 | 0 | 849 | 1 | 0 | 3 | 2 | 4 | 8 | 0 | 6 | 4 | 14 | 1811 |
| Grand Total | 2 | 1708 | 39 | 0 | 1749 | 11 | 1681 | 61 | 0 | 1753 | 3 | 0 | 6 | 8 | 9 | 12 | 0 | 16 | 5 | 28 | 3539 |
| Approach % | 0.1 | 97.7 | 2.2 | - | - | 0.6 | 95.9 | 3.5 | - | - | 33.3 | 0.0 | 66.7 | - | - | 42.9 | 0.0 | 57.1 | - | - | - |
| Total % | 0.1 | 48.3 | 1.1 | - | 49.4 | 0.3 | 47.5 | 1.7 | - | 49.5 | 0.1 | 0.0 | 0.2 | - | 0.3 | 0.3 | 0.0 | 0.5 | - | 0.8 | - |
| Lights | 2 | 1637 | 39 | - | 1678 | 11 | 1624 | 58 | - | 1693 | 3 | 0 | 6 | - | 9 | 11 | 0 | 16 | - | 27 | 3407 |
| % Lights | 100.0 | 95.8 | 100.0 | - | 95.9 | 100.0 | 96.6 | 95.1 | - | 96.6 | 100.0 | - | 100.0 | - | 100.0 | 91.7 | - | 100.0 | - | 96.4 | 96.3 |
| Other Vehicles | 0 | 71 | 0 | - | 71 | 0 | 57 | 3 | - | 60 | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | - | 1 | 132 |
| % Other Vehicles | 0.0 | 4.2 | 0.0 | - | 4.1 | 0.0 | 3.4 | 4.9 | - | 3.4 | 0.0 | - | 0.0 | - | 0.0 | 8.3 | - | 0.0 | - | 3.6 | 3.7 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 8 | - | - | - | - | 5 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 3A Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 3A Driveway
Site Code:
Start Date: 12/13/2018


# Turning Movement Peak Hour Data (12:00)

| Start Time | Lancaster Ave Eastbound | | | | | Lancaster Ave Westbound | | | | | 3A Driveway Northbound | | | | | Southbound Approach Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 12:00 | 0 | 229 | 3 | 0 | 232 | 1 | 200 | 9 | 0 | 210 | 0 | 0 | 1 | 0 | 1 | 5 | 0 | 2 | 0 | 7 | 450 |
| 12:15 | 0 | 226 | 7 | 0 | 233 | 1 | 208 | 5 | 0 | 214 | 0 | 0 | 1 | 0 | 1 | 2 | 0 | 1 | 0 | 3 | 451 |
| 12:30 | 1 | 237 | 1 | 0 | 239 | 4 | 187 | 6 | 0 | 197 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 3 | 439 |
| 12:45 | 0 | 233 | 7 | 0 | 240 | 0 | 222 | 6 | 0 | 228 | 1 | 0 | 1 | 2 | 2 | 0 | 0 | 1 | 2 | 1 | 471 |
| Total | 1 | 925 | 18 | 0 | 944 | 6 | 817 | 26 | 0 | 849 | 1 | 0 | 3 | 2 | 4 | 8 | 0 | 6 | 4 | 14 | 1811 |
| Approach % | 0.1 | 98.0 | 1.9 | - | - | 0.7 | 96.2 | 3.1 | - | - | 25.0 | 0.0 | 75.0 | - | - | 57.1 | 0.0 | 42.9 | - | - | - |
| Total % | 0.1 | 51.1 | 1.0 | - | 52.1 | 0.3 | 45.1 | 1.4 | - | 46.9 | 0.1 | 0.0 | 0.2 | - | 0.2 | 0.4 | 0.0 | 0.3 | - | 0.8 | - |
| PHF | 0.250 | 0.976 | 0.643 | - | 0.983 | 0.375 | 0.920 | 0.722 | - | 0.931 | 0.250 | 0.000 | 0.750 | - | 0.500 | 0.400 | 0.000 | 0.750 | - | 0.500 | 0.961 |
| Lights | 1 | 893 | 18 | - | 912 | 6 | 789 | 25 | - | 820 | 1 | 0 | 3 | - | 4 | 7 | 0 | 6 | - | 13 | 1749 |
| % Lights | 100.0 | 96.5 | 100.0 | - | 96.6 | 100.0 | 96.6 | 96.2 | - | 96.6 | 100.0 | - | 100.0 | - | 100.0 | 87.5 | - | 100.0 | - | 92.9 | 96.6 |
| Other Vehicles | 0 | 32 | 0 | - | 32 | 0 | 28 | 1 | - | 29 | 0 | 0 | 0 | - | 0 | 1 | 0 | 0 | - | 1 | 62 |
| % Other Vehicles | 0.0 | 3.5 | 0.0 | - | 3.4 | 0.0 | 3.4 | 3.8 | - | 3.4 | 0.0 | - | 0.0 | - | 0.0 | 12.5 | - | 0.0 | - | 7.1 | 3.4 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 | - | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 0 | - | - | - | - | 0 | - | - | - | - | 2 | - | - | - | - | 4 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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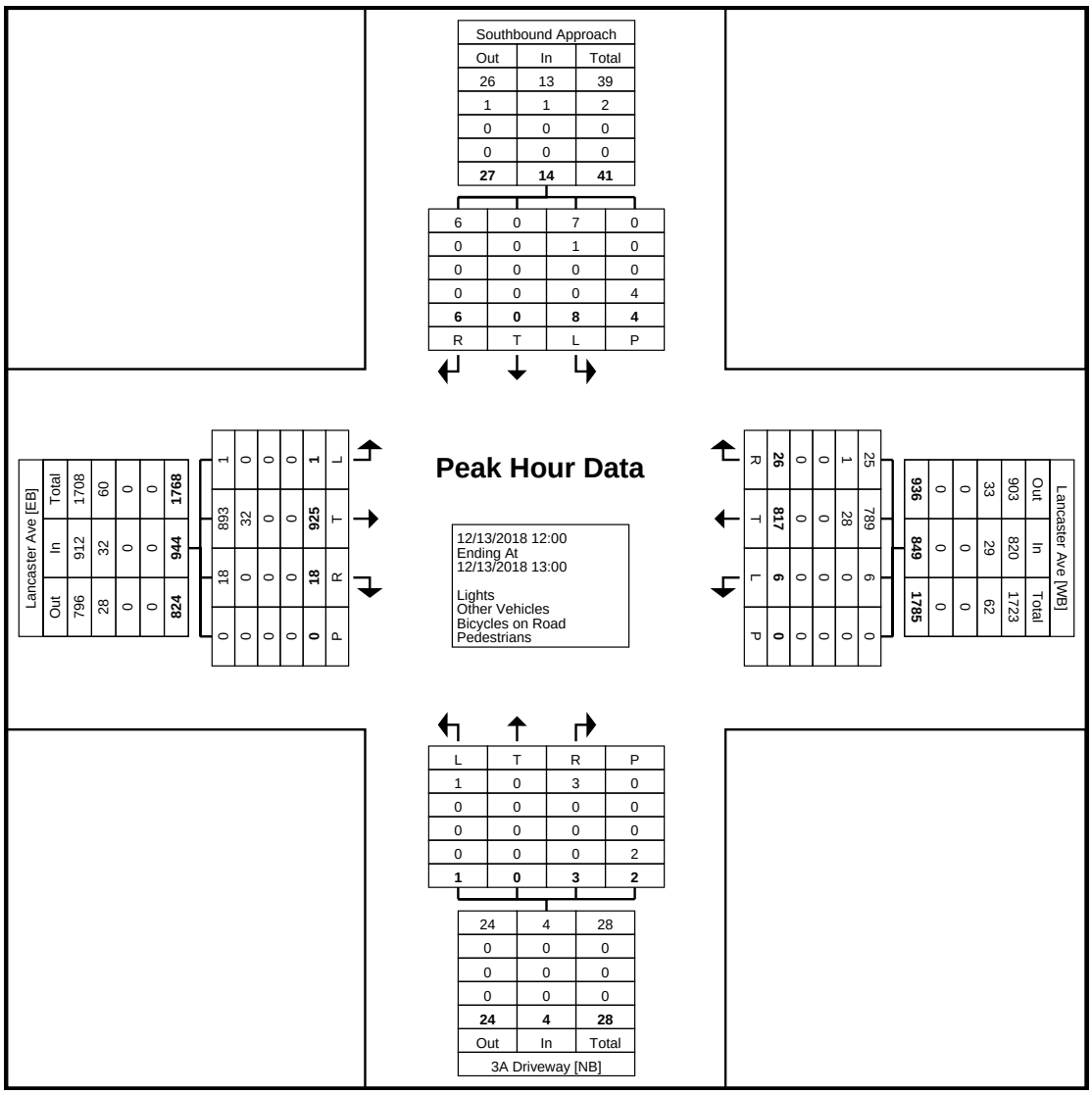
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 3A Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (12:00)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 3B Driveway
Site Code:
Start Date: 12/13/2018

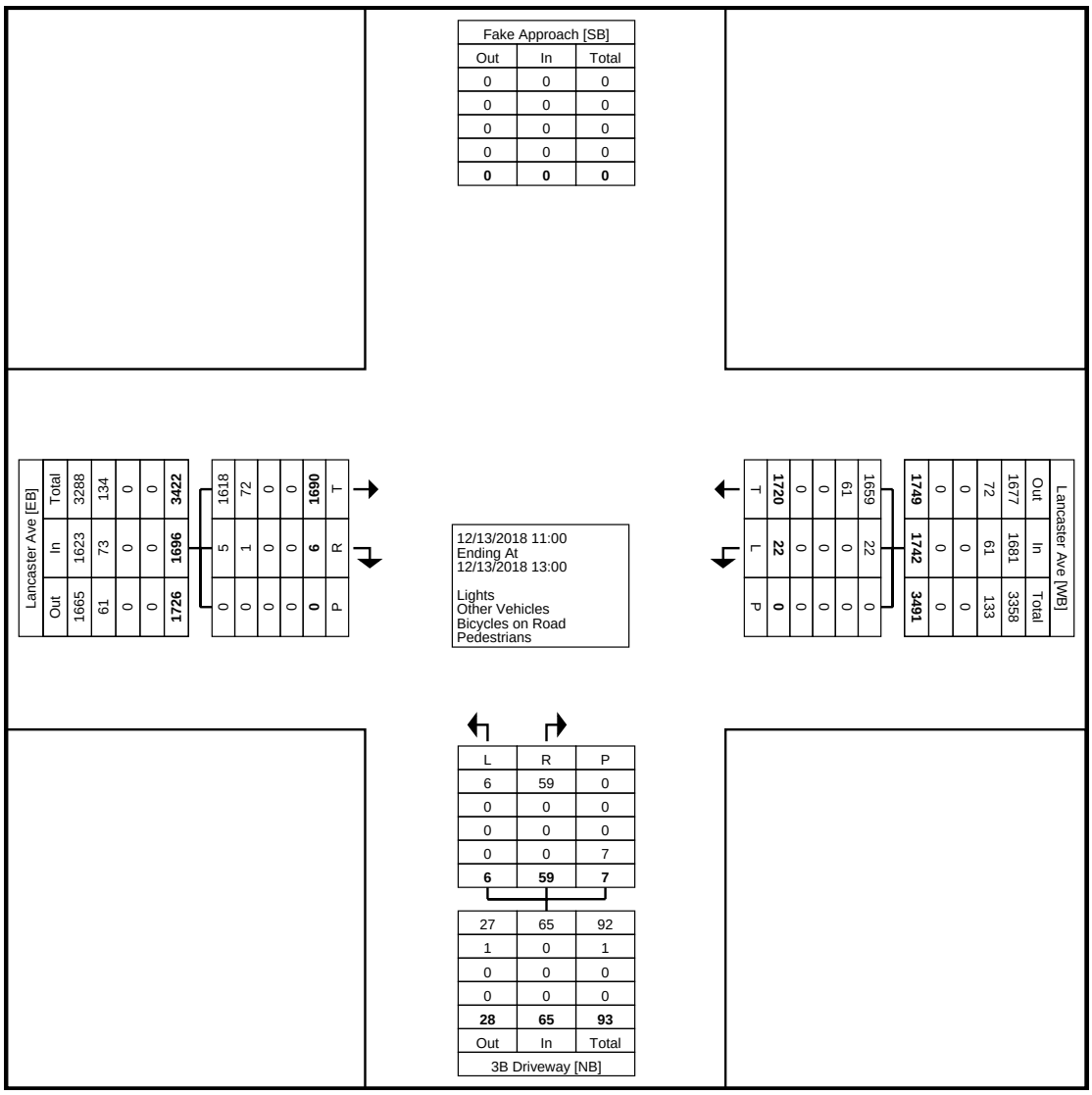

# Turning Movement Data

| Start Time | Lancaster Ave Eastbound | | | | Lancaster Ave Westbound | | | | 3B Driveway Northbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Left | Right | Peds | App. Total | Int. Total |
| 11:00 | 195 | 0 | 0 | 195 | 1 | 202 | 0 | 203 | 1 | 5 | 0 | 6 | 404 |
| 11:15 | 193 | 1 | 0 | 194 | 3 | 218 | 0 | 221 | 0 | 8 | 0 | 8 | 423 |
| 11:30 | 199 | 1 | 0 | 200 | 2 | 218 | 0 | 220 | 2 | 6 | 2 | 8 | 428 |
| 11:45 | 175 | 1 | 0 | 176 | 1 | 240 | 0 | 241 | 0 | 5 | 4 | 5 | 422 |
| Hourly Total | 762 | 3 | 0 | 765 | 7 | 878 | 0 | 885 | 3 | 24 | 6 | 27 | 1677 |
| 12:00 | 232 | 1 | 0 | 233 | 2 | 221 | 0 | 223 | 0 | 10 | 0 | 10 | 466 |
| 12:15 | 228 | 0 | 0 | 228 | 3 | 203 | 0 | 206 | 0 | 12 | 0 | 12 | 446 |
| 12:30 | 228 | 1 | 0 | 229 | 4 | 196 | 0 | 200 | 1 | 6 | 0 | 7 | 436 |
| 12:45 | 240 | 1 | 0 | 241 | 6 | 222 | 0 | 228 | 2 | 7 | 1 | 9 | 478 |
| Hourly Total | 928 | 3 | 0 | 931 | 15 | 842 | 0 | 857 | 3 | 35 | 1 | 38 | 1826 |
| Grand Total | 1690 | 6 | 0 | 1696 | 22 | 1720 | 0 | 1742 | 6 | 59 | 7 | 65 | 3503 |
| Approach % | 99.6 | 0.4 | - | - | 1.3 | 98.7 | - | - | 9.2 | 90.8 | - | - | - |
| Total % | 48.2 | 0.2 | - | 48.4 | 0.6 | 49.1 | - | 49.7 | 0.2 | 1.7 | - | 1.9 | - |
| Lights | 1618 | 5 | - | 1623 | 22 | 1659 | - | 1681 | 6 | 59 | - | 65 | 3369 |
| % Lights | 95.7 | 83.3 | - | 95.7 | 100.0 | 96.5 | - | 96.5 | 100.0 | 100.0 | - | 100.0 | 96.2 |
| Other Vehicles | 72 | 1 | - | 73 | 0 | 61 | - | 61 | 0 | 0 | - | 0 | 134 |
| % Other Vehicles | 4.3 | 16.7 | - | 4.3 | 0.0 | 3.5 | - | 3.5 | 0.0 | 0.0 | - | 0.0 | 3.8 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 0 | - | - | - | 0 | - | - | - | 7 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 3B Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Data Plot

Traffic Planning and Design, Inc
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Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 3B Driveway
Site Code:
Start Date: 12/13/2018


# Turning Movement Peak Hour Data (12:00)

| Start Time | Lancaster Ave Eastbound | | | | Lancaster Ave Westbound | | | | 3B Driveway Northbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Left | Right | Peds | App. Total | Int. Total |
| 12:00 | 232 | 1 | 0 | 233 | 2 | 221 | 0 | 223 | 0 | 10 | 0 | 10 | 466 |
| 12:15 | 228 | 0 | 0 | 228 | 3 | 203 | 0 | 206 | 0 | 12 | 0 | 12 | 446 |
| 12:30 | 228 | 1 | 0 | 229 | 4 | 196 | 0 | 200 | 1 | 6 | 0 | 7 | 436 |
| 12:45 | 240 | 1 | 0 | 241 | 6 | 222 | 0 | 228 | 2 | 7 | 1 | 9 | 478 |
| Total | 928 | 3 | 0 | 931 | 15 | 842 | 0 | 857 | 3 | 35 | 1 | 38 | 1826 |
| Approach % | 99.7 | 0.3 | - | - | 1.8 | 98.2 | - | - | 7.9 | 92.1 | - | - | - |
| Total % | 50.8 | 0.2 | - | 51.0 | 0.8 | 46.1 | - | 46.9 | 0.2 | 1.9 | - | 2.1 | - |
| PHF | 0.967 | 0.750 | - | 0.966 | 0.625 | 0.948 | - | 0.940 | 0.375 | 0.729 | - | 0.792 | 0.955 |
| Lights | 895 | 2 | - | 897 | 15 | 814 | - | 829 | 3 | 35 | - | 38 | 1764 |
| % Lights | 96.4 | 66.7 | - | 96.3 | 100.0 | 96.7 | - | 96.7 | 100.0 | 100.0 | - | 100.0 | 96.6 |
| Other Vehicles | 33 | 1 | - | 34 | 0 | 28 | - | 28 | 0 | 0 | - | 0 | 62 |
| % Other Vehicles | 3.6 | 33.3 | - | 3.7 | 0.0 | 3.3 | - | 3.3 | 0.0 | 0.0 | - | 0.0 | 3.4 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 0 | - | - | - | 0 | - | - | - | 1 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - |

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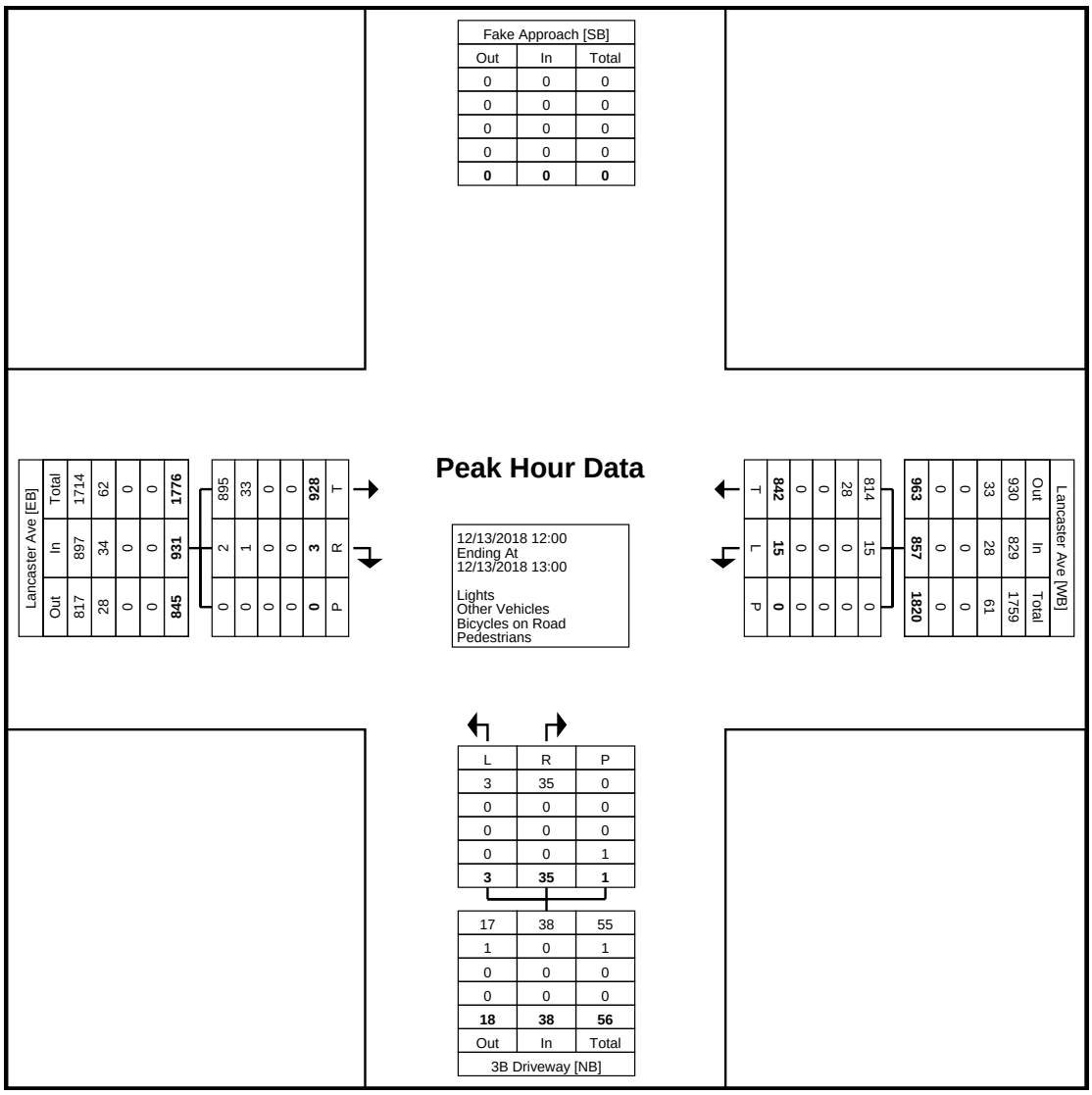
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 3B Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (12:00)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 4A Driveway
Site Code:
Start Date: 12/13/2018


# Turning Movement Data

| Start Time | 4A Driveway Westbound | | | | Aberdeen Ave Northbound | | | | Aberdeen Ave Southbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |
| 11:00 | 0 | 0 | 0 | 0 | 35 | 2 | 0 | 37 | 2 | 30 | 0 | 32 | 69 |
| 11:15 | 1 | 1 | 0 | 2 | 40 | 1 | 0 | 41 | 0 | 21 | 0 | 21 | 64 |
| 11:30 | 0 | 2 | 0 | 2 | 34 | 4 | 0 | 38 | 0 | 23 | 0 | 23 | 63 |
| 11:45 | 1 | 1 | 1 | 2 | 32 | 2 | 0 | 34 | 0 | 31 | 0 | 31 | 67 |
| Hourly Total | 2 | 4 | 1 | 6 | 141 | 9 | 0 | 150 | 2 | 105 | 0 | 107 | 263 |
| 12:00 | 0 | 1 | 0 | 1 | 26 | 1 | 0 | 27 | 2 | 28 | 0 | 30 | 58 |
| 12:15 | 2 | 1 | 2 | 3 | 20 | 2 | 0 | 22 | 1 | 25 | 0 | 26 | 51 |
| 12:30 | 0 | 4 | 0 | 4 | 24 | 2 | 0 | 26 | 1 | 25 | 0 | 26 | 56 |
| 12:45 | 1 | 3 | 0 | 4 | 28 | 3 | 0 | 31 | 1 | 26 | 0 | 27 | 62 |
| Hourly Total | 3 | 9 | 2 | 12 | 98 | 8 | 0 | 106 | 5 | 104 | 0 | 109 | 227 |
| Grand Total | 5 | 13 | 3 | 18 | 239 | 17 | 0 | 256 | 7 | 209 | 0 | 216 | 490 |
| Approach % | 27.8 | 72.2 | - | - | 93.4 | 6.6 | - | - | 3.2 | 96.8 | - | - | - |
| Total % | 1.0 | 2.7 | - | 3.7 | 48.8 | 3.5 | - | 52.2 | 1.4 | 42.7 | - | 44.1 | - |
| Lights | 5 | 13 | - | 18 | 235 | 17 | - | 252 | 7 | 204 | - | 211 | 481 |
| % Lights | 100.0 | 100.0 | - | 100.0 | 98.3 | 100.0 | - | 98.4 | 100.0 | 97.6 | - | 97.7 | 98.2 |
| Other Vehicles | 0 | 0 | - | 0 | 4 | 0 | - | 4 | 0 | 5 | - | 5 | 9 |
| % Other Vehicles | 0.0 | 0.0 | - | 0.0 | 1.7 | 0.0 | - | 1.6 | 0.0 | 2.4 | - | 2.3 | 1.8 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 3 | - | - | - | 0 | - | - | - | 0 | - | - |
| % Pedestrians | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - |

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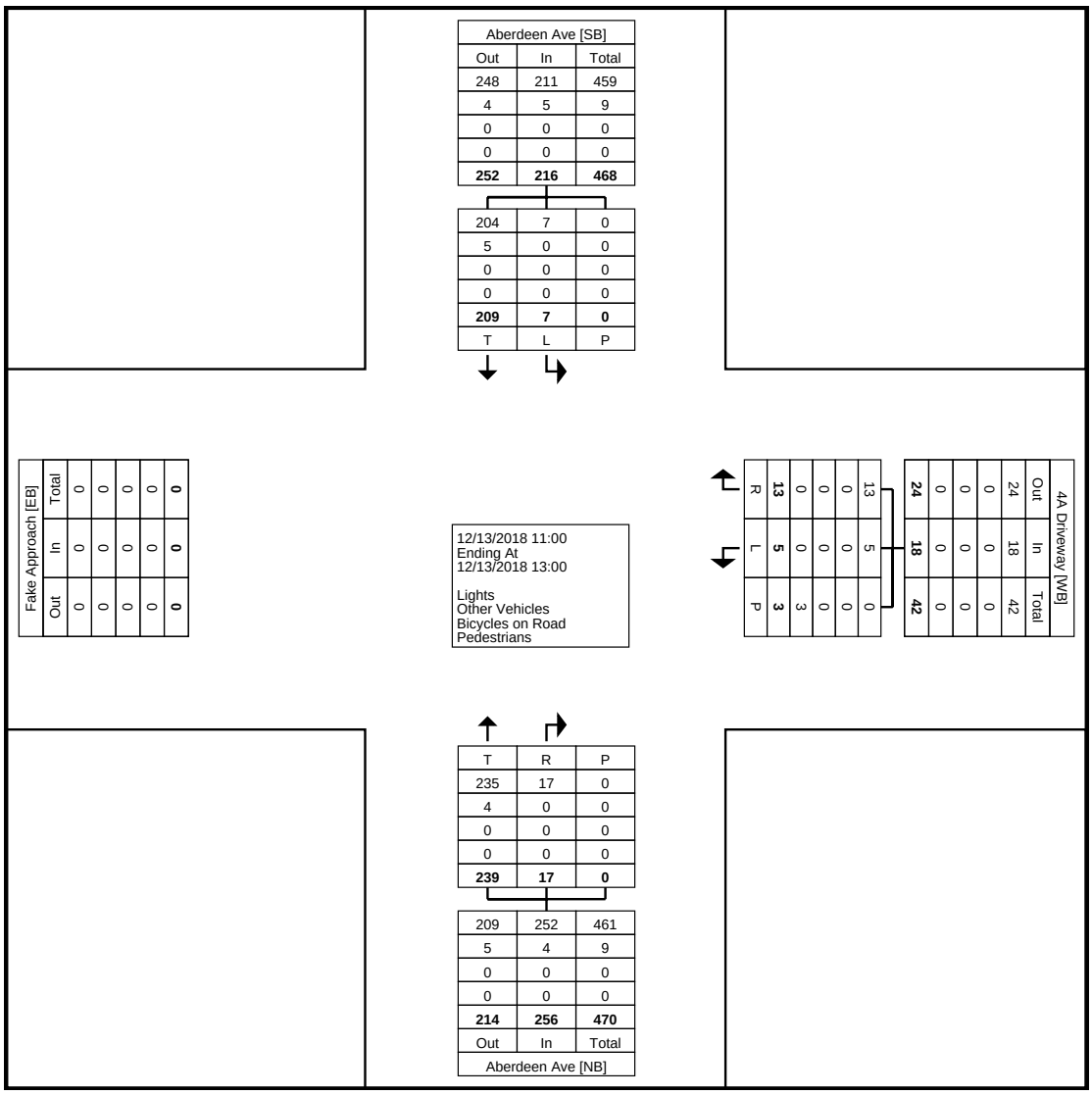
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 4A Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Data Plot

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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 4A Driveway
Site Code:
Start Date: 12/13/2018


# Turning Movement Peak Hour Data (11:00)

| Start Time | 4A Driveway Westbound | | | | Aberdeen Ave Northbound | | | | Aberdeen Ave Southbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |
| 11:00 | 0 | 0 | 0 | 0 | 35 | 2 | 0 | 37 | 2 | 30 | 0 | 32 | 69 |
| 11:15 | 1 | 1 | 0 | 2 | 40 | 1 | 0 | 41 | 0 | 21 | 0 | 21 | 64 |
| 11:30 | 0 | 2 | 0 | 2 | 34 | 4 | 0 | 38 | 0 | 23 | 0 | 23 | 63 |
| 11:45 | 1 | 1 | 1 | 2 | 32 | 2 | 0 | 34 | 0 | 31 | 0 | 31 | 67 |
| Total | 2 | 4 | 1 | 6 | 141 | 9 | 0 | 150 | 2 | 105 | 0 | 107 | 263 |
| Approach % | 33.3 | 66.7 | - | - | 94.0 | 6.0 | - | - | 1.9 | 98.1 | - | - | - |
| Total % | 0.8 | 1.5 | - | 2.3 | 53.6 | 3.4 | - | 57.0 | 0.8 | 39.9 | - | 40.7 | - |
| PHF | 0.500 | 0.500 | - | 0.750 | 0.881 | 0.563 | - | 0.915 | 0.250 | 0.847 | - | 0.836 | 0.953 |
| Lights | 2 | 4 | - | 6 | 138 | 9 | - | 147 | 2 | 101 | - | 103 | 256 |
| % Lights | 100.0 | 100.0 | - | 100.0 | 97.9 | 100.0 | - | 98.0 | 100.0 | 96.2 | - | 96.3 | 97.3 |
| Other Vehicles | 0 | 0 | - | 0 | 3 | 0 | - | 3 | 0 | 4 | - | 4 | 7 |
| % Other Vehicles | 0.0 | 0.0 | - | 0.0 | 2.1 | 0.0 | - | 2.0 | 0.0 | 3.8 | - | 3.7 | 2.7 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 1 | - | - | - | 0 | - | - | - | 0 | - | - |
| % Pedestrians | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - |

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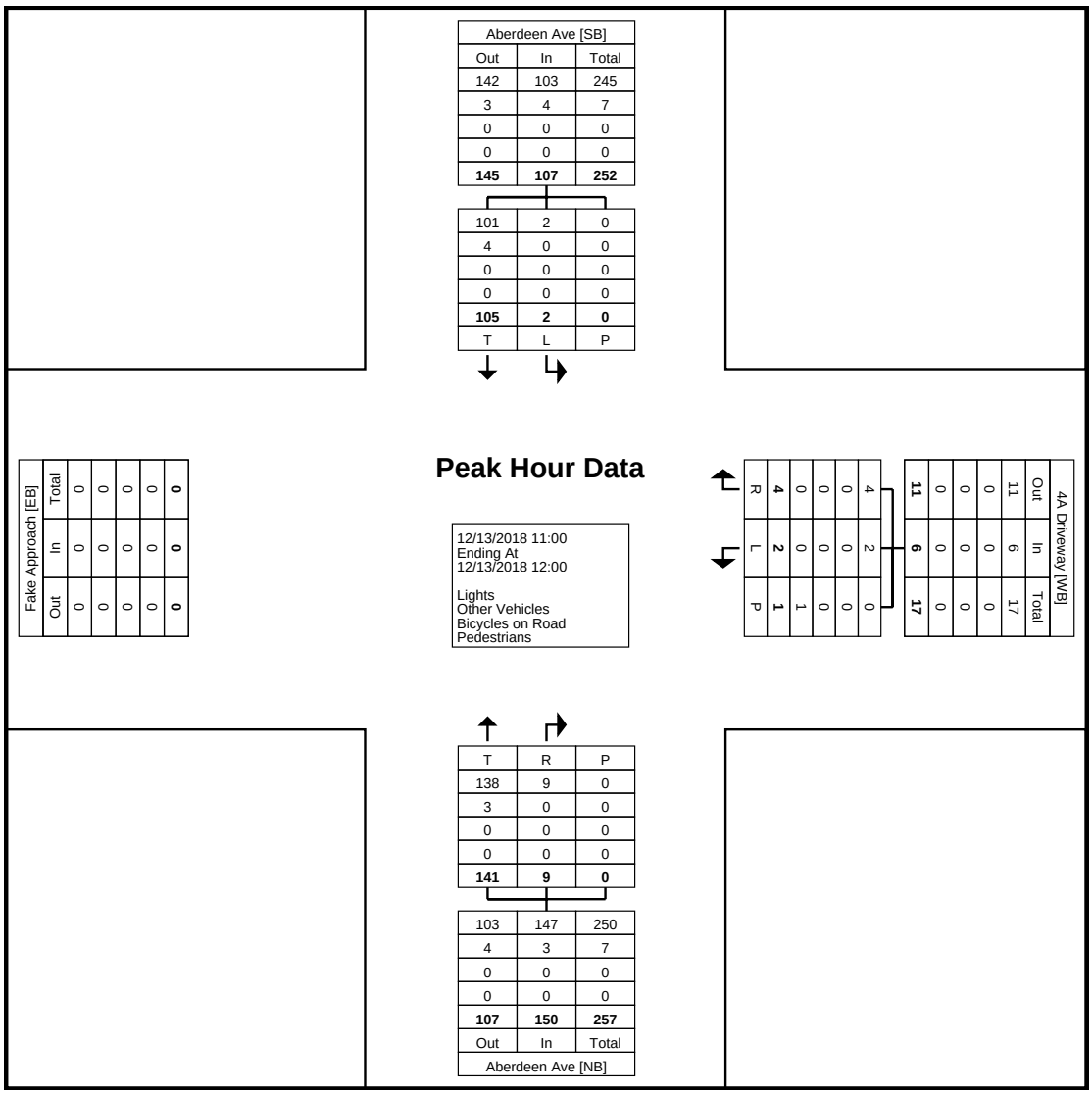
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 4A Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (11:00)

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Pottstown, Pennsylvania, United States 19464
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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 4B Driveway
Site Code:
Start Date: 12/13/2018


# Turning Movement Data

| Start Time | 4B Driveway Westbound | | | | Aberdeen Ave Northbound | | | | Aberdeen Ave Southbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |
| 11:00 | 0 | 0 | 0 | 0 | 34 | 2 | 0 | 36 | 2 | 30 | 0 | 32 | 68 |
| 11:15 | 1 | 1 | 0 | 2 | 40 | 1 | 0 | 41 | 0 | 21 | 0 | 21 | 64 |
| 11:30 | 0 | 2 | 0 | 2 | 34 | 4 | 0 | 38 | 0 | 23 | 0 | 23 | 63 |
| 11:45 | 1 | 1 | 1 | 2 | 32 | 2 | 0 | 34 | 0 | 31 | 0 | 31 | 67 |
| Hourly Total | 2 | 4 | 1 | 6 | 140 | 9 | 0 | 149 | 2 | 105 | 0 | 107 | 262 |
| 12:00 | 0 | 1 | 0 | 1 | 27 | 1 | 0 | 28 | 2 | 28 | 0 | 30 | 59 |
| 12:15 | 2 | 1 | 2 | 3 | 19 | 2 | 0 | 21 | 1 | 28 | 0 | 29 | 53 |
| 12:30 | 0 | 4 | 0 | 4 | 24 | 2 | 0 | 26 | 1 | 24 | 0 | 25 | 55 |
| 12:45 | 1 | 3 | 0 | 4 | 28 | 3 | 0 | 31 | 1 | 25 | 0 | 26 | 61 |
| Hourly Total | 3 | 9 | 2 | 12 | 98 | 8 | 0 | 106 | 5 | 105 | 0 | 110 | 228 |
| Grand Total | 5 | 13 | 3 | 18 | 238 | 17 | 0 | 255 | 7 | 210 | 0 | 217 | 490 |
| Approach % | 27.8 | 72.2 | - | - | 93.3 | 6.7 | - | - | 3.2 | 96.8 | - | - | - |
| Total % | 1.0 | 2.7 | - | 3.7 | 48.6 | 3.5 | - | 52.0 | 1.4 | 42.9 | - | 44.3 | - |
| Lights | 5 | 13 | - | 18 | 234 | 17 | - | 251 | 7 | 204 | - | 211 | 480 |
| % Lights | 100.0 | 100.0 | - | 100.0 | 98.3 | 100.0 | - | 98.4 | 100.0 | 97.1 | - | 97.2 | 98.0 |
| Other Vehicles | 0 | 0 | - | 0 | 4 | 0 | - | 4 | 0 | 6 | - | 6 | 10 |
| % Other Vehicles | 0.0 | 0.0 | - | 0.0 | 1.7 | 0.0 | - | 1.6 | 0.0 | 2.9 | - | 2.8 | 2.0 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 3 | - | - | - | 0 | - | - | - | 0 | - | - |
| % Pedestrians | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - |

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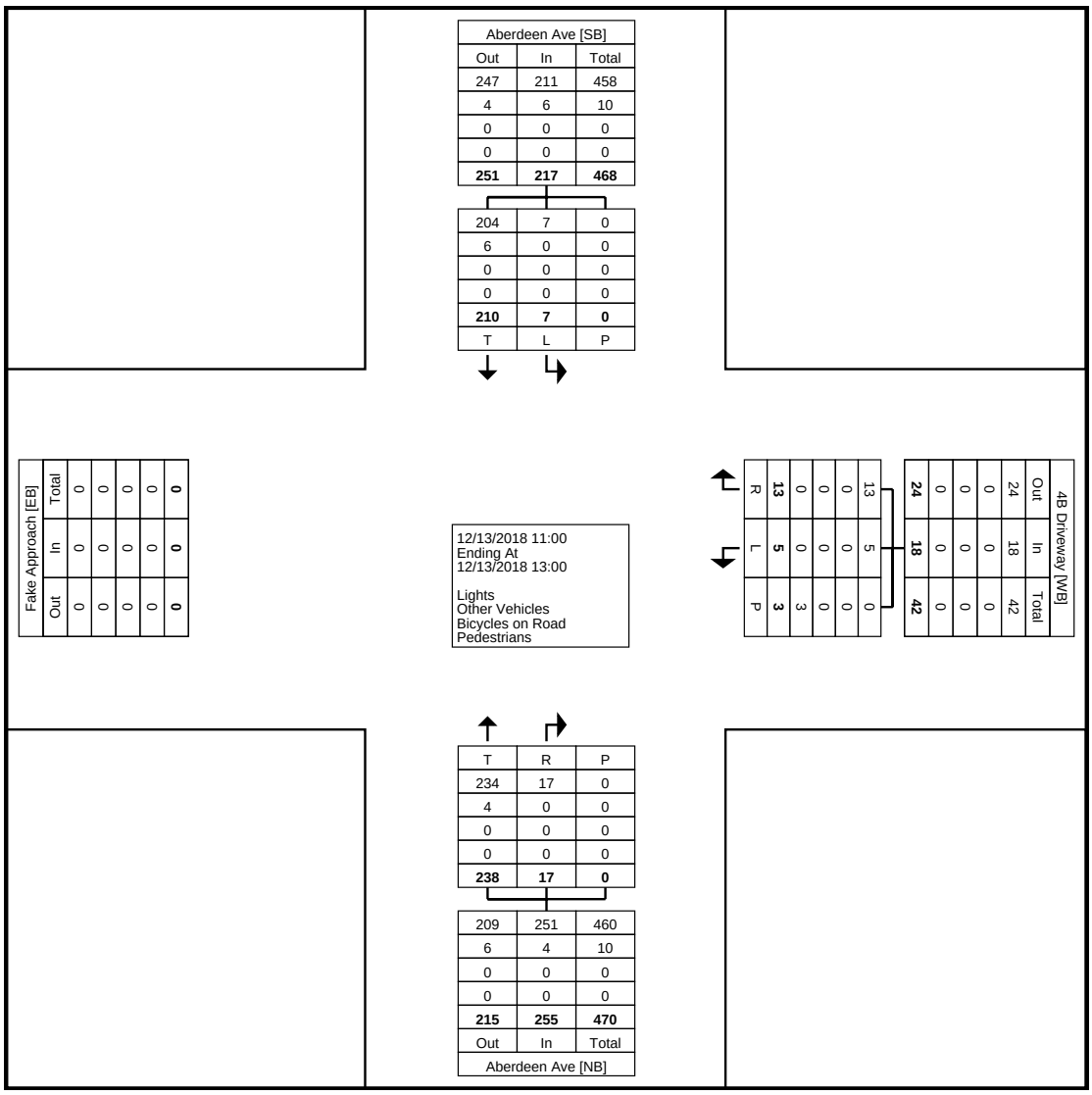
Set Up By: JH:
Weather:Clear:

Count Name: 4B Driveway
Site Code:
Start Date: 12/13/2018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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 4B Driveway
Site Code:
Start Date: 12/13/2018


# Turning Movement Peak Hour Data (11:00)

| Start Time | 4B Driveway Westbound | | | | Aberdeen Ave Northbound | | | | Aberdeen Ave Southbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |
| 11:00 | 0 | 0 | 0 | 0 | 34 | 2 | 0 | 36 | 2 | 30 | 0 | 32 | 68 |
| 11:15 | 1 | 1 | 0 | 2 | 40 | 1 | 0 | 41 | 0 | 21 | 0 | 21 | 64 |
| 11:30 | 0 | 2 | 0 | 2 | 34 | 4 | 0 | 38 | 0 | 23 | 0 | 23 | 63 |
| 11:45 | 1 | 1 | 1 | 2 | 32 | 2 | 0 | 34 | 0 | 31 | 0 | 31 | 67 |
| Total | 2 | 4 | 1 | 6 | 140 | 9 | 0 | 149 | 2 | 105 | 0 | 107 | 262 |
| Approach % | 33.3 | 66.7 | - | - | 94.0 | 6.0 | - | - | 1.9 | 98.1 | - | - | - |
| Total % | 0.8 | 1.5 | - | 2.3 | 53.4 | 3.4 | - | 56.9 | 0.8 | 40.1 | - | 40.8 | - |
| PHF | 0.500 | 0.500 | - | 0.750 | 0.875 | 0.563 | - | 0.909 | 0.250 | 0.847 | - | 0.836 | 0.963 |
| Lights | 2 | 4 | - | 6 | 137 | 9 | - | 146 | 2 | 100 | - | 102 | 254 |
| % Lights | 100.0 | 100.0 | - | 100.0 | 97.9 | 100.0 | - | 98.0 | 100.0 | 95.2 | - | 95.3 | 96.9 |
| Other Vehicles | 0 | 0 | - | 0 | 3 | 0 | - | 3 | 0 | 5 | - | 5 | 8 |
| % Other Vehicles | 0.0 | 0.0 | - | 0.0 | 2.1 | 0.0 | - | 2.0 | 0.0 | 4.8 | - | 4.7 | 3.1 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 1 | - | - | - | 0 | - | - | - | 0 | - | - |
| % Pedestrians | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - |

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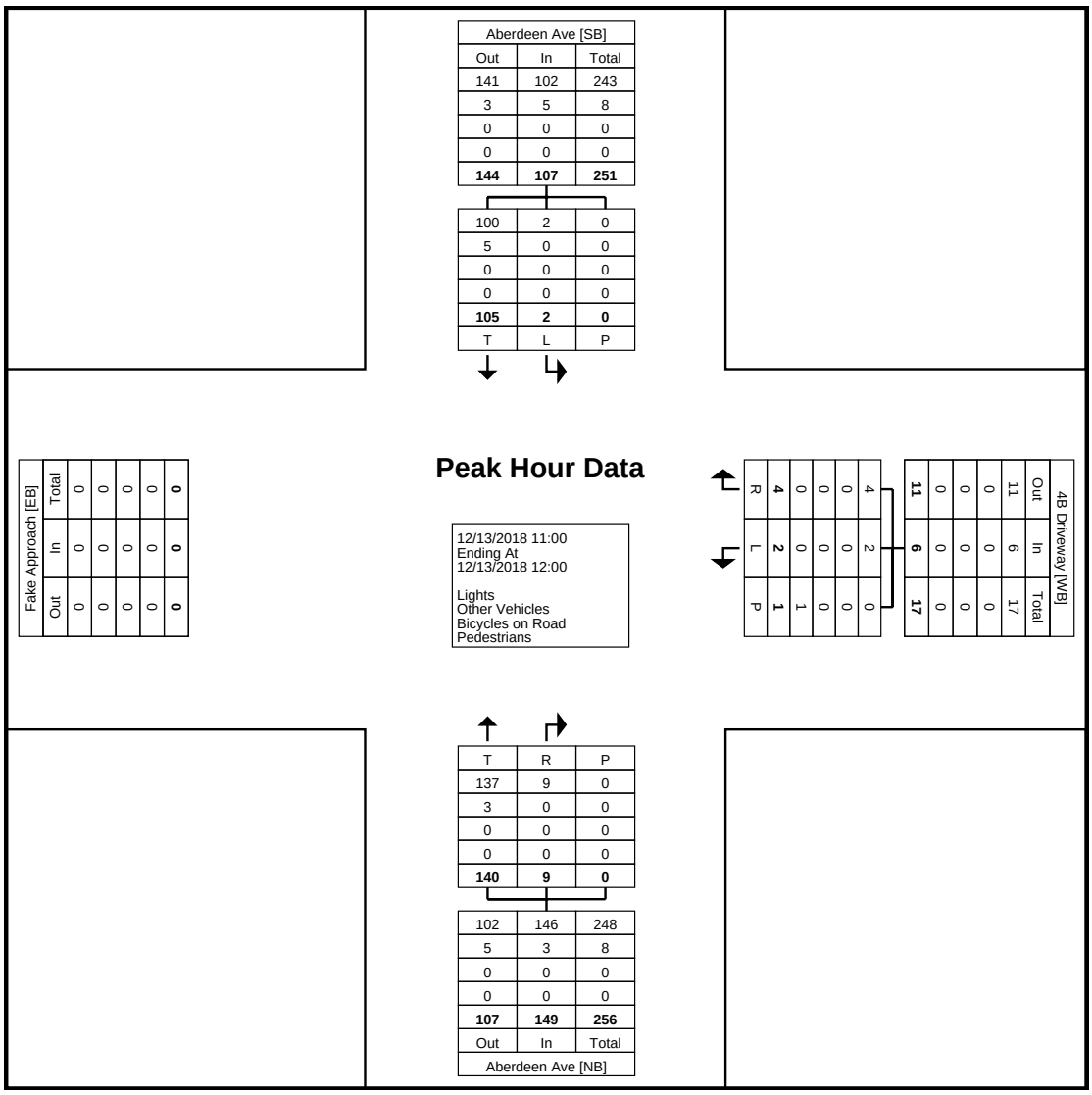
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: 4B Driveway
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (11:00)

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2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Driveway 2A
Site Code:
Start Date: 12/13/2018


# Turning Movement Data

| Start Time | Lancaster Ave Eastbound | | | | Lancaster Ave Westbound | | | | 2A Driveway Northbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Left | Right | Peds | App. Total | Int. Total |
| 11:00 | 204 | 0 | 2 | 204 | 0 | 216 | 0 | 216 | 0 | 2 | 0 | 2 | 422 |
| 11:15 | 202 | 2 | 0 | 204 | 0 | 210 | 0 | 210 | 0 | 2 | 0 | 2 | 416 |
| 11:30 | 203 | 3 | 0 | 206 | 0 | 228 | 0 | 228 | 0 | 0 | 4 | 0 | 434 |
| 11:45 | 184 | 2 | 1 | 186 | 1 | 231 | 0 | 232 | 0 | 0 | 2 | 0 | 418 |
| Hourly Total | 793 | 7 | 3 | 800 | 1 | 885 | 0 | 886 | 0 | 4 | 6 | 4 | 1690 |
| 12:00 | 239 | 1 | 0 | 240 | 0 | 223 | 0 | 223 | 0 | 1 | 0 | 1 | 464 |
| 12:15 | 205 | 3 | 2 | 208 | 0 | 190 | 0 | 190 | 0 | 1 | 0 | 1 | 399 |
| 12:30 | 231 | 4 | 0 | 235 | 0 | 200 | 0 | 200 | 0 | 1 | 0 | 1 | 436 |
| 12:45 | 230 | 4 | 0 | 234 | 0 | 222 | 0 | 222 | 0 | 0 | 2 | 0 | 456 |
| Hourly Total | 905 | 12 | 2 | 917 | 0 | 835 | 0 | 835 | 0 | 3 | 2 | 3 | 1755 |
| Grand Total | 1698 | 19 | 5 | 1717 | 1 | 1720 | 0 | 1721 | 0 | 7 | 8 | 7 | 3445 |
| Approach % | 98.9 | 1.1 | - | - | 0.1 | 99.9 | - | - | 0.0 | 100.0 | - | - | - |
| Total % | 49.3 | 0.6 | - | 49.8 | 0.0 | 49.9 | - | 50.0 | 0.0 | 0.2 | - | 0.2 | - |
| Lights | 1628 | 19 | - | 1647 | 1 | 1665 | - | 1666 | 0 | 7 | - | 7 | 3320 |
| % Lights | 95.9 | 100.0 | - | 95.9 | 100.0 | 96.8 | - | 96.8 | - | 100.0 | - | 100.0 | 96.4 |
| Other Vehicles | 70 | 0 | - | 70 | 0 | 55 | - | 55 | 0 | 0 | - | 0 | 125 |
| % Other Vehicles | 4.1 | 0.0 | - | 4.1 | 0.0 | 3.2 | - | 3.2 | - | 0.0 | - | 0.0 | 3.6 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 5 | - | - | - | 0 | - | - | - | 8 | - | - |
| % Pedestrians | - | - | 100.0 | - | - | - | - | - | - | - | 100.0 | - | - |

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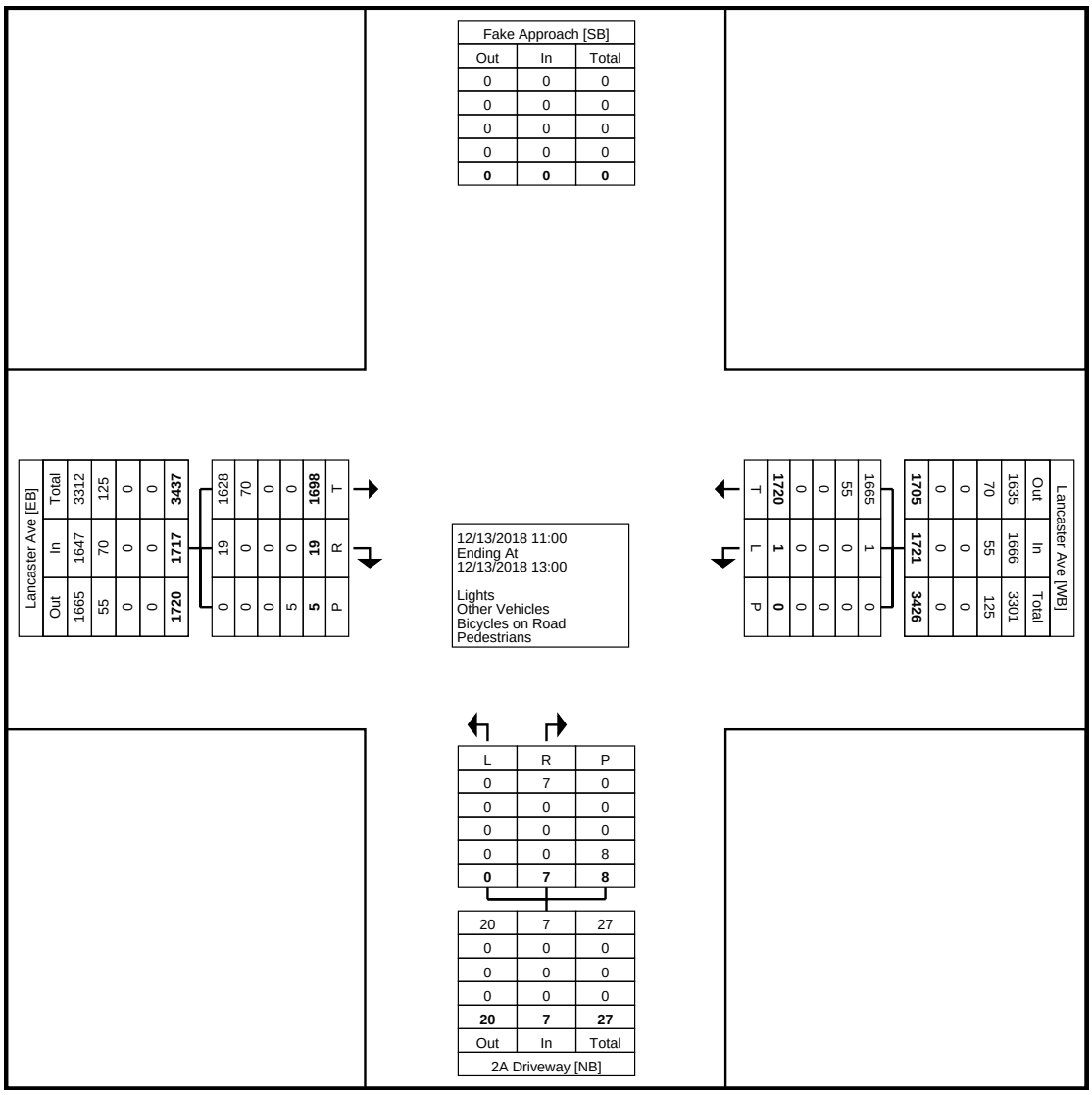
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Driveway 2A
Site Code:
Start Date: 12/13/2018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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Driveway 2A
Site Code:
Start Date: 12/13/2018

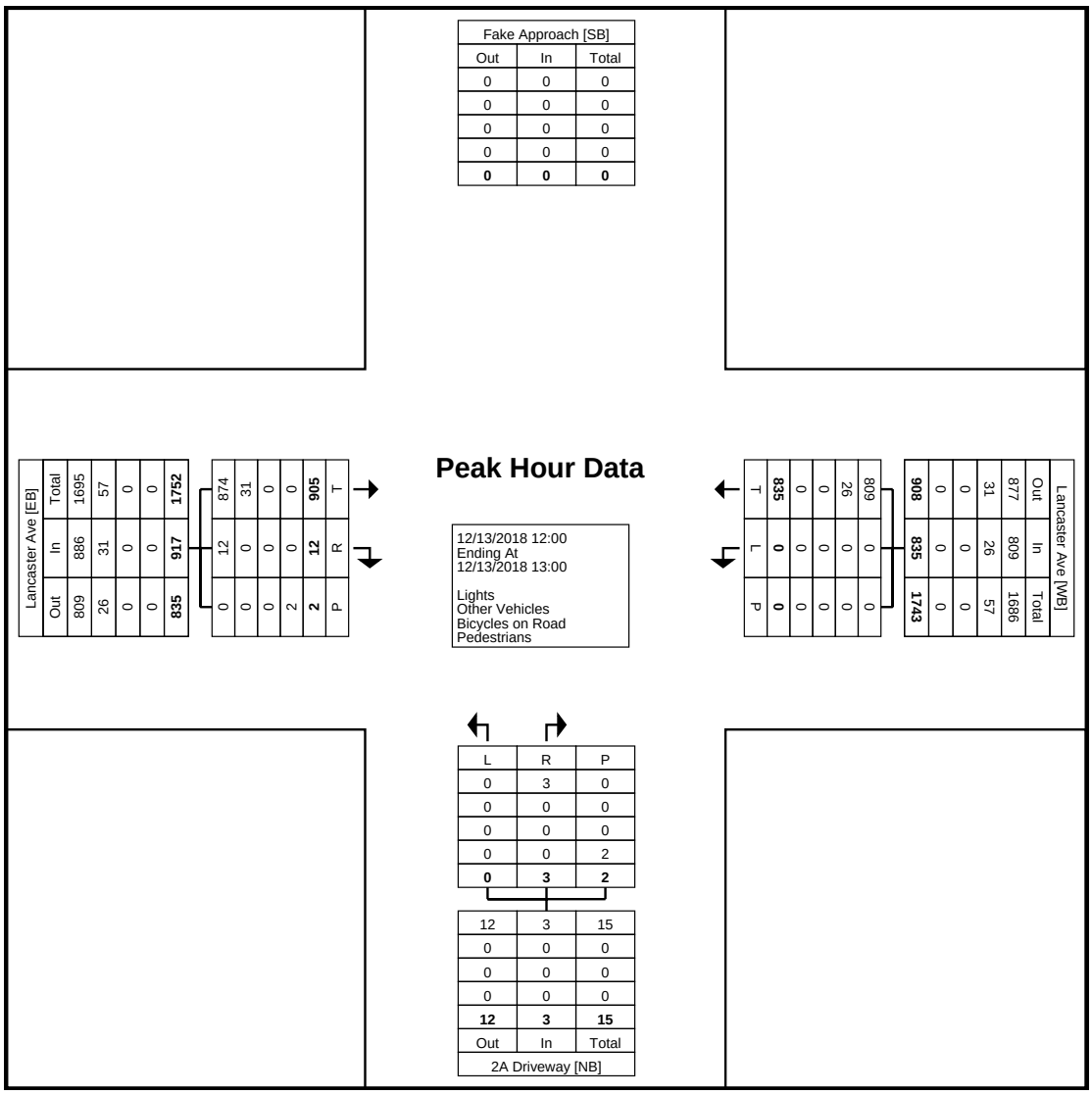

# Turning Movement Peak Hour Data (12:00)

| Start Time | Lancaster Ave Eastbound | | | | Lancaster Ave Westbound | | | | 2A Driveway Northbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Left | Right | Peds | App. Total | Int. Total |
| 12:00 | 239 | 1 | 0 | 240 | 0 | 223 | 0 | 223 | 0 | 1 | 0 | 1 | 464 |
| 12:15 | 205 | 3 | 2 | 208 | 0 | 190 | 0 | 190 | 0 | 1 | 0 | 1 | 399 |
| 12:30 | 231 | 4 | 0 | 235 | 0 | 200 | 0 | 200 | 0 | 1 | 0 | 1 | 436 |
| 12:45 | 230 | 4 | 0 | 234 | 0 | 222 | 0 | 222 | 0 | 0 | 2 | 0 | 456 |
| Total | 905 | 12 | 2 | 917 | 0 | 835 | 0 | 835 | 0 | 3 | 2 | 3 | 1755 |
| Approach % | 98.7 | 1.3 | - | - | 0.0 | 100.0 | - | - | 0.0 | 100.0 | - | - | - |
| Total % | 51.6 | 0.7 | - | 52.3 | 0.0 | 47.6 | - | 47.6 | 0.0 | 0.2 | - | 0.2 | - |
| PHF | 0.947 | 0.750 | - | 0.955 | 0.000 | 0.936 | - | 0.936 | 0.000 | 0.750 | - | 0.750 | 0.946 |
| Lights | 874 | 12 | - | 886 | 0 | 809 | - | 809 | 0 | 3 | - | 3 | 1698 |
| % Lights | 96.6 | 100.0 | - | 96.6 | - | 96.9 | - | 96.9 | - | 100.0 | - | 100.0 | 96.8 |
| Other Vehicles | 31 | 0 | - | 31 | 0 | 26 | - | 26 | 0 | 0 | - | 0 | 57 |
| % Other Vehicles | 3.4 | 0.0 | - | 3.4 | - | 3.1 | - | 3.1 | - | 0.0 | - | 0.0 | 3.2 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 2 | - | - | - | 0 | - | - | - | 2 | - | - |
| % Pedestrians | - | - | 100.0 | - | - | - | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Driveway 2A
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (12:00)

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Count Name: Louella Ave & Midland Ave
Site Code:
Start Date: 12/13/2018


# Turning Movement Data

| Start Time | Midland Ave Westbound | | | | Louellea Ave Northbound | | | | Louellea Ave Southbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |
| 11:00 | 1 | 11 | 0 | 12 | 10 | 1 | 1 | 11 | 2 | 6 | 2 | 8 | 31 |
| 11:15 | 1 | 9 | 1 | 10 | 5 | 2 | 0 | 7 | 2 | 8 | 0 | 10 | 27 |
| 11:30 | 0 | 9 | 0 | 9 | 5 | 3 | 1 | 8 | 3 | 10 | 0 | 13 | 30 |
| 11:45 | 2 | 9 | 0 | 11 | 5 | 1 | 0 | 6 | 2 | 11 | 1 | 13 | 30 |
| Hourly Total | 4 | 38 | 1 | 42 | 25 | 7 | 2 | 32 | 9 | 35 | 3 | 44 | 118 |
| 12:00 | 0 | 14 | 0 | 14 | 14 | 3 | 1 | 17 | 4 | 8 | 2 | 12 | 43 |
| 12:15 | 3 | 4 | 0 | 7 | 7 | 2 | 0 | 9 | 2 | 4 | 1 | 6 | 22 |
| 12:30 | 0 | 13 | 0 | 13 | 6 | 3 | 0 | 9 | 4 | 10 | 0 | 14 | 36 |
| 12:45 | 0 | 12 | 2 | 12 | 6 | 3 | 0 | 9 | 2 | 8 | 1 | 10 | 31 |
| Hourly Total | 3 | 43 | 2 | 46 | 33 | 11 | 1 | 44 | 12 | 30 | 4 | 42 | 132 |
| Grand Total | 7 | 81 | 3 | 88 | 58 | 18 | 3 | 76 | 21 | 65 | 7 | 86 | 250 |
| Approach % | 8.0 | 92.0 | - | - | 76.3 | 23.7 | - | - | 24.4 | 75.6 | - | - | - |
| Total % | 2.8 | 32.4 | - | 35.2 | 23.2 | 7.2 | - | 30.4 | 8.4 | 26.0 | - | 34.4 | - |
| Lights | 6 | 81 | - | 87 | 56 | 18 | - | 74 | 21 | 63 | - | 84 | 245 |
| % Lights | 85.7 | 100.0 | - | 98.9 | 96.6 | 100.0 | - | 97.4 | 100.0 | 96.9 | - | 97.7 | 98.0 |
| Other Vehicles | 1 | 0 | - | 1 | 2 | 0 | - | 2 | 0 | 2 | - | 2 | 5 |
| % Other Vehicles | 14.3 | 0.0 | - | 1.1 | 3.4 | 0.0 | - | 2.6 | 0.0 | 3.1 | - | 2.3 | 2.0 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 3 | - | - | - | 3 | - | - | - | 7 | - | - |
| % Pedestrians | - | - | 100.0 | - | - | - | 100.0 | - | - | - | 100.0 | - | - |

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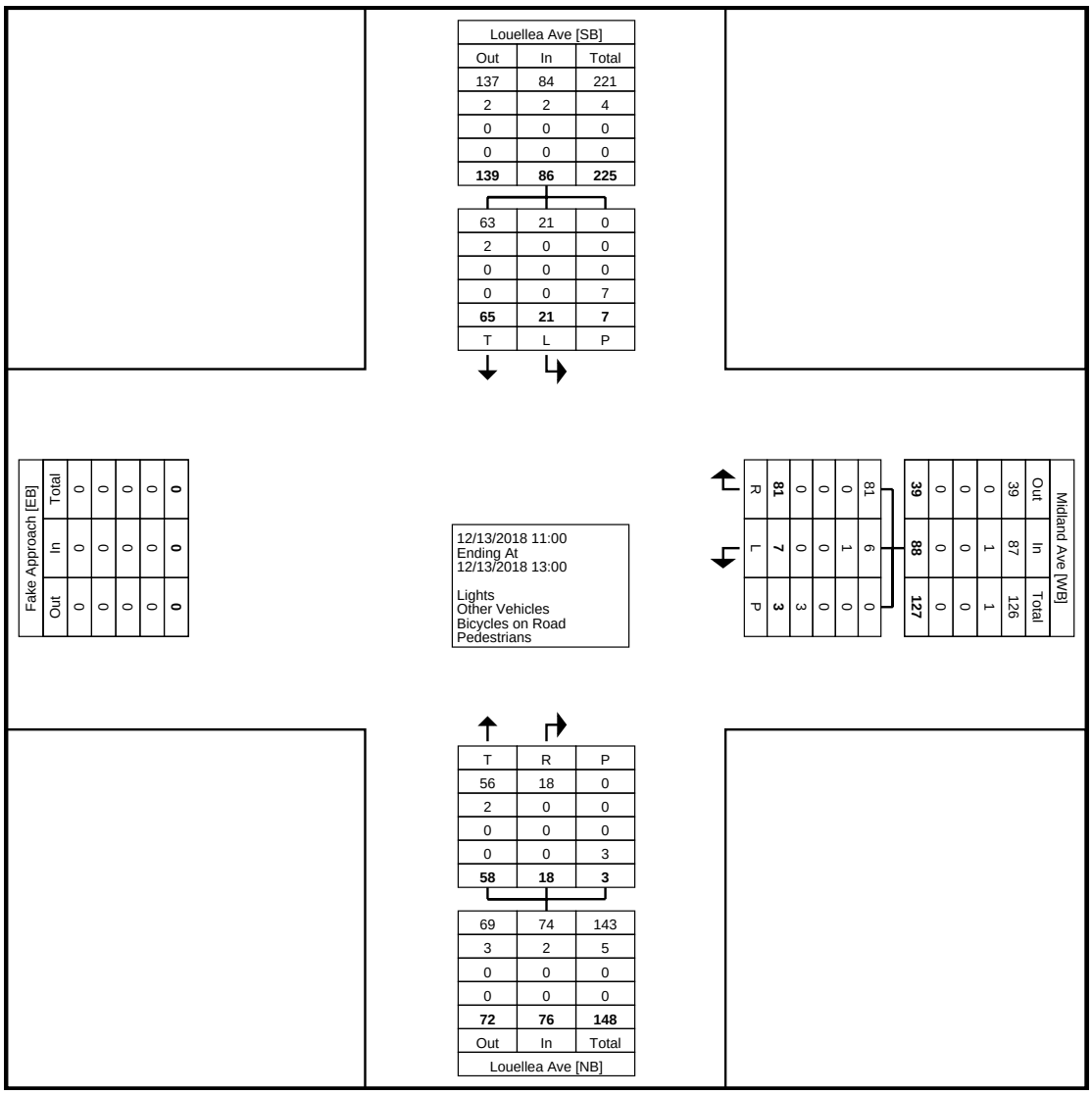
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Louella Ave & Midland Ave
Site Code:
Start Date: 12/13/2018


Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Louella Ave & Midland Ave
Site Code:
Start Date: 12/13/2018


# Turning Movement Peak Hour Data (12:00)

| Start Time | Midland Ave Westbound | | | | Louellea Ave Northbound | | | | Louellea Ave Southbound | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Right | Peds | App. Total | Thru | Right | Peds | App. Total | Left | Thru | Peds | App. Total | Int. Total |
| 12:00 | 0 | 14 | 0 | 14 | 14 | 3 | 1 | 17 | 4 | 8 | 2 | 12 | 43 |
| 12:15 | 3 | 4 | 0 | 7 | 7 | 2 | 0 | 9 | 2 | 4 | 1 | 6 | 22 |
| 12:30 | 0 | 13 | 0 | 13 | 6 | 3 | 0 | 9 | 4 | 10 | 0 | 14 | 36 |
| 12:45 | 0 | 12 | 2 | 12 | 6 | 3 | 0 | 9 | 2 | 8 | 1 | 10 | 31 |
| Total | 3 | 43 | 2 | 46 | 33 | 11 | 1 | 44 | 12 | 30 | 4 | 42 | 132 |
| Approach % | 6.5 | 93.5 | - | - | 75.0 | 25.0 | - | - | 28.6 | 71.4 | - | - | - |
| Total % | 2.3 | 32.6 | - | 34.8 | 25.0 | 8.3 | - | 33.3 | 9.1 | 22.7 | - | 31.8 | - |
| PHF | 0.250 | 0.768 | - | 0.821 | 0.589 | 0.917 | - | 0.647 | 0.750 | 0.750 | - | 0.750 | 0.767 |
| Lights | 3 | 43 | - | 46 | 32 | 11 | - | 43 | 12 | 29 | - | 41 | 130 |
| % Lights | 100.0 | 100.0 | - | 100.0 | 97.0 | 100.0 | - | 97.7 | 100.0 | 96.7 | - | 97.6 | 98.5 |
| Other Vehicles | 0 | 0 | - | 0 | 1 | 0 | - | 1 | 0 | 1 | - | 1 | 2 |
| % Other Vehicles | 0.0 | 0.0 | - | 0.0 | 3.0 | 0.0 | - | 2.3 | 0.0 | 3.3 | - | 2.4 | 1.5 |
| Bicycles on Road | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | 2 | - | - | - | 1 | - | - | - | 4 | - | - |
| % Pedestrians | - | - | 100.0 | - | - | - | 100.0 | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
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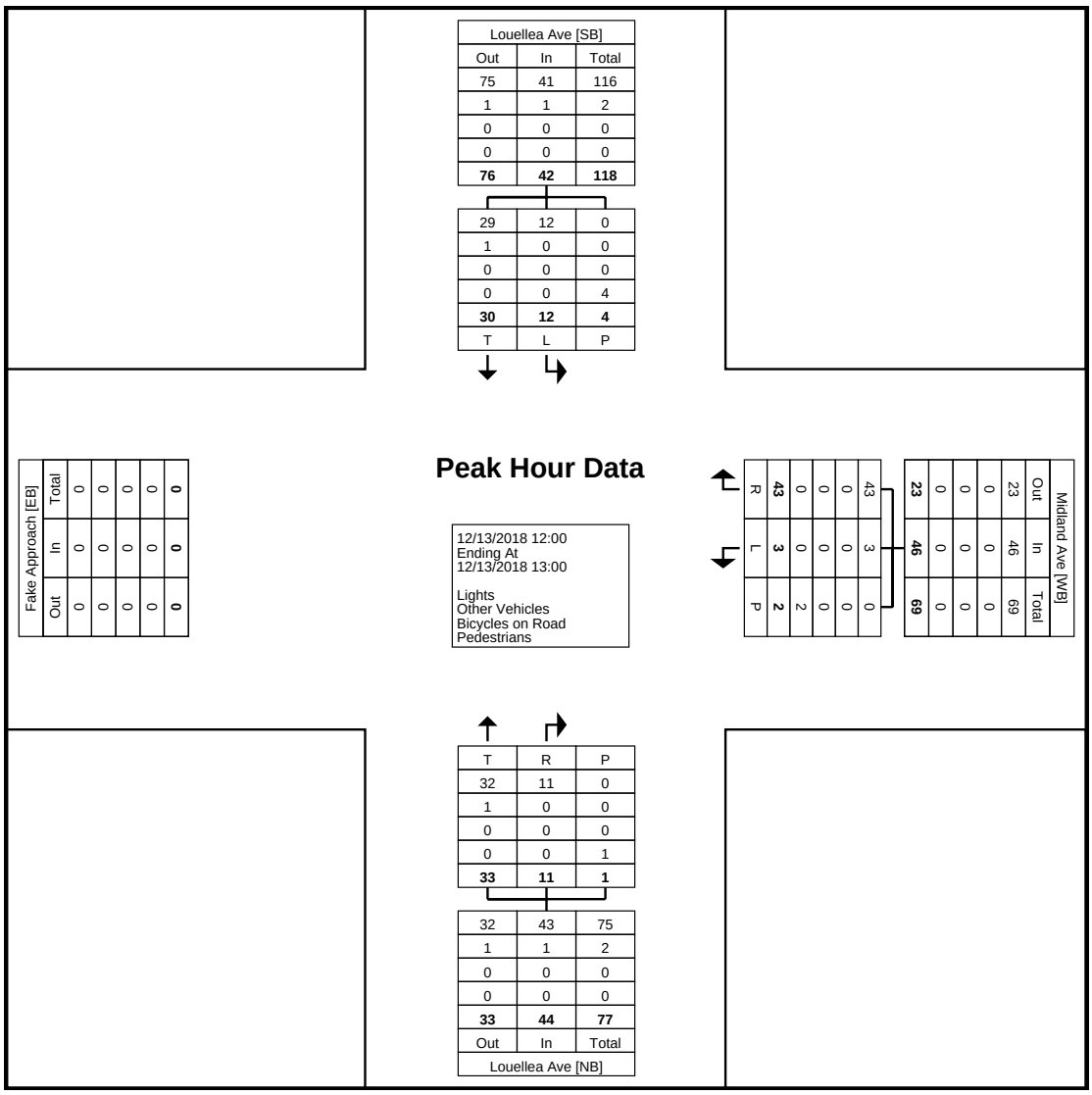
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Louella Ave & Midland Ave
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (12:00)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Wayne Ave & Lancaster Ave
Site Code:
Start Date: 12/13/2018

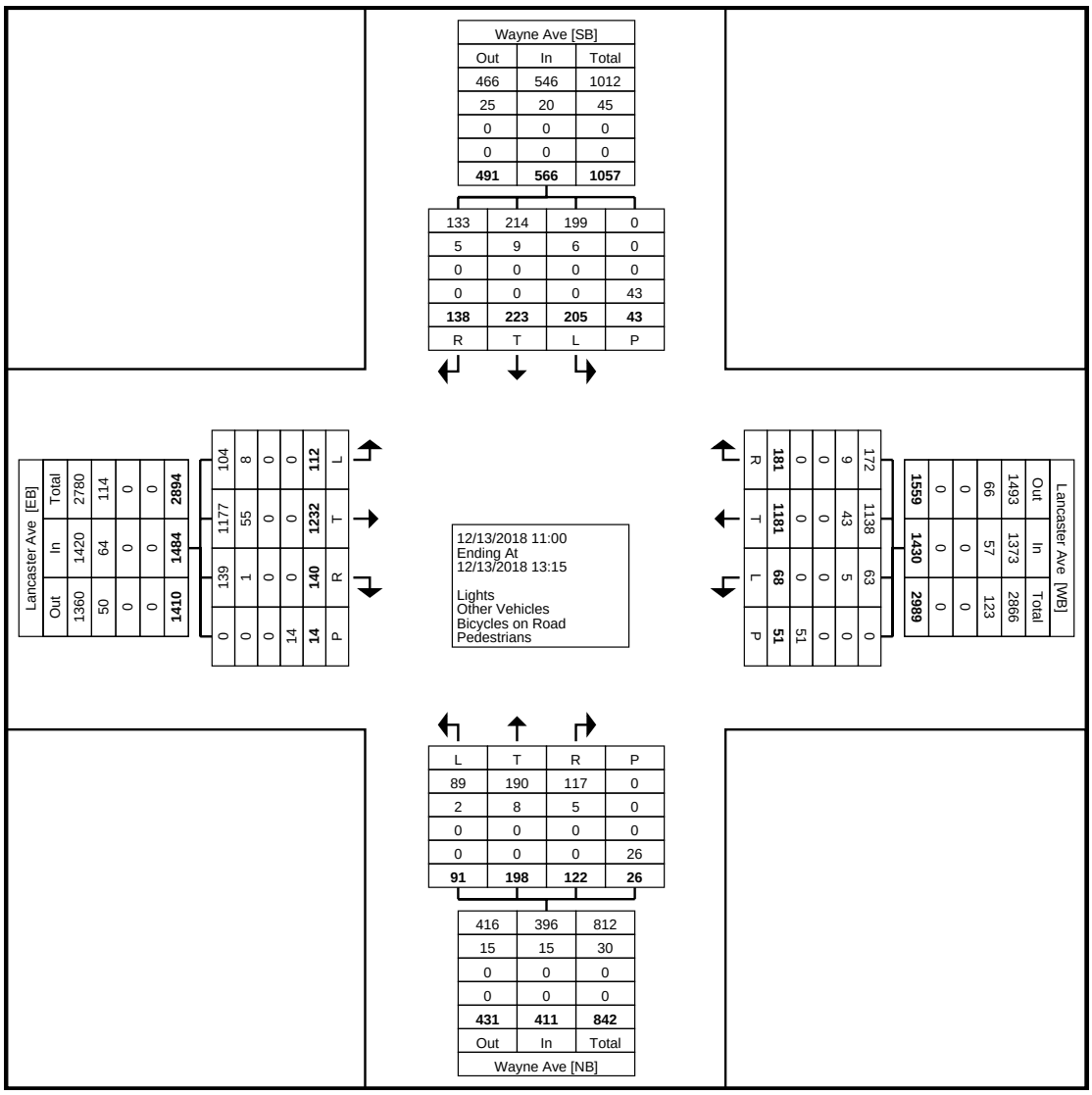

# Turning Movement Data

| Start Time | Lancaster Ave Eastbound | | | | | | Lancaster Ave Westbound | | | | | | Wayne Ave Northbound | | | | | | Wayne Ave Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | |
| 11:00 | 9 | 134 | 19 | 2 | 2 | 164 | 12 | 140 | 20 | 0 | 2 | 172 | 10 | 18 | 18 | 0 | 3 | 46 | 29 | 24 | 12 | 0 | 1 | 65 | 447 |
| 11:15 | 7 | 147 | 14 | 0 | 3 | 168 | 9 | 150 | 19 | 0 | 5 | 178 | 12 | 17 | 13 | 0 | 1 | 42 | 19 | 31 | 14 | 0 | 5 | 64 | 452 |
| 11:30 | 27 | 146 | 20 | 0 | 0 | 193 | 10 | 169 | 22 | 0 | 2 | 201 | 7 | 28 | 12 | 0 | 1 | 47 | 20 | 30 | 17 | 1 | 4 | 68 | 509 |
| 11:45 | 12 | 128 | 21 | 0 | 7 | 161 | 7 | 150 | 19 | 0 | 12 | 176 | 17 | 25 | 15 | 0 | 4 | 57 | 29 | 36 | 21 | 0 | 7 | 86 | 480 |
| Hourly Total | 55 | 555 | 74 | 2 | 12 | 686 | 38 | 609 | 80 | 0 | 21 | 727 | 46 | 88 | 58 | 0 | 9 | 192 | 97 | 121 | 64 | 1 | 17 | 283 | 1888 |
| 12:00 | 14 | 186 | 23 | 0 | 2 | 223 | 6 | 149 | 17 | 0 | 2 | 172 | 11 | 37 | 21 | 0 | 7 | 69 | 27 | 38 | 20 | 1 | 3 | 86 | 550 |
| 12:15 | 15 | 156 | 18 | 0 | 0 | 189 | 5 | 164 | 28 | 0 | 8 | 197 | 7 | 23 | 15 | 0 | 6 | 45 | 25 | 15 | 13 | 1 | 6 | 54 | 485 |
| 12:30 | 12 | 173 | 13 | 0 | 0 | 198 | 11 | 123 | 28 | 0 | 15 | 162 | 16 | 26 | 11 | 1 | 3 | 54 | 24 | 24 | 17 | 2 | 11 | 67 | 481 |
| 12:45 | 16 | 162 | 10 | 0 | 0 | 188 | 8 | 136 | 27 | 1 | 5 | 172 | 11 | 24 | 16 | 0 | 1 | 51 | 32 | 25 | 19 | 0 | 6 | 76 | 487 |
| Hourly Total | 57 | 677 | 64 | 0 | 2 | 798 | 30 | 572 | 100 | 1 | 30 | 703 | 45 | 110 | 63 | 1 | 17 | 219 | 108 | 102 | 69 | 4 | 26 | 283 | 2003 |
| 13:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grand Total | 112 | 1232 | 138 | 2 | 14 | 1484 | 68 | 1181 | 180 | 1 | 51 | 1430 | 91 | 198 | 121 | 1 | 26 | 411 | 205 | 223 | 133 | 5 | 43 | 566 | 3891 |
| Approach % | 7.5 | 83.0 | 9.3 | 0.1 | - | - | 4.8 | 82.6 | 12.6 | 0.1 | - | - | 22.1 | 48.2 | 29.4 | 0.2 | - | - | 36.2 | 39.4 | 23.5 | 0.9 | - | - | - |
| Total % | 2.9 | 31.7 | 3.5 | 0.1 | - | 38.1 | 1.7 | 30.4 | 4.6 | 0.0 | - | 36.8 | 2.3 | 5.1 | 3.1 | 0.0 | - | 10.6 | 5.3 | 5.7 | 3.4 | 0.1 | - | 14.5 | - |
| Lights | 104 | 1177 | 137 | 2 | - | 1420 | 63 | 1138 | 171 | 1 | - | 1373 | 89 | 190 | 116 | 1 | - | 396 | 199 | 214 | 128 | 5 | - | 546 | 3735 |
| % Lights | 92.9 | 95.5 | 99.3 | 100.0 | - | 95.7 | 92.6 | 96.4 | 95.0 | 100.0 | - | 96.0 | 97.8 | 96.0 | 95.9 | 100.0 | - | 96.4 | 97.1 | 96.0 | 96.2 | 100.0 | - | 96.5 | 96.0 |
| Other Vehicles | 8 | 55 | 1 | 0 | - | 64 | 5 | 43 | 9 | 0 | - | 57 | 2 | 8 | 5 | 0 | - | 15 | 6 | 9 | 5 | 0 | - | 20 | 156 |
| % Other Vehicles | 7.1 | 4.5 | 0.7 | 0.0 | - | 4.3 | 7.4 | 3.6 | 5.0 | 0.0 | - | 4.0 | 2.2 | 4.0 | 4.1 | 0.0 | - | 3.6 | 2.9 | 4.0 | 3.8 | 0.0 | - | 3.5 | 4.0 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 14 | - | - | - | - | - | 51 | - | - | - | - | - | 26 | - | - | - | - | - | 43 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Wayne Ave & Lancaster Ave
Site Code:
Start Date: 12/13/2018


Turning Movement Data Plot

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Wayne Ave & Lancaster Ave
Site Code:
Start Date: 12/13/2018

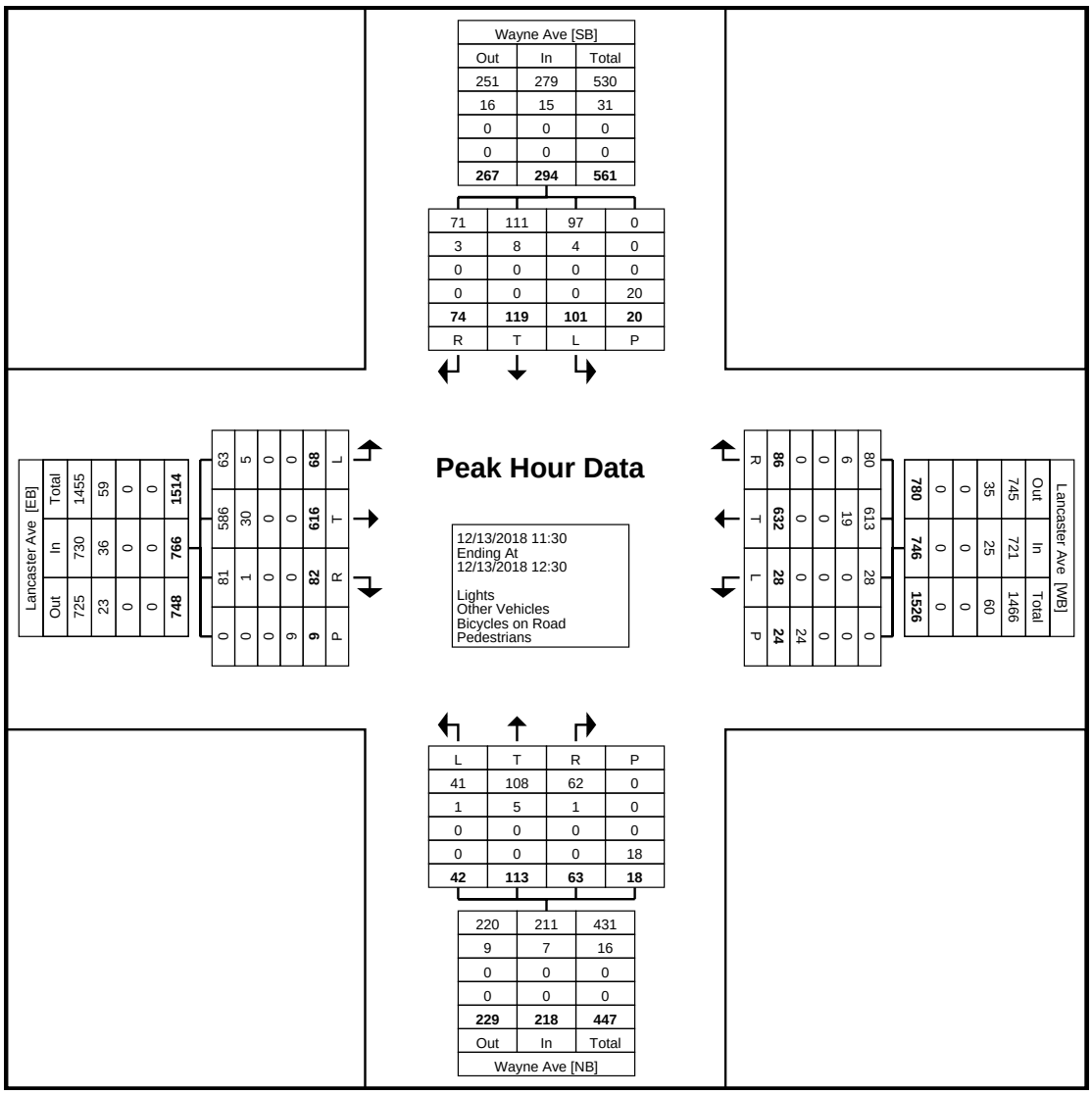

# Turning Movement Peak Hour Data (11:30)

| Start Time | Lancaster Ave Eastbound | | | | | | Lancaster Ave Westbound | | | | | | Wayne Ave Northbound | | | | | | Wayne Ave Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | |
| 11:30 | 27 | 146 | 20 | 0 | 0 | 193 | 10 | 169 | 22 | 0 | 2 | 201 | 7 | 28 | 12 | 0 | 1 | 47 | 20 | 30 | 17 | 1 | 4 | 68 | 509 |
| 11:45 | 12 | 128 | 21 | 0 | 7 | 161 | 7 | 150 | 19 | 0 | 12 | 176 | 17 | 25 | 15 | 0 | 4 | 57 | 29 | 36 | 21 | 0 | 7 | 86 | 480 |
| 12:00 | 14 | 186 | 23 | 0 | 2 | 223 | 6 | 149 | 17 | 0 | 2 | 172 | 11 | 37 | 21 | 0 | 7 | 69 | 27 | 38 | 20 | 1 | 3 | 86 | 550 |
| 12:15 | 15 | 156 | 18 | 0 | 0 | 189 | 5 | 164 | 28 | 0 | 8 | 197 | 7 | 23 | 15 | 0 | 6 | 45 | 25 | 15 | 13 | 1 | 6 | 54 | 485 |
| Total | 68 | 616 | 82 | 0 | 9 | 766 | 28 | 632 | 86 | 0 | 24 | 746 | 42 | 113 | 63 | 0 | 18 | 218 | 101 | 119 | 71 | 3 | 20 | 294 | 2024 |
| Approach % | 8.9 | 80.4 | 10.7 | 0.0 | - | - | 3.8 | 84.7 | 11.5 | 0.0 | - | - | 19.3 | 51.8 | 28.9 | 0.0 | - | - | 34.4 | 40.5 | 24.1 | 1.0 | - | - | - |
| Total % | 3.4 | 30.4 | 4.1 | 0.0 | - | 37.8 | 1.4 | 31.2 | 4.2 | 0.0 | - | 36.9 | 2.1 | 5.6 | 3.1 | 0.0 | - | 10.8 | 5.0 | 5.9 | 3.5 | 0.1 | - | 14.5 | - |
| PHF | 0.630 | 0.828 | 0.891 | 0.000 | - | 0.859 | 0.700 | 0.935 | 0.768 | 0.000 | - | 0.928 | 0.618 | 0.764 | 0.750 | 0.000 | - | 0.790 | 0.871 | 0.783 | 0.845 | 0.750 | - | 0.855 | 0.920 |
| Lights | 63 | 586 | 81 | 0 | - | 730 | 28 | 613 | 80 | 0 | - | 721 | 41 | 108 | 62 | 0 | - | 211 | 97 | 111 | 68 | 3 | - | 279 | 1941 |
| % Lights | 92.6 | 95.1 | 98.8 | - | - | 95.3 | 100.0 | 97.0 | 93.0 | - | - | 96.6 | 97.6 | 95.6 | 98.4 | - | - | 96.8 | 96.0 | 93.3 | 95.8 | 100.0 | - | 94.9 | 95.9 |
| Other Vehicles | 5 | 30 | 1 | 0 | - | 36 | 0 | 19 | 6 | 0 | - | 25 | 1 | 5 | 1 | 0 | - | 7 | 4 | 8 | 3 | 0 | - | 15 | 83 |
| % Other Vehicles | 7.4 | 4.9 | 1.2 | - | - | 4.7 | 0.0 | 3.0 | 7.0 | - | - | 3.4 | 2.4 | 4.4 | 1.6 | - | - | 3.2 | 4.0 | 6.7 | 4.2 | 0.0 | - | 5.1 | 4.1 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 9 | - | - | - | - | - | 24 | - | - | - | - | - | 18 | - | - | - | - | - | 20 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Wayne Ave & Lancaster Ave
Site Code:
Start Date: 12/13/2018


Turning Movement Peak Hour Data Plot (11:30)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Aberdeen Ave & Midland Ave
Site Code:
Start Date: 12/18/2018

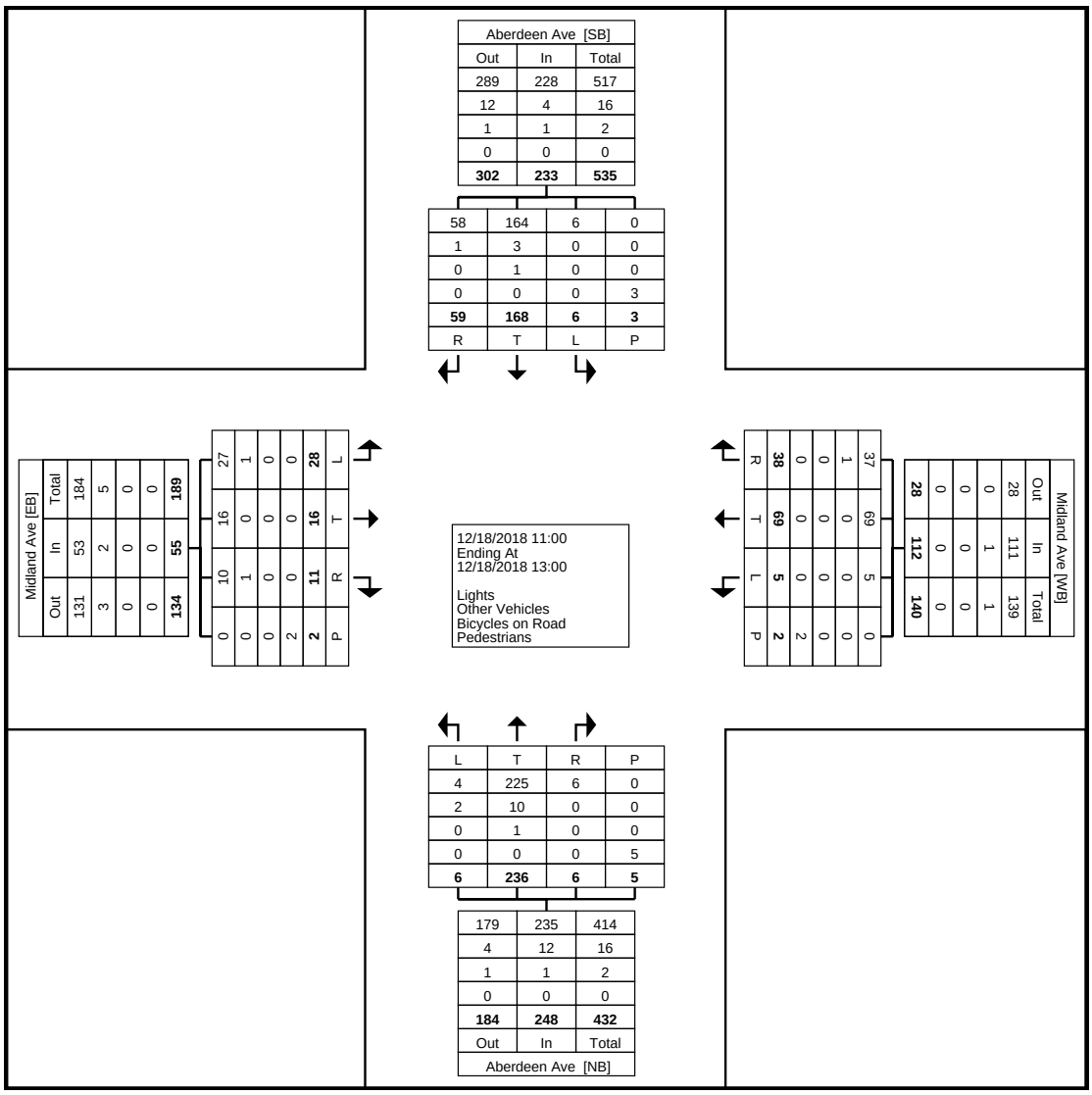

# Turning Movement Data

| Start Time | Midland Ave Eastbound | | | | | Midland Ave Westbound | | | | | Aberdeen Ave Northbound | | | | | Aberdeen Ave Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 11:00 | 4 | 1 | 2 | 1 | 7 | 0 | 8 | 2 | 0 | 10 | 1 | 30 | 2 | 2 | 33 | 1 | 23 | 0 | 0 | 24 | 74 |
| 11:15 | 5 | 1 | 1 | 0 | 7 | 1 | 6 | 4 | 0 | 11 | 1 | 37 | 0 | 0 | 38 | 1 | 18 | 8 | 1 | 27 | 83 |
| 11:30 | 1 | 2 | 3 | 1 | 6 | 1 | 7 | 4 | 0 | 12 | 1 | 31 | 0 | 0 | 32 | 0 | 17 | 4 | 0 | 21 | 71 |
| 11:45 | 4 | 2 | 0 | 0 | 6 | 1 | 12 | 5 | 0 | 18 | 1 | 28 | 0 | 1 | 29 | 1 | 19 | 6 | 0 | 26 | 79 |
| Hourly Total | 14 | 6 | 6 | 2 | 26 | 3 | 33 | 15 | 0 | 51 | 4 | 126 | 2 | 3 | 132 | 3 | 77 | 18 | 1 | 98 | 307 |
| 12:00 | 2 | 3 | 1 | 0 | 6 | 0 | 6 | 2 | 0 | 8 | 1 | 21 | 2 | 0 | 24 | 0 | 27 | 9 | 0 | 36 | 74 |
| 12:15 | 8 | 2 | 2 | 0 | 12 | 1 | 5 | 10 | 2 | 16 | 0 | 32 | 1 | 1 | 33 | 1 | 19 | 7 | 1 | 27 | 88 |
| 12:30 | 4 | 3 | 1 | 0 | 8 | 0 | 15 | 6 | 0 | 21 | 0 | 30 | 0 | 0 | 30 | 0 | 22 | 10 | 0 | 32 | 91 |
| 12:45 | 0 | 2 | 1 | 0 | 3 | 1 | 10 | 5 | 0 | 16 | 1 | 27 | 1 | 1 | 29 | 2 | 23 | 15 | 1 | 40 | 88 |
| Hourly Total | 14 | 10 | 5 | 0 | 29 | 2 | 36 | 23 | 2 | 61 | 2 | 110 | 4 | 2 | 116 | 3 | 91 | 41 | 2 | 135 | 341 |
| Grand Total | 28 | 16 | 11 | 2 | 55 | 5 | 69 | 38 | 2 | 112 | 6 | 236 | 6 | 5 | 248 | 6 | 168 | 59 | 3 | 233 | 648 |
| Approach % | 50.9 | 29.1 | 20.0 | - | - | 4.5 | 61.6 | 33.9 | - | - | 2.4 | 95.2 | 2.4 | - | - | 2.6 | 72.1 | 25.3 | - | - | - |
| Total % | 4.3 | 2.5 | 1.7 | - | 8.5 | 0.8 | 10.6 | 5.9 | - | 17.3 | 0.9 | 36.4 | 0.9 | - | 38.3 | 0.9 | 25.9 | 9.1 | - | 36.0 | - |
| Lights | 27 | 16 | 10 | - | 53 | 5 | 69 | 37 | - | 111 | 4 | 225 | 6 | - | 235 | 6 | 164 | 58 | - | 228 | 627 |
| % Lights | 96.4 | 100.0 | 90.9 | - | 96.4 | 100.0 | 100.0 | 97.4 | - | 99.1 | 66.7 | 95.3 | 100.0 | - | 94.8 | 100.0 | 97.6 | 98.3 | - | 97.9 | 96.8 |
| Other Vehicles | 1 | 0 | 1 | - | 2 | 0 | 0 | 1 | - | 1 | 2 | 10 | 0 | - | 12 | 0 | 3 | 1 | - | 4 | 19 |
| % Other Vehicles | 3.6 | 0.0 | 9.1 | - | 3.6 | 0.0 | 0.0 | 2.6 | - | 0.9 | 33.3 | 4.2 | 0.0 | - | 4.8 | 0.0 | 1.8 | 1.7 | - | 1.7 | 2.9 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | - | 1 | 0 | 1 | 0 | - | 1 | 2 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.4 | 0.0 | - | 0.4 | 0.0 | 0.6 | 0.0 | - | 0.4 | 0.3 |
| Pedestrians | - | - | - | 2 | - | - | - | - | 2 | - | - | - | - | 5 | - | - | - | - | 3 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Aberdeen Ave & Midland Ave
Site Code:
Start Date: 12/18/2018


Turning Movement Data Plot

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Traffic Planning and Design, Inc
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Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Count Name: Aberdeen Ave & Midland Ave
Site Code:
Start Date: 12/18/2018


# Turning Movement Peak Hour Data (12:00)

| Start Time | Midland Ave Eastbound | | | | | Midland Ave Westbound | | | | | Aberdeen Ave Northbound | | | | | Aberdeen Ave Southbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Left | Thru | Right | Peds | App. Total | Int. Total |
| 12:00 | 2 | 3 | 1 | 0 | 6 | 0 | 6 | 2 | 0 | 8 | 1 | 21 | 2 | 0 | 24 | 0 | 27 | 9 | 0 | 36 | 74 |
| 12:15 | 8 | 2 | 2 | 0 | 12 | 1 | 5 | 10 | 2 | 16 | 0 | 32 | 1 | 1 | 33 | 1 | 19 | 7 | 1 | 27 | 88 |
| 12:30 | 4 | 3 | 1 | 0 | 8 | 0 | 15 | 6 | 0 | 21 | 0 | 30 | 0 | 0 | 30 | 0 | 22 | 10 | 0 | 32 | 91 |
| 12:45 | 0 | 2 | 1 | 0 | 3 | 1 | 10 | 5 | 0 | 16 | 1 | 27 | 1 | 1 | 29 | 2 | 23 | 15 | 1 | 40 | 88 |
| Total | 14 | 10 | 5 | 0 | 29 | 2 | 36 | 23 | 2 | 61 | 2 | 110 | 4 | 2 | 116 | 3 | 91 | 41 | 2 | 135 | 341 |
| Approach % | 48.3 | 34.5 | 17.2 | - | - | 3.3 | 59.0 | 37.7 | - | - | 1.7 | 94.8 | 3.4 | - | - | 2.2 | 67.4 | 30.4 | - | - | - |
| Total % | 4.1 | 2.9 | 1.5 | - | 8.5 | 0.6 | 10.6 | 6.7 | - | 17.9 | 0.6 | 32.3 | 1.2 | - | 34.0 | 0.9 | 26.7 | 12.0 | - | 39.6 | - |
| PHF | 0.438 | 0.833 | 0.625 | - | 0.604 | 0.500 | 0.600 | 0.575 | - | 0.726 | 0.500 | 0.859 | 0.500 | - | 0.879 | 0.375 | 0.843 | 0.683 | - | 0.844 | 0.937 |
| Lights | 14 | 10 | 5 | - | 29 | 2 | 36 | 22 | - | 60 | 0 | 107 | 4 | - | 111 | 3 | 88 | 40 | - | 131 | 331 |
| % Lights | 100.0 | 100.0 | 100.0 | - | 100.0 | 100.0 | 100.0 | 95.7 | - | 98.4 | 0.0 | 97.3 | 100.0 | - | 95.7 | 100.0 | 96.7 | 97.6 | - | 97.0 | 97.1 |
| Other Vehicles | 0 | 0 | 0 | - | 0 | 0 | 0 | 1 | - | 1 | 2 | 2 | 0 | - | 4 | 0 | 2 | 1 | - | 3 | 8 |
| % Other Vehicles | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 4.3 | - | 1.6 | 100.0 | 1.8 | 0.0 | - | 3.4 | 0.0 | 2.2 | 2.4 | - | 2.2 | 2.3 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | - | 0 | 0 | 1 | 0 | - | 1 | 0 | 1 | 0 | - | 1 | 2 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.9 | 0.0 | - | 0.9 | 0.0 | 1.1 | 0.0 | - | 0.7 | 0.6 |
| Pedestrians | - | - | - | 0 | - | - | - | - | 2 | - | - | - | - | 2 | - | - | - | - | 2 | - | - |
| % Pedestrians | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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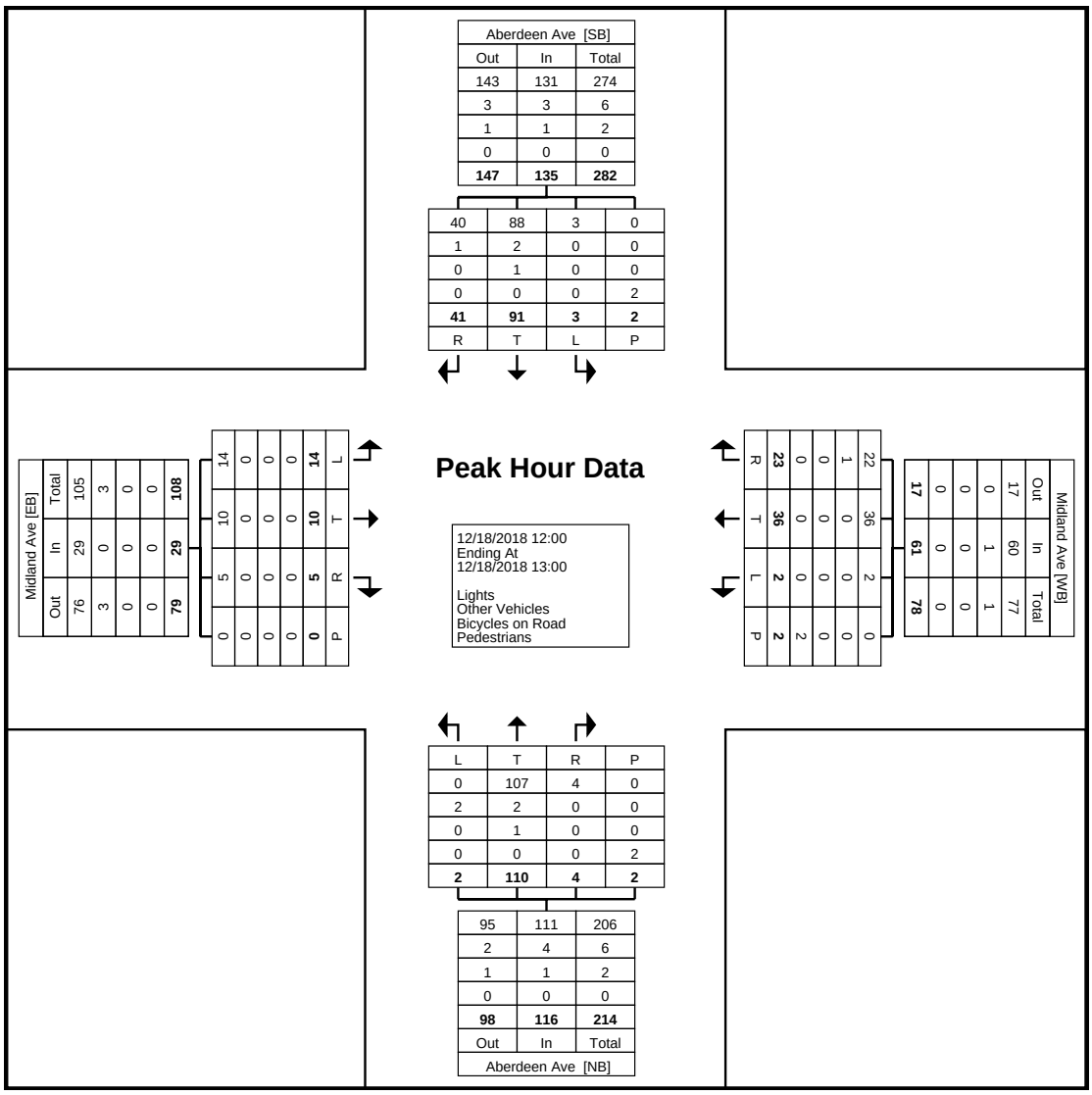
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Aberdeen Ave & Midland Ave
Site Code:
Start Date: 12/18/2018


Turning Movement Peak Hour Data Plot (12:00)

Traffic Planning and Design, Inc
2500 East High Street
Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Louella Ave & Lancaster Ave
Site Code:
Start Date: 12/18/2018


# Turning Movement Data

| Start Time | Lancaster Ave Eastbound | | | | | Lancaster Ave Westbound | | | | Louella Ave Northbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Peds | App. Total | Left | Right | Right on Red | Peds | App. Total | Int. Total |
| 11:00 | 161 | 25 | 0 | 3 | 186 | 21 | 162 | 1 | 183 | 5 | 10 | 0 | 0 | 15 | 384 |
| 11:15 | 174 | 14 | 0 | 4 | 188 | 12 | 197 | 2 | 209 | 4 | 7 | 0 | 1 | 11 | 408 |
| 11:30 | 171 | 19 | 0 | 5 | 190 | 7 | 225 | 2 | 232 | 5 | 11 | 0 | 1 | 16 | 438 |
| 11:45 | 201 | 13 | 0 | 12 | 214 | 17 | 205 | 5 | 222 | 5 | 11 | 0 | 3 | 16 | 452 |
| Hourly Total | 707 | 71 | 0 | 24 | 778 | 57 | 789 | 10 | 846 | 19 | 39 | 0 | 5 | 58 | 1682 |
| 12:00 | 171 | 13 | 0 | 0 | 184 | 32 | 174 | 0 | 206 | 4 | 11 | 0 | 4 | 15 | 405 |
| 12:15 | 205 | 17 | 0 | 1 | 222 | 17 | 219 | 8 | 236 | 5 | 7 | 0 | 3 | 12 | 470 |
| 12:30 | 185 | 9 | 0 | 7 | 194 | 22 | 190 | 0 | 212 | 6 | 12 | 0 | 4 | 18 | 424 |
| 12:45 | 170 | 19 | 0 | 3 | 189 | 31 | 164 | 8 | 195 | 5 | 10 | 0 | 2 | 15 | 399 |
| Hourly Total | 731 | 58 | 0 | 11 | 789 | 102 | 747 | 16 | 849 | 20 | 40 | 0 | 13 | 60 | 1698 |
| Grand Total | 1438 | 129 | 0 | 35 | 1567 | 159 | 1536 | 26 | 1695 | 39 | 79 | 0 | 18 | 118 | 3380 |
| Approach % | 91.8 | 8.2 | 0.0 | - | - | 9.4 | 90.6 | - | - | 33.1 | 66.9 | 0.0 | - | - | - |
| Total % | 42.5 | 3.8 | 0.0 | - | 46.4 | 4.7 | 45.4 | - | 50.1 | 1.2 | 2.3 | 0.0 | - | 3.5 | - |
| Lights | 1384 | 129 | 0 | - | 1513 | 152 | 1457 | - | 1609 | 37 | 79 | 0 | - | 116 | 3238 |
| % Lights | 96.2 | 100.0 | - | - | 96.6 | 95.6 | 94.9 | - | 94.9 | 94.9 | 100.0 | - | - | 98.3 | 95.8 |
| Other Vehicles | 54 | 0 | 0 | - | 54 | 7 | 78 | - | 85 | 2 | 0 | 0 | - | 2 | 141 |
| % Other Vehicles | 3.8 | 0.0 | - | - | 3.4 | 4.4 | 5.1 | - | 5.0 | 5.1 | 0.0 | - | - | 1.7 | 4.2 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 1 | - | 1 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.1 | - | 0.1 | 0.0 | 0.0 | - | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | 35 | - | - | - | 26 | - | - | - | - | 18 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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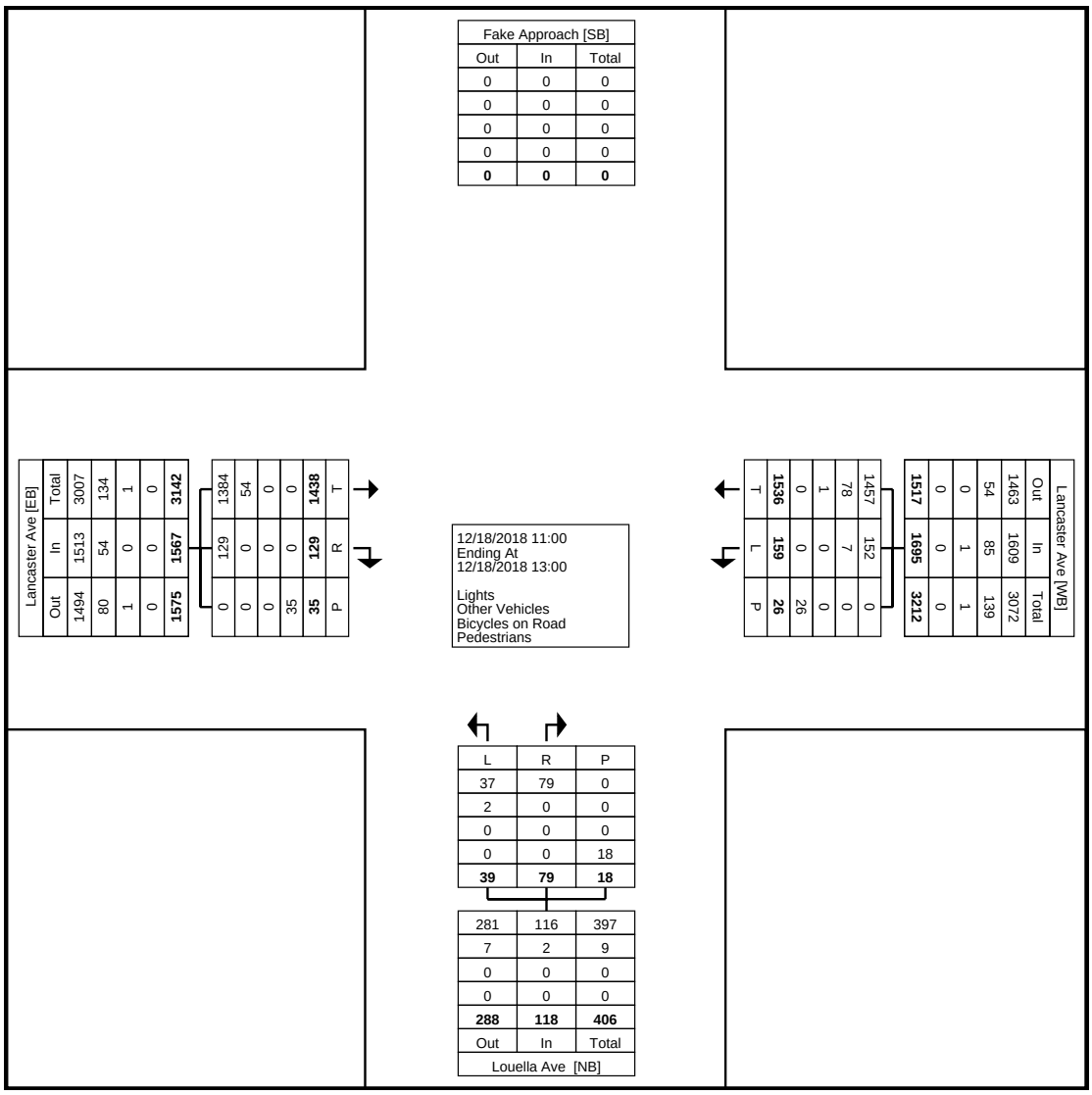
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Louella Ave & Lancaster Ave
Site Code:
Start Date: 12/18/2018


Turning Movement Data Plot

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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Louella Ave & Lancaster Ave
Site Code:
Start Date: 12/18/2018


# Turning Movement Peak Hour Data (11:30)

| Start Time | Lancaster Ave Eastbound | | | | | Lancaster Ave Westbound | | | | Louella Ave Northbound | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Peds | App. Total | Left | Right | Right on Red | Peds | App. Total | Int. Total |
| 11:30 | 171 | 19 | 0 | 5 | 190 | 7 | 225 | 2 | 232 | 5 | 11 | 0 | 1 | 16 | 438 |
| 11:45 | 201 | 13 | 0 | 12 | 214 | 17 | 205 | 5 | 222 | 5 | 11 | 0 | 3 | 16 | 452 |
| 12:00 | 171 | 13 | 0 | 0 | 184 | 32 | 174 | 0 | 206 | 4 | 11 | 0 | 4 | 15 | 405 |
| 12:15 | 205 | 17 | 0 | 1 | 222 | 17 | 219 | 8 | 236 | 5 | 7 | 0 | 3 | 12 | 470 |
| Total | 748 | 62 | 0 | 18 | 810 | 73 | 823 | 15 | 896 | 19 | 40 | 0 | 11 | 59 | 1765 |
| Approach % | 92.3 | 7.7 | 0.0 | - | - | 8.1 | 91.9 | - | - | 32.2 | 67.8 | 0.0 | - | - | - |
| Total % | 42.4 | 3.5 | 0.0 | - | 45.9 | 4.1 | 46.6 | - | 50.8 | 1.1 | 2.3 | 0.0 | - | 3.3 | - |
| PHF | 0.912 | 0.816 | 0.000 | - | 0.912 | 0.570 | 0.914 | - | 0.949 | 0.950 | 0.909 | 0.000 | - | 0.922 | 0.939 |
| Lights | 716 | 62 | 0 | - | 778 | 70 | 784 | - | 854 | 18 | 40 | 0 | - | 58 | 1690 |
| % Lights | 95.7 | 100.0 | - | - | 96.0 | 95.9 | 95.3 | - | 95.3 | 94.7 | 100.0 | - | - | 98.3 | 95.8 |
| Other Vehicles | 32 | 0 | 0 | - | 32 | 3 | 38 | - | 41 | 1 | 0 | 0 | - | 1 | 74 |
| % Other Vehicles | 4.3 | 0.0 | - | - | 4.0 | 4.1 | 4.6 | - | 4.6 | 5.3 | 0.0 | - | - | 1.7 | 4.2 |
| Bicycles on Road | 0 | 0 | 0 | - | 0 | 0 | 1 | - | 1 | 0 | 0 | 0 | - | 0 | 1 |
| % Bicycles on Road | 0.0 | 0.0 | - | - | 0.0 | 0.0 | 0.1 | - | 0.1 | 0.0 | 0.0 | - | - | 0.0 | 0.1 |
| Pedestrians | - | - | - | 18 | - | - | - | 15 | - | - | - | - | 11 | - | - |
| % Pedestrians | - | - | - | 100.0 | - | - | - | 100.0 | - | - | - | - | 100.0 | - | - |

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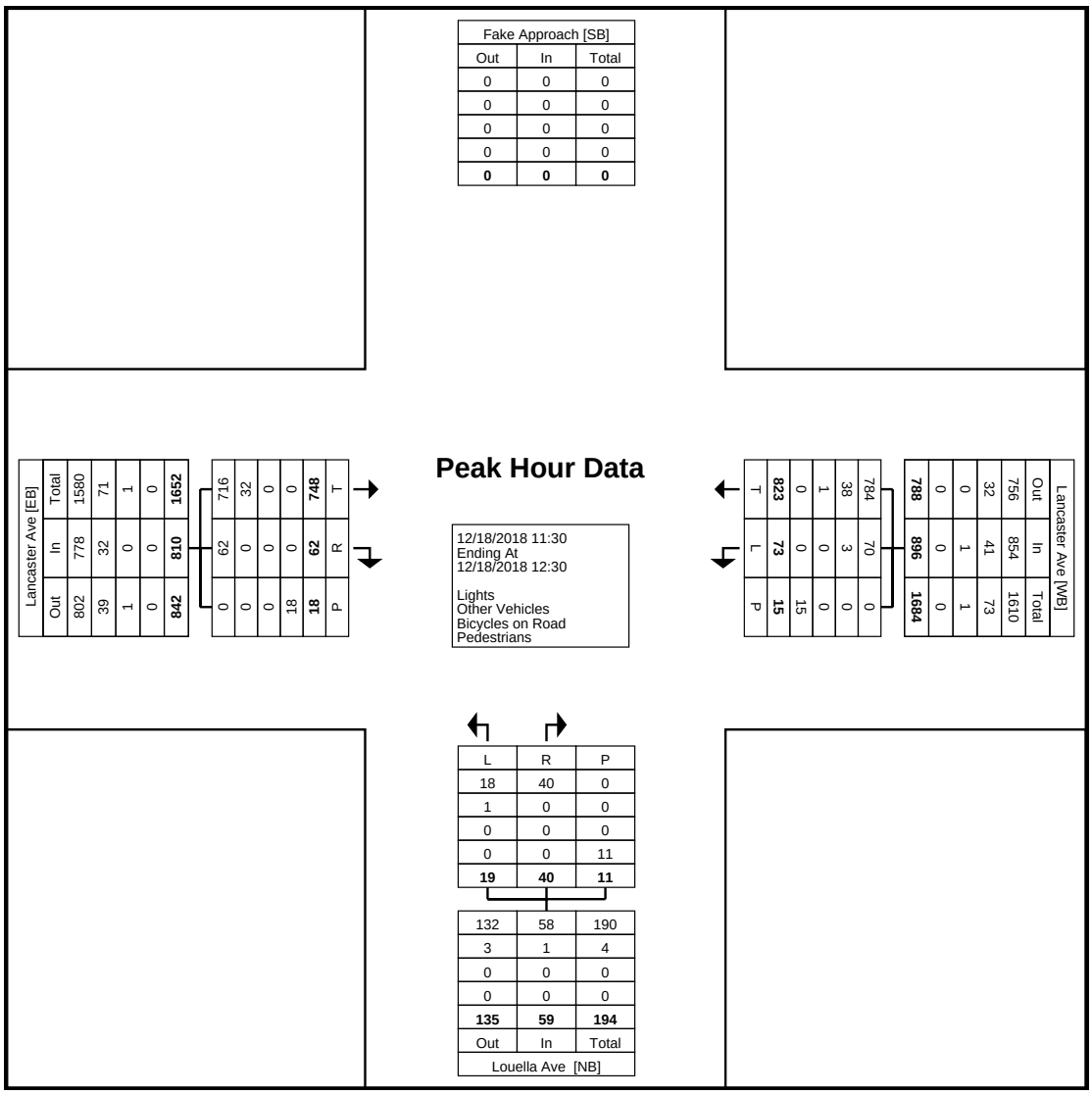
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: Louella Ave & Lancaster Ave
Site Code:
Start Date: 12/18/2018


Turning Movement Peak Hour Data Plot (11:30)

Traffic Planning and Design, Inc
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Suite 650
Pottstown, Pennsylvania, United States 19464
610.326.3100 mbressler@trafficpd.com

Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: St Davids Rd & Lancaster Ave
Site Code:
Start Date: 12/18/2018


# Turning Movement Data

| Start Time | Lancaster Ave Eastbound | | | | | | Lancaster Ave Westbound | | | | | | St Davids Rd Northbound | | | | | | St Davids Rd Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | |
| 11:00 | 3 | 185 | 1 | 0 | 0 | 189 | 4 | 190 | 7 | 1 | 0 | 202 | 3 | 5 | 10 | 0 | 0 | 18 | 7 | 2 | 5 | 2 | 0 | 16 | 425 |
| 11:15 | 4 | 203 | 2 | 0 | 0 | 209 | 2 | 221 | 16 | 0 | 0 | 239 | 2 | 1 | 8 | 1 | 1 | 12 | 16 | 2 | 5 | 2 | 0 | 25 | 485 |
| 11:30 | 3 | 196 | 2 | 0 | 0 | 201 | 5 | 244 | 14 | 1 | 0 | 264 | 4 | 4 | 8 | 0 | 0 | 16 | 10 | 2 | 6 | 5 | 0 | 23 | 504 |
| 11:45 | 4 | 213 | 4 | 1 | 0 | 222 | 6 | 290 | 24 | 1 | 0 | 321 | 1 | 3 | 10 | 0 | 0 | 14 | 13 | 2 | 11 | 0 | 2 | 26 | 583 |
| Hourly Total | 14 | 797 | 9 | 1 | 0 | 821 | 17 | 945 | 61 | 3 | 0 | 1026 | 10 | 13 | 36 | 1 | 1 | 60 | 46 | 8 | 27 | 9 | 2 | 90 | 1997 |
| 12:00 | 6 | 215 | 2 | 1 | 1 | 224 | 11 | 285 | 20 | 0 | 0 | 316 | 2 | 1 | 6 | 1 | 0 | 10 | 15 | 4 | 6 | 1 | 0 | 26 | 576 |
| 12:15 | 14 | 221 | 5 | 0 | 0 | 240 | 6 | 256 | 14 | 0 | 0 | 276 | 4 | 3 | 7 | 1 | 0 | 15 | 11 | 5 | 12 | 1 | 1 | 29 | 560 |
| 12:30 | 7 | 221 | 5 | 0 | 0 | 233 | 8 | 248 | 18 | 0 | 0 | 274 | 3 | 2 | 16 | 0 | 1 | 21 | 19 | 8 | 9 | 0 | 0 | 36 | 564 |
| 12:45 | 5 | 251 | 4 | 0 | 0 | 260 | 8 | 231 | 19 | 2 | 2 | 260 | 1 | 4 | 12 | 0 | 2 | 17 | 14 | 6 | 5 | 0 | 0 | 25 | 562 |
| Hourly Total | 32 | 908 | 16 | 1 | 1 | 957 | 33 | 1020 | 71 | 2 | 2 | 1126 | 10 | 10 | 41 | 2 | 3 | 63 | 59 | 23 | 32 | 2 | 1 | 116 | 2262 |
| 13:00 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| Grand Total | 46 | 1705 | 25 | 2 | 1 | 1778 | 51 | 1967 | 132 | 5 | 2 | 2155 | 20 | 23 | 77 | 3 | 4 | 123 | 105 | 31 | 59 | 11 | 3 | 206 | 4262 |
| Approach % | 2.6 | 95.9 | 1.4 | 0.1 | - | - | 2.4 | 91.3 | 6.1 | 0.2 | - | - | 16.3 | 18.7 | 62.6 | 2.4 | - | - | 51.0 | 15.0 | 28.6 | 5.3 | - | - | - |
| Total % | 1.1 | 40.0 | 0.6 | 0.0 | - | 41.7 | 1.2 | 46.2 | 3.1 | 0.1 | - | 50.6 | 0.5 | 0.5 | 1.8 | 0.1 | - | 2.9 | 2.5 | 0.7 | 1.4 | 0.3 | - | 4.8 | - |
| Lights | 46 | 1641 | 22 | 2 | - | 1711 | 48 | 1898 | 131 | 5 | - | 2082 | 20 | 23 | 76 | 3 | - | 122 | 105 | 31 | 56 | 11 | - | 203 | 4118 |
| % Lights | 100.0 | 96.2 | 88.0 | 100.0 | - | 96.2 | 94.1 | 96.5 | 99.2 | 100.0 | - | 96.6 | 100.0 | 100.0 | 98.7 | 100.0 | - | 99.2 | 100.0 | 100.0 | 94.9 | 100.0 | - | 98.5 | 96.6 |
| Other Vehicles | 0 | 64 | 3 | 0 | - | 67 | 3 | 69 | 1 | 0 | - | 73 | 0 | 0 | 1 | 0 | - | 1 | 0 | 0 | 3 | 0 | - | 3 | 144 |
| % Other Vehicles | 0.0 | 3.8 | 12.0 | 0.0 | - | 3.8 | 5.9 | 3.5 | 0.8 | 0.0 | - | 3.4 | 0.0 | 0.0 | 1.3 | 0.0 | - | 0.8 | 0.0 | 0.0 | 5.1 | 0.0 | - | 1.5 | 3.4 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 1 | - | - | - | - | - | 2 | - | - | - | - | - | 4 | - | - | - | - | - | 3 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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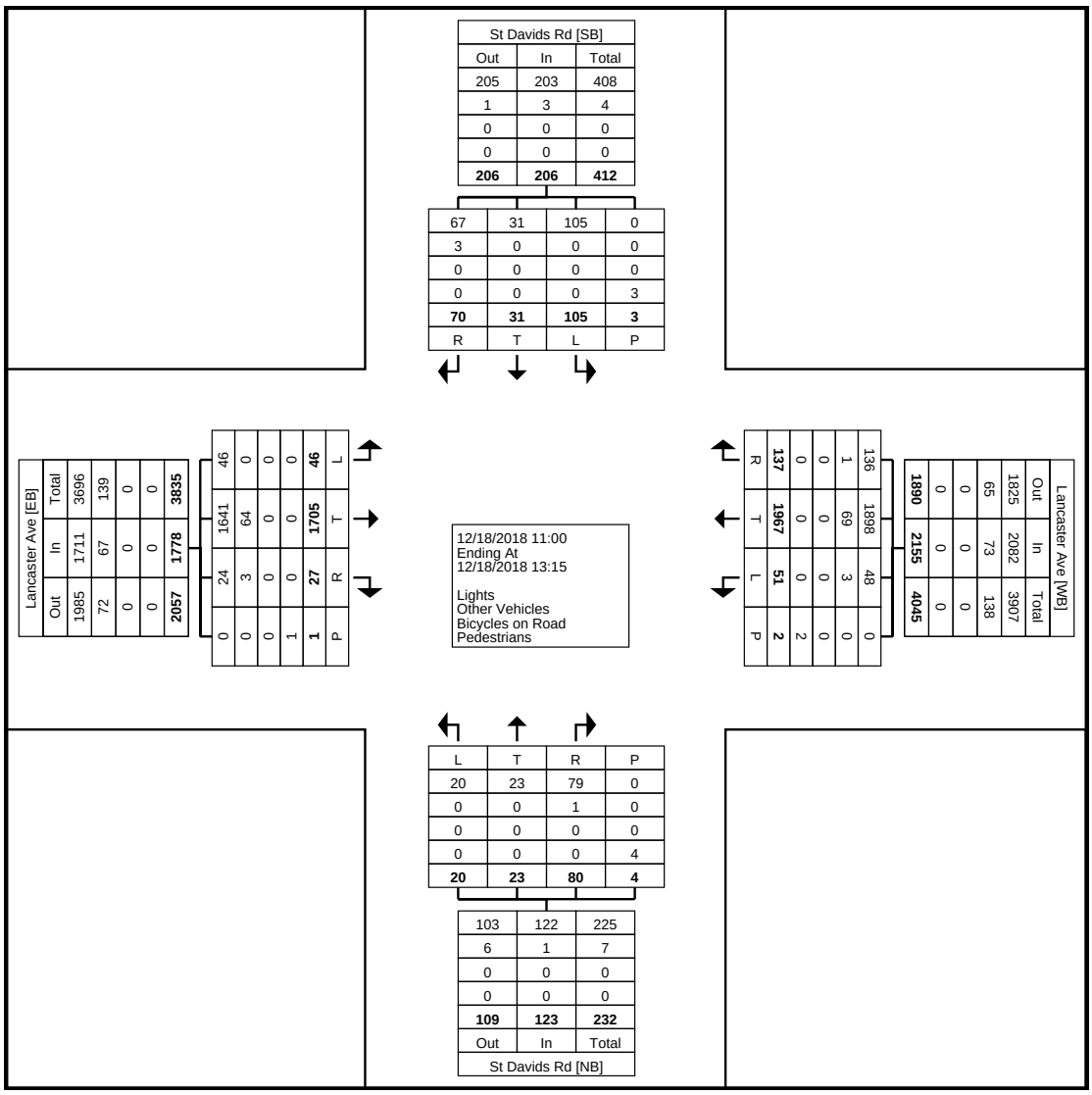
Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: St Davids Rd & Lancaster Ave
Site Code:
Start Date: 12/18/2018


Turning Movement Data Plot

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Counted By: Mio:
Set Up By: JH:
Weather:Clear:

Count Name: St Davids Rd & Lancaster Ave
Site Code:
Start Date: 12/18/2018


# Turning Movement Peak Hour Data (11:45)

| Start Time | Lancaster Ave Eastbound | | | | | | Lancaster Ave Westbound | | | | | | St Davids Rd Northbound | | | | | | St Davids Rd Southbound | | | | | | Int. Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | Left | Thru | Right | Right on Red | Peds | App. Total | |
| 11:45 | 4 | 213 | 4 | 1 | 0 | 222 | 6 | 290 | 24 | 1 | 0 | 321 | 1 | 3 | 10 | 0 | 0 | 14 | 13 | 2 | 11 | 0 | 2 | 26 | 583 |
| 12:00 | 6 | 215 | 2 | 1 | 1 | 224 | 11 | 285 | 20 | 0 | 0 | 316 | 2 | 1 | 6 | 1 | 0 | 10 | 15 | 4 | 6 | 1 | 0 | 26 | 576 |
| 12:15 | 14 | 221 | 5 | 0 | 0 | 240 | 6 | 256 | 14 | 0 | 0 | 276 | 4 | 3 | 7 | 1 | 0 | 15 | 11 | 5 | 12 | 1 | 1 | 29 | 560 |
| 12:30 | 7 | 221 | 5 | 0 | 0 | 233 | 8 | 248 | 18 | 0 | 0 | 274 | 3 | 2 | 16 | 0 | 1 | 21 | 19 | 8 | 9 | 0 | 0 | 36 | 564 |
| Total | 31 | 870 | 16 | 2 | 1 | 919 | 31 | 1079 | 76 | 1 | 0 | 1187 | 10 | 9 | 39 | 2 | 1 | 60 | 58 | 19 | 38 | 2 | 3 | 117 | 2283 |
| Approach % | 3.4 | 94.7 | 1.7 | 0.2 | - | - | 2.6 | 90.9 | 6.4 | 0.1 | - | - | 16.7 | 15.0 | 65.0 | 3.3 | - | - | 49.6 | 16.2 | 32.5 | 1.7 | - | - | - |
| Total % | 1.4 | 38.1 | 0.7 | 0.1 | - | 40.3 | 1.4 | 47.3 | 3.3 | 0.0 | - | 52.0 | 0.4 | 0.4 | 1.7 | 0.1 | - | 2.6 | 2.5 | 0.8 | 1.7 | 0.1 | - | 5.1 | - |
| PHF | 0.554 | 0.984 | 0.800 | 0.500 | - | 0.957 | 0.705 | 0.930 | 0.792 | 0.250 | - | 0.924 | 0.625 | 0.750 | 0.609 | 0.500 | - | 0.714 | 0.763 | 0.594 | 0.792 | 0.500 | - | 0.813 | 0.979 |
| Lights | 31 | 839 | 14 | 2 | - | 886 | 28 | 1052 | 76 | 1 | - | 1157 | 10 | 9 | 38 | 2 | - | 59 | 58 | 19 | 36 | 2 | - | 115 | 2217 |
| % Lights | 100.0 | 96.4 | 87.5 | 100.0 | - | 96.4 | 90.3 | 97.5 | 100.0 | 100.0 | - | 97.5 | 100.0 | 100.0 | 97.4 | 100.0 | - | 98.3 | 100.0 | 100.0 | 94.7 | 100.0 | - | 98.3 | 97.1 |
| Other Vehicles | 0 | 31 | 2 | 0 | - | 33 | 3 | 27 | 0 | 0 | - | 30 | 0 | 0 | 1 | 0 | - | 1 | 0 | 0 | 2 | 0 | - | 2 | 66 |
| % Other Vehicles | 0.0 | 3.6 | 12.5 | 0.0 | - | 3.6 | 9.7 | 2.5 | 0.0 | 0.0 | - | 2.5 | 0.0 | 0.0 | 2.6 | 0.0 | - | 1.7 | 0.0 | 0.0 | 5.3 | 0.0 | - | 1.7 | 2.9 |
| Bicycles on Road | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 |
| % Bicycles on Road | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 |
| Pedestrians | - | - | - | - | 1 | - | - | - | - | - | 0 | - | - | - | - | - | 1 | - | - | - | - | - | 3 | - | - |
| % Pedestrians | - | - | - | - | 100.0 | - | - | - | - | - | - | - | - | - | - | - | 100.0 | - | - | - | - | - | 100.0 | - | - |

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Counted By: Mio:
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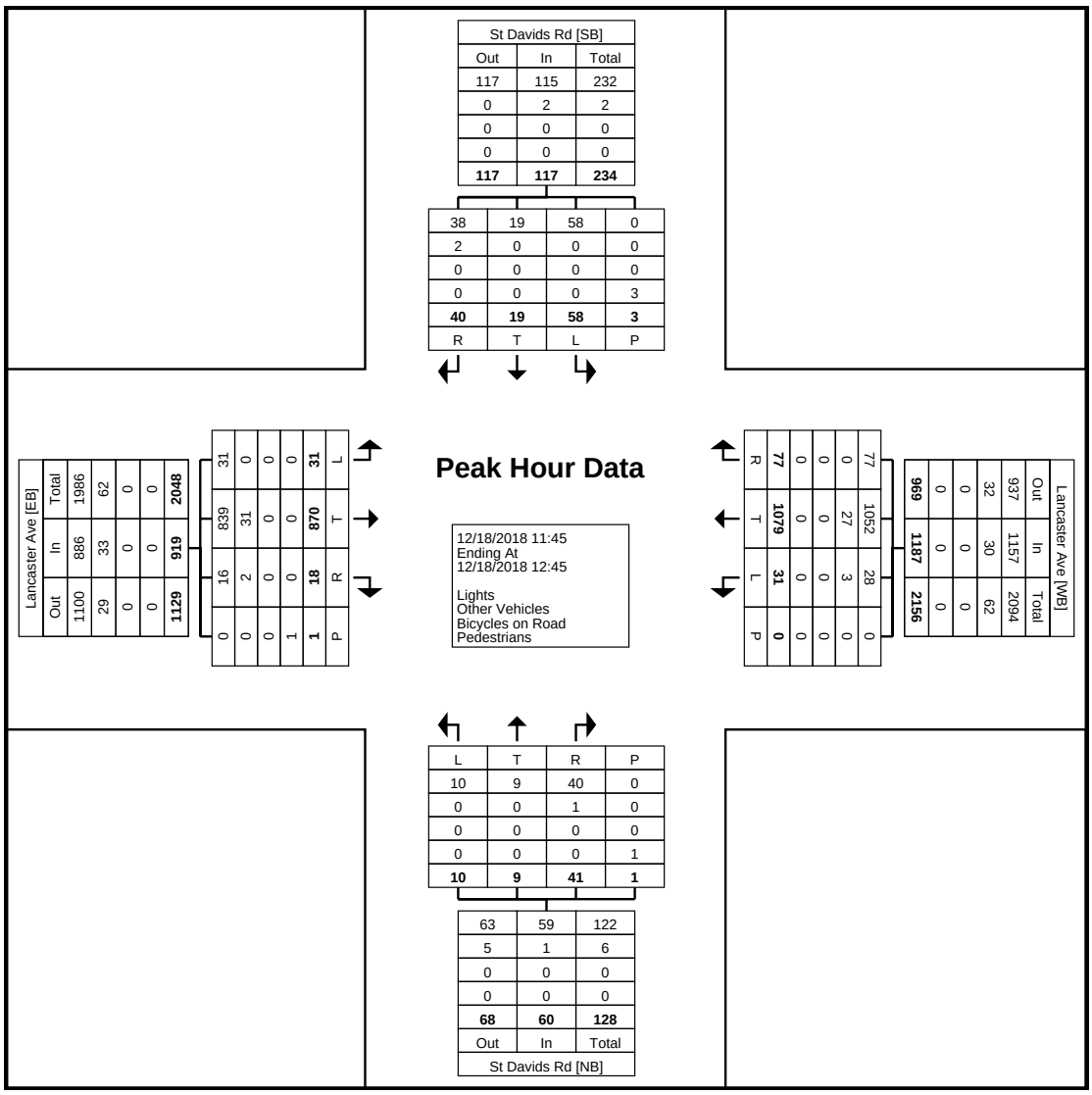
Weather:Clear:

Count Name: St Davids Rd & Lancaster Ave
Site Code:
Start Date: 12/18/2018


Turning Movement Peak Hour Data Plot (11:45)

KARA.00010
Existing Sunoco/BP

May 31, 2018 & Tuesday, September 11, 2018

| | Western Sunoco Driveway (Lancaster Avenue) | | | | Eastern Sunoco Driveway (Lancaster Avenue) | | | | Western BP Driveway (Lancaster Avenue) | | | | Eastern BP Driveway (Lancaster Avenue) | | | | Northern Sunoco Driveway (Aberdeen Avenue) | | | | Southern Sunoco Driveway (Aberdeen Avenue) | | | | TOTAL SITE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | ENTER | EXIT | TOTAL | PEAK |
| 7:00 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 4 | 0 | 3 | 0 | 2 | 1 | 1 | 0 | 3 | 3 | 1 | 1 | 4 | 1 | 6 | 2 | 0 | 19 | 18 | 37 | 130 |
| 7:15 | 0 | 4 | 0 | 0 | 0 | 0 | 2 | 6 | 2 | 8 | 0 | 2 | 1 | 1 | 1 | 7 | 2 | 1 | 0 | 2 | 0 | 2 | 1 | 0 | 21 | 21 | 42 | 128 |
| 7:30 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 0 | 2 | 1 | 0 | 1 | 5 | 2 | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 12 | 13 | 25 | 116 |
| 7:45 | 0 | 3 | 0 | 0 | 0 | 1 | 1 | 3 | 1 | 5 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 2 | 0 | 0 | 0 | 3 | 1 | 0 | 20 | 6 | 26 | 124 |
| 8:00 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 5 | 0 | 1 | 0 | 0 | 1 | 7 | 3 | 1 | 1 | 1 | 0 | 3 | 2 | 0 | 16 | 19 | 35 | 124 |
| 8:15 | 0 | 4 | 0 | 0 | 0 | 0 | 1 | 4 | 1 | 5 | 0 | 0 | 0 | 1 | 1 | 6 | 1 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 14 | 16 | 30 | |
| 8:30 | 0 | 1 | 0 | 1 | 1 | 2 | 1 | 3 | 1 | 5 | 0 | 1 | 0 | 0 | 0 | 5 | 2 | 1 | 1 | 2 | 1 | 3 | 1 | 1 | 17 | 16 | 33 | |
| 8:45 | 0 | 4 | 0 | 0 | 0 | 1 | 1 | 4 | 0 | 2 | 0 | 1 | 1 | 1 | 0 | 4 | 2 | 1 | 0 | 0 | 0 | 1 | 2 | 1 | 13 | 13 | 26 | |
| PEAK HOUR | 0 | 12 | 0 | 0 | 0 | 2 | 5 | 15 | 3 | 20 | 0 | 6 | 3 | 3 | 2 | 16 | 11 | 5 | 1 | 8 | 1 | 12 | 4 | 1 | 72 | 58 | 130 | |

| | Western Sunoco Driveway (Lancaster Avenue) | | | | Eastern Sunoco Driveway (Lancaster Avenue) | | | | Western BP Driveway (Lancaster Avenue) | | | | Eastern BP Driveway (Lancaster Avenue) | | | | Northern Sunoco Driveway (Aberdeen Avenue) | | | | Southern Sunoco Driveway (Aberdeen Avenue) | | | | TOTAL SITE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | ENTER | EXIT | TOTAL | PEAK |
| 2:00 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 5 | 0 | 3 | 2 | 0 | 1 | 4 | 1 | 3 | 1 | 2 | 2 | 1 | 0 | 0 | 20 | 14 | 34 | 164 |
| 2:15 | 0 | 2 | 0 | 0 | 0 | 6 | 0 | 2 | 2 | 8 | 1 | 0 | 2 | 0 | 3 | 6 | 2 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 23 | 15 | 38 | 163 |
| 2:30 | 1 | 1 | 0 | 1 | 1 | 3 | 1 | 3 | 2 | 5 | 2 | 1 | 3 | 1 | 3 | 9 | 0 | 1 | 2 | 2 | 0 | 1 | 0 | 0 | 19 | 24 | 43 | 182 |
| 2:45 | 0 | 6 | 0 | 1 | 1 | 6 | 0 | 4 | 1 | 13 | 0 | 1 | 0 | 0 | 3 | 7 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 0 | 30 | 19 | 49 | 202 |
| 3:00 | 0 | 2 | 0 | 1 | 1 | 3 | 0 | 5 | 2 | 4 | 0 | 0 | 0 | 0 | 1 | 5 | 2 | 3 | 0 | 1 | 1 | 2 | 0 | 0 | 20 | 13 | 33 | 186 |
| 3:15 | 1 | 8 | 0 | 0 | 0 | 9 | 2 | 8 | 0 | 11 | 0 | 0 | 1 | 0 | 0 | 7 | 0 | 4 | 2 | 0 | 1 | 2 | 0 | 1 | 37 | 20 | 57 | 185 |
| 3:30 | 1 | 2 | 0 | 1 | 1 | 6 | 0 | 4 | 2 | 8 | 0 | 2 | 3 | 1 | 3 | 9 | 0 | 3 | 6 | 1 | 4 | 1 | 1 | 4 | 32 | 31 | 63 | 163 |
| 3:45 | 0 | 3 | 0 | 0 | 1 | 4 | 0 | 3 | 0 | 4 | 2 | 2 | 1 | 0 | 0 | 7 | 1 | 2 | 1 | 1 | 1 | 0 | 0 | 0 | 17 | 16 | 33 | 153 |
| 4:00 | 0 | 8 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 7 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 2 | 1 | 1 | 0 | 2 | 2 | 0 | 23 | 9 | 32 | 141 |
| 4:15 | 0 | 8 | 0 | 1 | 0 | 0 | 2 | 5 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 5 | 1 | 0 | 1 | 2 | 0 | 3 | 3 | 0 | 15 | 20 | 35 | 155 |
| 4:30 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 5 | 3 | 10 | 1 | 3 | 3 | 2 | 3 | 9 | 3 | 1 | 0 | 2 | 0 | 1 | 2 | 1 | 25 | 28 | 53 | 163 |
| 4:45 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 5 | 0 | 1 | 1 | 1 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 11 | 10 | 21 | 154 |
| 5:00 | 0 | 4 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 7 | 0 | 3 | 3 | 0 | 2 | 6 | 2 | 1 | 1 | 4 | 0 | 3 | 3 | 1 | 24 | 22 | 46 | 181 |
| 5:15 | 0 | 9 | 0 | 0 | 0 | 2 | 2 | 5 | 1 | 5 | 0 | 1 | 0 | 1 | 2 | 6 | 1 | 0 | 2 | 4 | 0 | 1 | 1 | 0 | 20 | 23 | 43 | |
| 5:30 | 0 | 3 | 0 | 3 | 0 | 1 | 0 | 2 | 2 | 7 | 0 | 0 | 1 | 0 | 3 | 8 | 3 | 1 | 1 | 2 | 1 | 4 | 2 | 0 | 23 | 21 | 44 | |
| 5:45 | 0 | 6 | 0 | 2 | 1 | 2 | 0 | 3 | 2 | 8 | 0 | 2 | 1 | 0 | 3 | 8 | 3 | 1 | 1 | 2 | 0 | 0 | 3 | 0 | 24 | 24 | 48 | |
| PEAK HOUR | 2 | 18 | 0 | 3 | 3 | 24 | 2 | 21 | 5 | 36 | 0 | 3 | 4 | 1 | 7 | 28 | 2 | 12 | 8 | 4 | 7 | 5 | 2 | 5 | 119 | 83 | 202 | |

Saturday, June 1, 2018

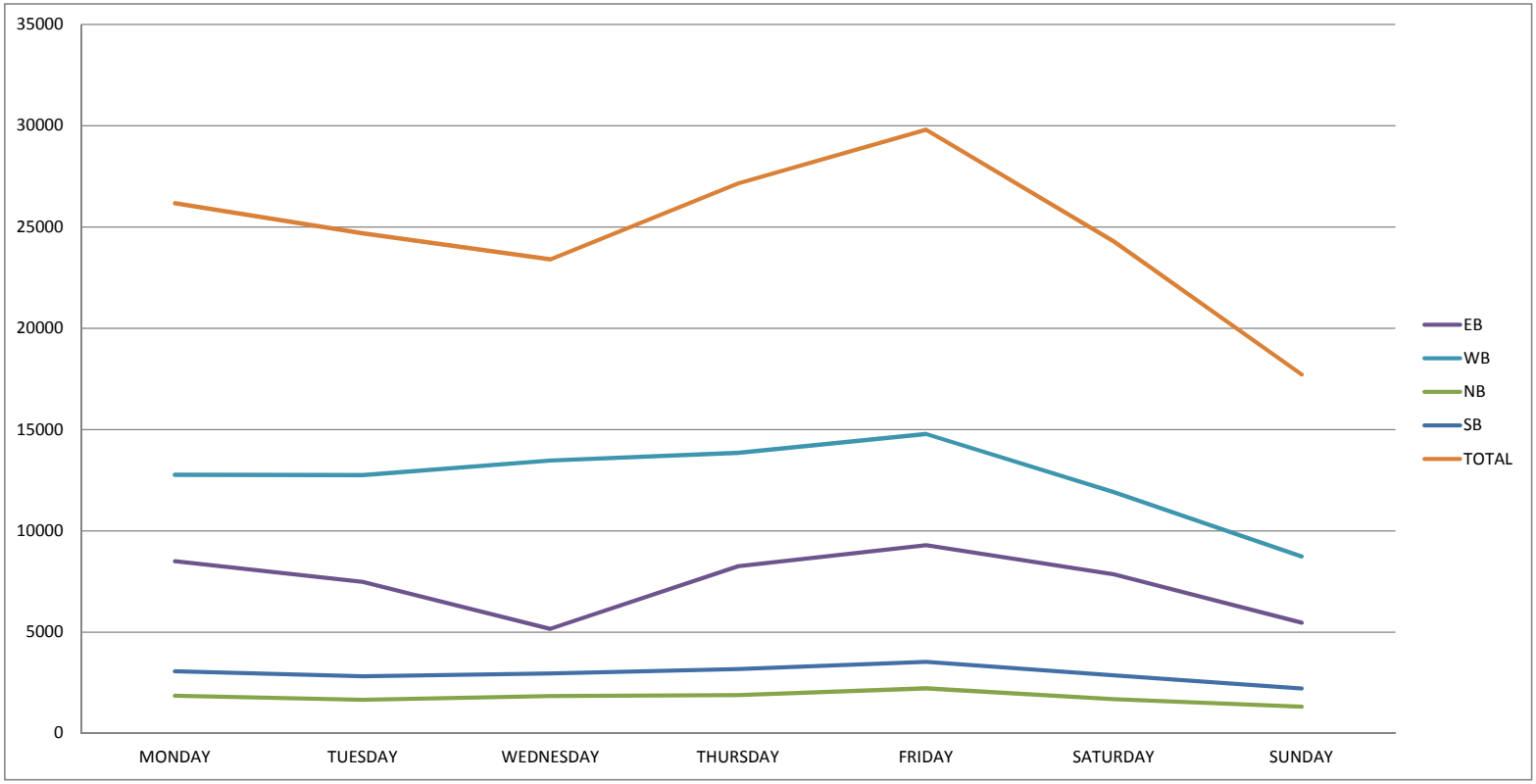
| | Western Sunoco Driveway (Lancaster Avenue) | | | | Eastern Sunoco Driveway (Lancaster Avenue) | | | | Western BP Driveway (Lancaster Avenue) | | | | Eastern BP Driveway (Lancaster Avenue) | | | | Northern Sunoco Driveway (Aberdeen Avenue) | | | | Southern Sunoco Driveway (Aberdeen Avenue) | | | | TOTAL SITE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | ENTER | EXIT | TOTAL | PEAK |
| 11:00 | 0 | 5 | 0 | 1 | 0 | 1 | 0 | 6 | 3 | 13 | 0 | 0 | 1 | 1 | 1 | 13 | 0 | 1 | 1 | 2 | 0 | 2 | 1 | 0 | 27 | 25 | 52 | 209 |
| 11:15 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 13 | 0 | 1 | 2 | 2 | 1 | 15 | 0 | 1 | 2 | 3 | 0 | 3 | 0 | 1 | 26 | 25 | 51 | 204 |
| 11:30 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 4 | 2 | 11 | 1 | 1 | 0 | 1 | 1 | 14 | 1 | 7 | 3 | 3 | 0 | 1 | 1 | 0 | 26 | 28 | 54 | 203 |
| 11:45 | 0 | 6 | 0 | 1 | 0 | 0 | 1 | 10 | 1 | 10 | 1 | 2 | 1 | 0 | 0 | 12 | 1 | 1 | 0 | 2 | 0 | 2 | 0 | 1 | 22 | 30 | 52 | 198 |
| 12:00 | 0 | 7 | 0 | 1 | 0 | 1 | 0 | 6 | 2 | 11 | 1 | 2 | 1 | 1 | 0 | 11 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 25 | 22 | 47 | 205 |
| 12:15 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 9 | 1 | 9 | 1 | 1 | 0 | 0 | 0 | 11 | 2 | 4 | 0 | 1 | 0 | 4 | 0 | 0 | 26 | 24 | 50 | |
| 12:30 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 7 | 0 | 0 | 2 | 3 | 0 | 9 | 1 | 1 | 2 | 7 | 1 | 5 | 0 | 1 | 24 | 25 | 49 | |
| 12:45 | 0 | 7 | 0 | 0 | 0 | 1 | 0 | 6 | 4 | 16 | 0 | 1 | 1 | 0 | 2 | 18 | 0 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 30 | 29 | 59 | |
| PEAK HOUR | 0 | 17 | 0 | 2 | 0 | 1 | 1 | 22 | 8 | 47 | 2 | 4 | 4 | 4 | 3 | 54 | 2 | 10 | 6 | 10 | 0 | 8 | 2 | 2 | 101 | 108 | 209 | |

Sunday, September 9, 2018

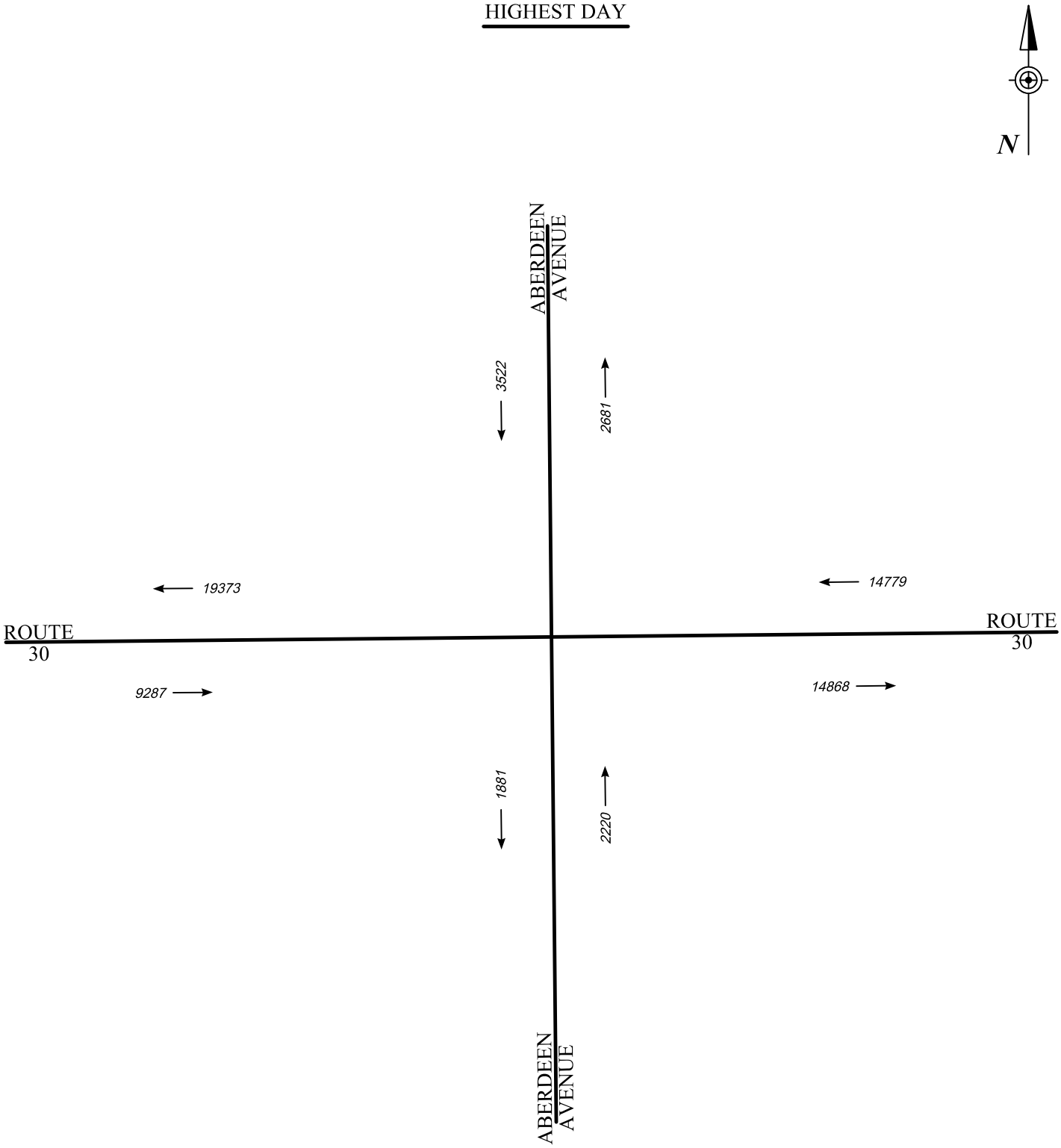
| | Western Sunoco Driveway | | | | Eastern Sunoco Driveway | | | | Western BP Driveway | | | | Eastern BP Driveway | | | | Northern Sunoco Driveway | | | | Southern Sunoco Driveway | | | | TOTAL SITE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | LI | RI | LO | RO | ENTER | EXIT | TOTAL | PEAK |
| 9:00 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 5 | 1 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 0 | 0 | 1 | 2 | 0 | 12 | 11 | 23 | 97 |
| 9:15 | 0 | 3 | 0 | 1 | 0 | 1 | 1 | 3 | 1 | 6 | 0 | 0 | 0 | 0 | 1 | 7 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 1 | 16 | 14 | 30 | 95 |
| 9:30 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 4 | 0 | 1 | 1 | 0 | 10 | 9 | 19 | 97 |
| 9:45 | 3 | 2 | 0 | 1 | 0 | 0 | 1 | 3 | 0 | 3 | 0 | 1 | 0 | 1 | 0 | 4 | 2 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 13 | 12 | 25 | 105 |
| 10:00 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 1 | 0 | 1 | 2 | 1 | 1 | 2 | 1 | 0 | 3 | 1 | 1 | 11 | 10 | 21 | 108 |
| 10:15 | 0 | 2 | 0 | 2 | 1 | 0 | 2 | 4 | 0 | 5 | 0 | 1 | 2 | 0 | 2 | 0 | 1 | 2 | 1 | 2 | 0 | 2 | 1 | 2 | 15 | 17 | 32 | 124 |
| 10:30 | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 5 | 1 | 0 | 0 | 0 | 3 | 5 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 2 | 12 | 15 | 27 | 119 |
| 10:45 | 0 | 2 | 0 | 0 | 1 | 1 | 1 | 3 | 2 | 3 | 0 | 0 | 2 | 0 | 2 | 3 | 1 | 0 | 1 | 2 | 0 | 3 | 1 | 0 | 15 | 13 | 28 | |
| 11:00 | 0 | 2 | 0 | 0 | 0 | 2 | 1 | 5 | 0 | 8 | 0 | 1 | 2 | 0 | 1 | 6 | 2 | 1 | 1 | 1 | 2 | 0 | 1 | 1 | 19 | 18 | 37 | |
| 11:15 | 0 | 5 | 0 | 1 | 0 | 0 | 0 | 2 | 2 | 2 | 0 | 1 | 1 | 0 | 1 | 6 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 14 | 13 | 27 | |
| PEAK HOUR | 1 | 9 | 0 | 2 | 2 | 3 | 4 | 14 | 3 | 21 | 1 | 2 | 6 | 0 | 8 | 14 | 5 | 4 | 4 | 5 | 2 | 5 | 4 | 5 | 61 | 63 | 124 | |

**WAWA.A.00475**
**Route 30 & Aberdeen Avenue**
**Radnor Township, Delaware County**
**2016-11-29 to 2016-12-06**

| | Route 30 | | | | Aberdeen Avenue | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | EB Approach | EB Departure | WB Approach | WB Departure | NB Approach | NB Departure | SB Approach | SB Departure | TOTAL |
| **MONDAY** | 8488 | 13133 | 12774 | 15530 | 1846 | 2326 | 3064 | 1592 | **26172** |
| **TUESDAY** | 7474 | 13149 | 12757 | 14481 | 1650 | 2130 | 2813 | 1413 | **24694** |
| **WEDNESDAY** | 5159 | 13502 | 13464 | 16209 | 1832 | 2184 | 2953 | 1554 | **23408** |
| **THURSDAY** | 8246 | 14323 | 13853 | 16641 | 1885 | 2309 | 3163 | 1619 | **27147** |
| **FRIDAY** | 9287 | 14868 | 14779 | 19373 | 2220 | 2681 | 3522 | 1881 | **29808** |
| **SATURDAY** | 7836 | 12380 | 11900 | 14712 | 1687 | 2108 | 2860 | 1392 | **24283** |
| **SUNDAY** | 5458 | 9075 | 8732 | 10571 | 1317 | 1669 | 2213 | 1144 | **17720** |
| **AVERAGE** | **7421** | **12919** | **12608** | **15360** | **1777** | **2201** | **2941** | **1514** | **24747** <--- Approach Total |



HIGHEST DAY




**KEY:**

**SCHEMATIC DRAWING:NOT TO SCALE**


**TRAFFIC PLANNING AND DESIGN, INC.**

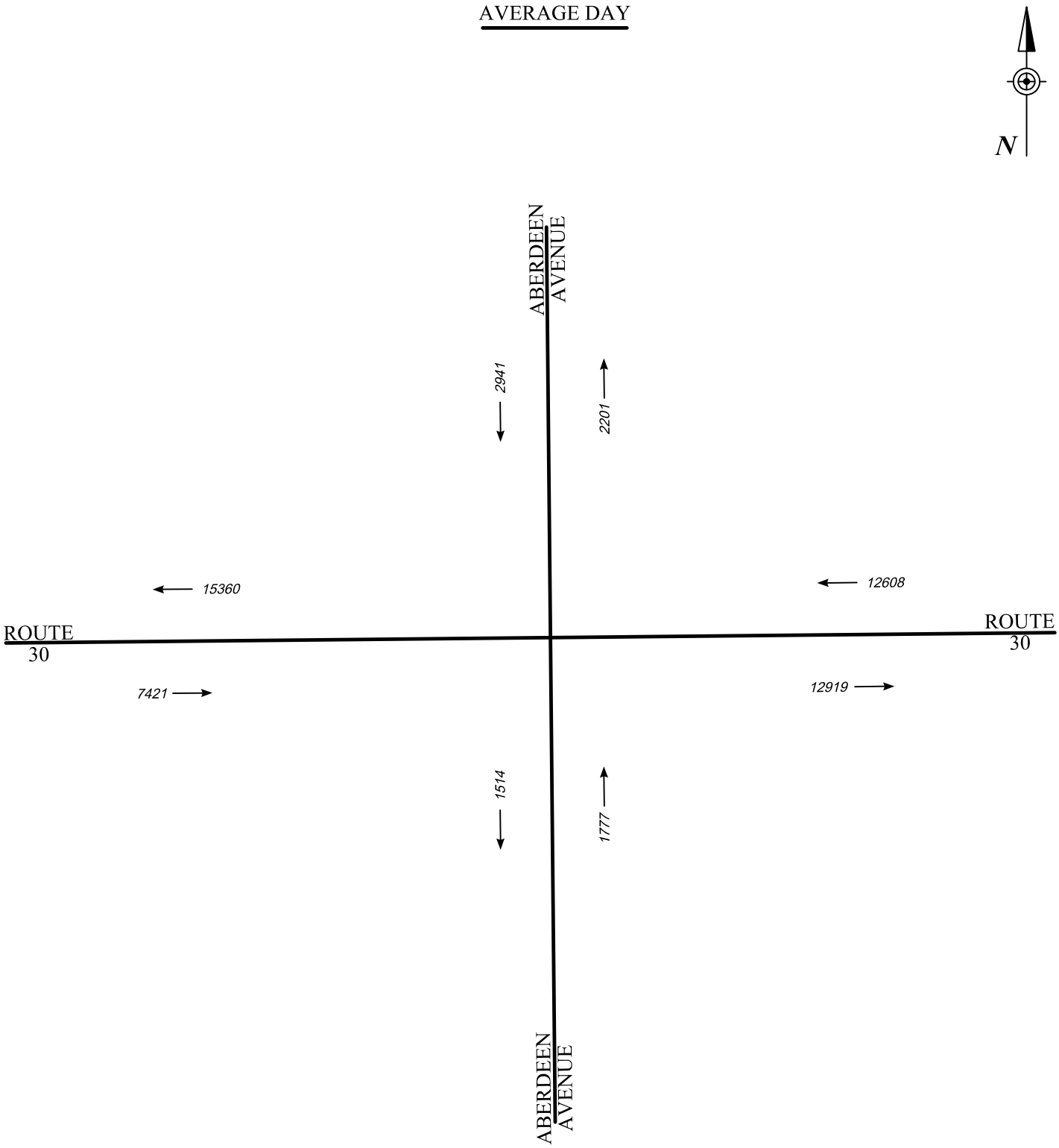
PITTSBURGH (412)765-3717
POTTSTOWN (610)326-3100
HARRISBURG (717)234-1430
LEHIGH VALLEY (610)625-4242
SOUTH JERSEY (856)966-4242
WWW.TRAFFICPD.COM


FIGURE 1

2016 EXISTING CONDITIONS
HIGHEST DAY (FRIDAY)
DAILY TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

AVERAGE DAY




**KEY:**

**SCHEMATIC DRAWING:NOT TO SCALE**


**TRAFFIC PLANNING AND DESIGN, INC.**

PITTSBURGH (412)765-3717
POTTSTOWN (610)326-3100
HARRISBURG (717)234-1430
LEHIGH VALLEY (610)625-4242
SOUTH JERSEY (856)966-4242
WWW.TRAFFICPD.COM


FIGURE 2

2016 EXISTING CONDITIONS
AVERAGE DAY
DAILY TRAFFIC VOLUMES

$FILE$ $DATE$ $TIME$ $USER$ $MODEL$

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: US 30 EB
Segment: East of Aberdeen Ave
Counter: AP63

Site Code: 00Rte. 30 EB
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start Time | Mon 11/28/2016 | Tue | Wed | Thu | Fri | Average Day | Sat | Sun | Week Average |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | * | * | 38 | 58 | 65 | 54 | 182 | 176 | 104 |
| 01:00 | * | * | 22 | 47 | 54 | 41 | 84 | 75 | 56 |
| 02:00 | * | * | 21 | 18 | 40 | 26 | 69 | 54 | 40 |
| 03:00 | * | * | 33 | 23 | 32 | 29 | 40 | 35 | 33 |
| 04:00 | * | * | 47 | 37 | 44 | 43 | 47 | 28 | 41 |
| 05:00 | * | * | 155 | 155 | 136 | 149 | 56 | 40 | 108 |
| 06:00 | * | * | 385 | 351 | 358 | 365 | 149 | 73 | 263 |
| 07:00 | * | * | 868 | 883 | 849 | 867 | 291 | 145 | 607 |
| 08:00 | * | * | **934** | 939 | 945 | **939** | 441 | 258 | 703 |
| 09:00 | * | * | 840 | 878 | 848 | 855 | 693 | 424 | 737 |
| 10:00 | * | 633 | 720 | 725 | 824 | 726 | 799 | 587 | 715 |
| 11:00 | * | **795** | 757 | **949** | **947** | 862 | **1070** | **710** | **871** |
| 12:00 PM | * | 940 | 962 | 1049 | 1072 | 1006 | **1080** | 799 | **984** |
| 01:00 | * | 934 | 956 | **1089** | **1135** | 1028 | 948 | **813** | 979 |
| 02:00 | * | 904 | 922 | 974 | 1032 | 958 | 852 | 751 | 906 |
| 03:00 | * | **982** | 1011 | 1051 | 1072 | **1029** | 1013 | 770 | 983 |
| 04:00 | * | 914 | **1016** | 1072 | 1095 | 1024 | 945 | 754 | 966 |
| 05:00 | * | 918 | 1007 | 987 | 923 | 959 | 785 | 609 | 872 |
| 06:00 | * | 870 | 818 | 844 | 826 | 840 | 654 | 532 | 757 |
| 07:00 | * | 665 | 663 | 723 | 710 | 690 | 564 | 416 | 624 |
| 08:00 | * | 460 | 550 | 579 | 647 | 559 | 445 | 324 | 501 |
| 09:00 | * | 429 | 382 | 448 | 541 | 450 | 432 | 349 | 430 |
| 10:00 | * | 225 | 260 | 267 | 392 | 286 | 455 | 252 | 308 |
| 11:00 | * | 124 | 135 | 177 | 281 | 179 | 286 | 101 | 184 |
| Total | 0 | 9793 | 13502 | 14323 | 14868 | 13964 | 12380 | 9075 | 12772 |
| % Avg. WkDay | 0.0% | 70.1% | 96.7% | 102.6% | 106.5% | 100.0% | | | |
| % Avg. Week | 0.0% | 76.7% | 105.7% | 112.1% | 116.4% | 109.3% | 96.9% | 71.1% | |
| AM Peak | - | 11:00 | 08:00 | 11:00 | 11:00 | - 08:00 | - 11:00 | 11:00 | - 11:00 - - |
| Vol. | - | 795 | 934 | 949 | 947 | - 939 | - 1070 | 710 | - 871 - - |
| PM Peak | - | 15:00 | 16:00 | 13:00 | 13:00 | - 15:00 | - 12:00 | 13:00 | - 12:00 - - |
| Vol. | - | 982 | 1016 | 1089 | 1135 | - 1029 | - 1080 | 813 | - 984 - - |

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: US 30 EB
Segment: East of Aberdeen Ave
Counter: AP63

Site Code: 00Rte. 30 EB
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start Time | Mon 12/5/2016 | Tue | Wed | Thu | Fri | Average Day | Sat | Sun | Week Average |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 39 | 56 | * | * | * | 48 | * | * | 48 |
| 01:00 | 39 | 31 | * | * | * | 35 | * | * | 35 |
| 02:00 | 34 | 29 | * | * | * | 32 | * | * | 32 |
| 03:00 | 23 | 24 | * | * | * | 24 | * | * | 24 |
| 04:00 | 28 | 46 | * | * | * | 37 | * | * | 37 |
| 05:00 | 160 | 149 | * | * | * | 154 | * | * | 154 |
| 06:00 | 357 | 395 | * | * | * | 376 | * | * | 376 |
| 07:00 | 819 | 873 | * | * | * | 846 | * | * | 846 |
| 08:00 | **893** | 868 | * | * | * | **880** | * | * | **880** |
| 09:00 | 798 | **885** | * | * | * | 842 | * | * | 842 |
| 10:00 | 720 | 627 | * | * | * | 674 | * | * | 674 |
| 11:00 | 810 | 0 | * | * | * | 405 | * | * | 405 |
| 12:00 PM | 913 | * | * | * | * | 913 | * | * | 913 |
| 01:00 | 997 | * | * | * | * | 997 | * | * | 997 |
| 02:00 | 943 | * | * | * | * | 943 | * | * | 943 |
| 03:00 | **1028** | * | * | * | * | **1028** | * | * | **1028** |
| 04:00 | 966 | * | * | * | * | 966 | * | * | 966 |
| 05:00 | 1011 | * | * | * | * | 1011 | * | * | 1011 |
| 06:00 | 773 | * | * | * | * | 773 | * | * | 773 |
| 07:00 | 644 | * | * | * | * | 644 | * | * | 644 |
| 08:00 | 456 | * | * | * | * | 456 | * | * | 456 |
| 09:00 | 344 | * | * | * | * | 344 | * | * | 344 |
| 10:00 | 225 | * | * | * | * | 225 | * | * | 225 |
| 11:00 | 113 | * | * | * | * | 113 | * | * | 113 |
| Total | 13133 | 3983 | 0 | 0 | 0 | 12766 | 0 | 0 | 12766 |
| % Avg. WkDay | 102.9% | 31.2% | 0.0% | 0.0% | 0.0% | 100.0% | | | |
| % Avg. Week | 102.9% | 31.2% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | |
| AM Peak | 08:00 | 09:00 | - | - | - | 08:00 | - | - | 08:00 |
| Vol. | 893 | 885 | - | - | - | 880 | - | - | 880 |
| PM Peak | 15:00 | - | - | - | - | 15:00 | - | - | 15:00 |
| Vol. | 1028 | - | - | - | - | 1028 | - | - | 1028 |
| Total | 13133 | 13776 | 13502 | 14323 | 14868 | 26730 | 12380 | 9075 | 25538 |

ADT ADT 12,738 AADT 12,738

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: US 30 EB
Segment: West of Aberdeen Ave
Counter: JT27

Site Code: ster Ave. EB
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start Time | Mon 11/28/2016 | Tue | Wed | Thu | Fri | Average Day | Sat | Sun | Week Average |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | * | * | 3 | 19 | 30 | 17 | 61 | 65 | 36 |
| 01:00 | * | * | 3 | 20 | 10 | 11 | 35 | 21 | 18 |
| 02:00 | * | * | 2 | 3 | 8 | 4 | 19 | 19 | 10 |
| 03:00 | * | * | 1 | 8 | 13 | 7 | 11 | 9 | 8 |
| 04:00 | * | * | 7 | 13 | 12 | 11 | 17 | 6 | 11 |
| 05:00 | * | * | 30 | 61 | 52 | 48 | 26 | 18 | 37 |
| 06:00 | * | * | 89 | 203 | 212 | 168 | 100 | 47 | 130 |
| 07:00 | * | * | 278 | 575 | 476 | 443 | 176 | 116 | 324 |
| 08:00 | * | * | **326** | 581 | 477 | 461 | 320 | 195 | 380 |
| 09:00 | * | * | 302 | 516 | 602 | 473 | 511 | 284 | 443 |
| 10:00 | * | * | 141 | 437 | 543 | 374 | 622 | 370 | 423 |
| 11:00 | * | **756** | 298 | **637** | **660** | **588** | **744** | **531** | **604** |
| 12:00 PM | * | **906** | 443 | **800** | **807** | **739** | **777** | 472 | **701** |
| 01:00 | * | 767 | 278 | 719 | 758 | 630 | 723 | **494** | 623 |
| 02:00 | * | 465 | 409 | 600 | 705 | 545 | 595 | 493 | 544 |
| 03:00 | * | 330 | 438 | 554 | 690 | 503 | 586 | 452 | 508 |
| 04:00 | * | 333 | 451 | 588 | 726 | 524 | 577 | 444 | 520 |
| 05:00 | * | 292 | **465** | 508 | 672 | 484 | 460 | 365 | 460 |
| 06:00 | * | 190 | 376 | 427 | 476 | 367 | 357 | 271 | 350 |
| 07:00 | * | 139 | 319 | 361 | 408 | 307 | 296 | 231 | 292 |
| 08:00 | * | 114 | 204 | 262 | 332 | 228 | 230 | 203 | 224 |
| 09:00 | * | 81 | 166 | 203 | 294 | 186 | 246 | 208 | 200 |
| 10:00 | * | 28 | 95 | 101 | 188 | 103 | 212 | 112 | 123 |
| 11:00 | * | 11 | 35 | 50 | 136 | 58 | 135 | 32 | 66 |
| Total | 0 | 4412 | 5159 | 8246 | 9287 | 7279 | 7836 | 5458 | 7035 |
| % Avg. WkDay | 0.0% | 60.6% | 70.9% | 113.3% | 127.6% | 100.0% | | | |
| % Avg. Week | 0.0% | 62.7% | 73.3% | 117.2% | 132.0% | 103.5% | 111.4% | 77.6% | |
| AM Peak | - | 11:00 | 08:00 | 11:00 | 11:00 | - 11:00 | - 11:00 | 11:00 | - 11:00 - - |
| Vol. | - | 756 | 326 | 637 | 660 | - 588 | - 744 | 531 | - 604 - - |
| PM Peak | - | 12:00 | 17:00 | 12:00 | 12:00 | - 12:00 | - 12:00 | 13:00 | - 12:00 - - |
| Vol. | - | 906 | 465 | 800 | 807 | - 739 | - 777 | 494 | - 701 - - |

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: US 30 EB
Segment: West of Aberdeen Ave
Counter: JT27

Site Code: ster Ave. EB
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start Time | Mon 12/5/2016 | Tue | Wed | Thu | Fri | Average Day | Sat | Sun | Week Average |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 14 | 24 | * | * | * | 19 | * | * | 19 |
| 01:00 | 12 | 16 | * | * | * | 14 | * | * | 14 |
| 02:00 | 9 | 8 | * | * | * | 8 | * | * | 8 |
| 03:00 | 10 | 9 | * | * | * | 10 | * | * | 10 |
| 04:00 | 17 | 20 | * | * | * | 18 | * | * | 18 |
| 05:00 | 86 | 2 | * | * | * | 44 | * | * | 44 |
| 06:00 | 264 | 182 | * | * | * | 223 | * | * | 223 |
| 07:00 | 655 | **713** | * | * | * | **684** | * | * | **684** |
| 08:00 | **666** | 675 | * | * | * | 670 | * | * | 670 |
| 09:00 | 516 | 657 | * | * | * | 586 | * | * | 586 |
| 10:00 | 428 | * | * | * | * | 428 | * | * | 428 |
| 11:00 | 491 | * | * | * | * | 491 | * | * | 491 |
| 12:00 PM | 616 | * | * | * | * | 616 | * | * | 616 |
| 01:00 | 633 | * | * | * | * | 633 | * | * | 633 |
| 02:00 | 641 | * | * | * | * | 641 | * | * | 641 |
| 03:00 | **674** | * | * | * | * | **674** | * | * | **674** |
| 04:00 | 646 | * | * | * | * | 646 | * | * | 646 |
| 05:00 | 642 | * | * | * | * | 642 | * | * | 642 |
| 06:00 | 485 | * | * | * | * | 485 | * | * | 485 |
| 07:00 | 358 | * | * | * | * | 358 | * | * | 358 |
| 08:00 | 271 | * | * | * | * | 271 | * | * | 271 |
| 09:00 | 204 | * | * | * | * | 204 | * | * | 204 |
| 10:00 | 110 | * | * | * | * | 110 | * | * | 110 |
| 11:00 | 40 | * | * | * | * | 40 | * | * | 40 |
| Total | 8488 | 2306 | 0 | 0 | 0 | 8515 | 0 | 0 | 8515 |
| % Avg. WkDay | 99.7% | 27.1% | 0.0% | 0.0% | 0.0% | 100.0% | | | |
| % Avg. Week | 99.7% | 27.1% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | |
| AM Peak | 08:00 | 07:00 | - | - | - | 07:00 | - | - | 07:00 |
| Vol. | 666 | 713 | - | - | - | 684 | - | - | 684 |
| PM Peak | 15:00 | - | - | - | - | 15:00 | - | - | 15:00 |
| Vol. | 674 | - | - | - | - | 674 | - | - | 674 |
| Total | 8488 | 6718 | 5159 | 8246 | 9287 | 15794 | 7836 | 5458 | 15550 |

ADT ADT 7,352 AADT 7,352

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: US 30 WB
Segment: East of Aberdeen Ave
Counter: AP61

Site Code: 00000Rte. 30
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start Time | Mon 11/28/2016 | Tue | Wed | Thu | Fri | Average Day | Sat | Sun | Week Average |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | * | * | 41 | 53 | 74 | 56 | 127 | 123 | 84 |
| 01:00 | * | * | 41 | 31 | 54 | 42 | 86 | 72 | 57 |
| 02:00 | * | * | 22 | 27 | 23 | 24 | 56 | 70 | 40 |
| 03:00 | * | * | 29 | 26 | 38 | 31 | 49 | 36 | 36 |
| 04:00 | * | * | 48 | 57 | 54 | 53 | 36 | 36 | 46 |
| 05:00 | * | * | 168 | 154 | 170 | 164 | 75 | 44 | 122 |
| 06:00 | * | * | 478 | 522 | 526 | 509 | 222 | 113 | 372 |
| 07:00 | * | * | 1012 | 1019 | 1073 | 1035 | 431 | 175 | 742 |
| 08:00 | * | * | **1028** | **1063** | **1116** | **1069** | 653 | 322 | 836 |
| 09:00 | * | * | 921 | 945 | 996 | 954 | 801 | 534 | 839 |
| 10:00 | * | 864 | 807 | 865 | 903 | 860 | **877** | 658 | 829 |
| 11:00 | * | **912** | 916 | 869 | 961 | 914 | 877 | **722** | **876** |
| 12:00 PM | * | 894 | 936 | 994 | 1015 | 960 | 926 | **781** | **924** |
| 01:00 | * | 806 | 870 | 885 | 908 | 867 | **1059** | 726 | 876 |
| 02:00 | * | 795 | 854 | 884 | 970 | 876 | 787 | 684 | 829 |
| 03:00 | * | 760 | 809 | 888 | 976 | 858 | 862 | 668 | 827 |
| 04:00 | * | 857 | 943 | 890 | 1044 | 934 | 779 | 639 | 859 |
| 05:00 | * | **909** | **1044** | **1065** | **1096** | **1028** | 727 | 576 | 903 |
| 06:00 | * | 803 | 799 | 803 | 823 | 807 | 673 | 597 | 750 |
| 07:00 | * | 636 | 622 | 614 | 584 | 614 | 549 | 395 | 567 |
| 08:00 | * | 333 | 431 | 479 | 433 | 419 | 336 | 316 | 388 |
| 09:00 | * | 291 | 323 | 371 | 398 | 346 | 347 | 217 | 324 |
| 10:00 | * | 225 | 214 | 240 | 338 | 254 | 309 | 146 | 245 |
| 11:00 | * | 109 | 108 | 109 | 206 | 133 | 256 | 82 | 145 |
| Total | 0 | 9194 | 13464 | 13853 | 14779 | 13807 | 11900 | 8732 | 12516 |
| % Avg. WkDay | 0.0% | 66.6% | 97.5% | 100.3% | 107.0% | 100.0% | | | |
| % Avg. Week | 0.0% | 73.5% | 107.6% | 110.7% | 118.1% | 110.3% | 95.1% | 69.8% | |
| AM Peak | - | 11:00 | 08:00 | 08:00 | 08:00 | - 08:00 | - 10:00 | 11:00 | - 11:00 - - |
| Vol. | - | 912 | 1028 | 1063 | 1116 | - 1069 | - 877 | 722 | - 876 - - |
| PM Peak | - | 17:00 | 17:00 | 17:00 | 17:00 | - 17:00 | - 13:00 | 12:00 | - 12:00 - - |
| Vol. | - | 909 | 1044 | 1065 | 1096 | - 1028 | - 1059 | 781 | - 924 - - |

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: US 30 WB
Segment: East of Aberdeen Ave
Counter: AP61

Site Code: 00000Rte. 30
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start Time | Mon 12/5/2016 | Tue | Wed | Thu | Fri | Average Day | Sat | Sun | Week Average |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 36 | 34 | * | * | * | 35 | * | * | 35 |
| 01:00 | 25 | 38 | * | * | * | 32 | * | * | 32 |
| 02:00 | 30 | 22 | * | * | * | 26 | * | * | 26 |
| 03:00 | 36 | 29 | * | * | * | 32 | * | * | 32 |
| 04:00 | 46 | 53 | * | * | * | 50 | * | * | 50 |
| 05:00 | 142 | 156 | * | * | * | 149 | * | * | 149 |
| 06:00 | 452 | 516 | * | * | * | 484 | * | * | 484 |
| 07:00 | 928 | 1054 | * | * | * | 991 | * | * | 991 |
| 08:00 | **1024** | **1059** | * | * | * | **1042** | * | * | **1042** |
| 09:00 | 871 | 599 | * | * | * | 735 | * | * | 735 |
| 10:00 | 798 | 1 | * | * | * | 400 | * | * | 400 |
| 11:00 | 841 | 2 | * | * | * | 422 | * | * | 422 |
| 12:00 PM | 882 | * | * | * | * | 882 | * | * | 882 |
| 01:00 | 811 | * | * | * | * | 811 | * | * | 811 |
| 02:00 | 865 | * | * | * | * | 865 | * | * | 865 |
| 03:00 | 821 | * | * | * | * | 821 | * | * | 821 |
| 04:00 | 875 | * | * | * | * | 875 | * | * | 875 |
| 05:00 | **1029** | * | * | * | * | **1029** | * | * | **1029** |
| 06:00 | 803 | * | * | * | * | 803 | * | * | 803 |
| 07:00 | 491 | * | * | * | * | 491 | * | * | 491 |
| 08:00 | 401 | * | * | * | * | 401 | * | * | 401 |
| 09:00 | 284 | * | * | * | * | 284 | * | * | 284 |
| 10:00 | 186 | * | * | * | * | 186 | * | * | 186 |
| 11:00 | 97 | * | * | * | * | 97 | * | * | 97 |
| Total | 12774 | 3563 | 0 | 0 | 0 | 11943 | 0 | 0 | 11943 |
| % Avg. WkDay | 107.0% | 29.8% | 0.0% | 0.0% | 0.0% | 100.0% | | | |
| % Avg. Week | 107.0% | 29.8% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | |
| AM Peak | 08:00 | 08:00 | - | - | - | 08:00 | - | - | 08:00 |
| Vol. | 1024 | 1059 | - | - | - | 1042 | - | - | 1042 |
| PM Peak | 17:00 | - | - | - | - | 17:00 | - | - | 17:00 |
| Vol. | 1029 | - | - | - | - | 1029 | - | - | 1029 |
| Total | 12774 | 12757 | 13464 | 13853 | 14779 | 25750 | 11900 | 8732 | 24459 |

ADT ADT 12,365 AADT 12,365

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: US 30 WB
Segment: West of Aberdeen Ave
Counter: JR64

Site Code: ster Ave. WB
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start Time | Mon 11/28/2016 | Tue | Wed | Thu | Fri | Average Day | Sat | Sun | Week Average |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | * | * | 50 | 55 | 78 | 61 | 127 | 135 | 89 |
| 01:00 | * | * | 46 | 39 | 53 | 46 | 91 | 67 | 59 |
| 02:00 | * | * | 21 | 29 | 28 | 26 | 58 | 66 | 40 |
| 03:00 | * | * | 36 | 29 | 39 | 35 | 40 | 37 | 36 |
| 04:00 | * | * | 50 | 59 | 63 | 57 | 44 | 39 | 51 |
| 05:00 | * | * | 186 | 166 | 191 | 181 | 83 | 52 | 136 |
| 06:00 | * | * | 515 | 595 | 598 | 569 | 234 | 136 | 416 |
| 07:00 | * | * | 1193 | 1245 | 1332 | 1257 | 501 | 216 | 897 |
| 08:00 | * | * | 1160 | **1261** | **1413** | **1278** | 863 | 435 | 1026 |
| 09:00 | * | * | **1311** | 1090 | 1245 | 1215 | 997 | 614 | 1051 |
| 10:00 | * | * | 1006 | 1004 | 1189 | 1066 | 1102 | **890** | 1038 |
| 11:00 | * | **1087** | 1155 | 1114 | 1366 | 1180 | **1210** | 867 | **1133** |
| 12:00 PM | * | **1163** | 1219 | **1307** | **1568** | **1314** | 1187 | **991** | **1239** |
| 01:00 | * | 961 | 1082 | 1072 | 1169 | 1071 | **1269** | 881 | 1072 |
| 02:00 | * | 963 | 1084 | 1119 | 1271 | 1109 | 992 | 814 | 1040 |
| 03:00 | * | 921 | 1004 | 1122 | 1318 | 1091 | 1202 | 793 | 1060 |
| 04:00 | * | 950 | 1106 | 1156 | 1398 | 1152 | 971 | 845 | 1071 |
| 05:00 | * | 954 | **1229** | 1253 | 1398 | 1208 | 889 | 705 | 1071 |
| 06:00 | * | 944 | 856 | 955 | 1143 | 974 | 852 | 740 | 915 |
| 07:00 | * | 692 | 688 | 696 | 908 | 746 | 658 | 423 | 678 |
| 08:00 | * | 349 | 512 | 499 | 547 | 477 | 381 | 380 | 445 |
| 09:00 | * | 319 | 369 | 422 | 485 | 399 | 378 | 210 | 364 |
| 10:00 | * | 223 | 232 | 237 | 364 | 264 | 325 | 156 | 256 |
| 11:00 | * | 100 | 99 | 117 | 209 | 131 | 258 | 79 | 144 |
| Total | 0 | 9626 | 16209 | 16641 | 19373 | 16907 | 14712 | 10571 | 15327 |
| % Avg. WkDay | 0.0% | 56.9% | 95.9% | 98.4% | 114.6% | 100.0% | | | |
| % Avg. Week | 0.0% | 62.8% | 105.8% | 108.6% | 126.4% | 110.3% | 96.0% | 69.0% | |
| AM Peak | - | 11:00 | 09:00 | 08:00 | 08:00 | - 08:00 | - 11:00 | 10:00 | - 11:00 - - |
| Vol. | - | 1087 | 1311 | 1261 | 1413 | - 1278 | - 1210 | 890 | - 1133 - - |
| PM Peak | - | 12:00 | 17:00 | 12:00 | 12:00 | - 12:00 | - 13:00 | 12:00 | - 12:00 - - |
| Vol. | - | 1163 | 1229 | 1307 | 1568 | - 1314 | - 1269 | 991 | - 1239 - - |

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: US 30 WB
Segment: West of Aberdeen Ave
Counter: JR64

Site Code: ster Ave. WB
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start Time | Mon 12/5/2016 | Tue | Wed | Thu | Fri | Average Day | Sat | Sun | Week Average |
|---|---|---|---|---|---|---|---|---|---|
| 12:00 AM | 44 | 31 | * | * | * | 38 | * | * | 38 |
| 01:00 | 38 | 47 | * | * | * | 42 | * | * | 42 |
| 02:00 | 33 | 27 | * | * | * | 30 | * | * | 30 |
| 03:00 | 30 | 33 | * | * | * | 32 | * | * | 32 |
| 04:00 | 56 | 62 | * | * | * | 59 | * | * | 59 |
| 05:00 | 174 | 175 | * | * | * | 174 | * | * | 174 |
| 06:00 | 524 | 594 | * | * | * | 559 | * | * | 559 |
| 07:00 | 1204 | 1339 | * | * | * | 1272 | * | * | 1272 |
| 08:00 | **1240** | **1353** | * | * | * | **1296** | * | * | **1296** |
| 09:00 | 1063 | 1166 | * | * | * | 1114 | * | * | 1114 |
| 10:00 | 1000 | 15 | * | * | * | 508 | * | * | 508 |
| 11:00 | 1096 | 13 | * | * | * | 554 | * | * | 554 |
| 12:00 PM | 1142 | * | * | * | * | 1142 | * | * | 1142 |
| 01:00 | 1017 | * | * | * | * | 1017 | * | * | 1017 |
| 02:00 | 1077 | * | * | * | * | 1077 | * | * | 1077 |
| 03:00 | 1106 | * | * | * | * | 1106 | * | * | 1106 |
| 04:00 | 1069 | * | * | * | * | 1069 | * | * | 1069 |
| 05:00 | **1162** | * | * | * | * | **1162** | * | * | **1162** |
| 06:00 | 911 | * | * | * | * | 911 | * | * | 911 |
| 07:00 | 518 | * | * | * | * | 518 | * | * | 518 |
| 08:00 | 450 | * | * | * | * | 450 | * | * | 450 |
| 09:00 | 298 | * | * | * | * | 298 | * | * | 298 |
| 10:00 | 178 | * | * | * | * | 178 | * | * | 178 |
| 11:00 | 100 | * | * | * | * | 100 | * | * | 100 |
| Total | 15530 | 4855 | 0 | 0 | 0 | 14706 | 0 | 0 | 14706 |
| % Avg. WkDay | 105.6% | 33.0% | 0.0% | 0.0% | 0.0% | 100.0% | | | |
| % Avg. Week | 105.6% | 33.0% | 0.0% | 0.0% | 0.0% | 100.0% | 0.0% | 0.0% | |
| AM Peak | 08:00 | 08:00 | - | - | - | 08:00 | - | - | 08:00 |
| Vol. | 1240 | 1353 | - | - | - | 1296 | - | - | 1296 |
| PM Peak | 17:00 | - | - | - | - | 17:00 | - | - | 17:00 |
| Vol. | 1162 | - | - | - | - | 1162 | - | - | 1162 |
| Total | 15530 | 14481 | 16209 | 16641 | 19373 | 31613 | 14712 | 10571 | 30033 |

ADT ADT 15,189 AADT 15,189

Road: Aberdeen Ave
Segment: North of US 30
Counter: CP30

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Site Code: berdeen Ave.
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start | 11/28/2016 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB |
| 12:00 AM | * | * | * | * | 7 | 9 | 5 | 7 | 13 | 9 | 16 | 9 | 17 | 17 | 12 | 10 |
| 01:00 | * | * | * | * | 5 | 2 | 5 | 6 | 4 | 6 | 6 | 10 | 8 | 5 | 6 | 6 |
| 02:00 | * | * | * | * | 2 | 1 | 1 | 4 | 4 | 4 | 5 | 3 | 5 | 5 | 3 | 3 |
| 03:00 | * | * | * | * | 0 | 3 | 1 | 0 | 3 | 3 | 4 | 2 | 5 | 4 | 3 | 2 |
| 04:00 | * | * | * | * | 1 | 4 | 0 | 6 | 2 | 4 | 0 | 1 | 3 | 1 | 1 | 3 |
| 05:00 | * | * | * | * | 6 | 25 | 6 | 21 | 8 | 22 | 4 | 7 | 2 | 6 | 5 | 16 |
| 06:00 | * | * | * | * | 30 | 83 | 39 | 84 | 37 | 80 | 10 | 22 | 7 | 13 | 25 | 56 |
| 07:00 | * | * | * | * | 113 | **232** | 131 | 239 | 134 | 222 | 38 | 72 | 13 | 63 | 86 | 166 |
| 08:00 | * | * | * | * | **166** | 213 | **171** | 211 | 162 | 186 | 80 | 139 | 58 | 100 | 127 | 170 |
| 09:00 | * | * | * | * | 122 | 180 | 125 | 190 | 141 | 189 | 124 | 232 | 110 | 169 | 124 | 192 |
| 10:00 | * | * | * | * | 130 | 166 | 132 | 166 | 129 | 189 | **195** | 224 | 131 | 188 | 143 | 187 |
| 11:00 | * | * | * | * | 157 | 202 | 158 | **249** | **174** | **272** | 194 | **307** | **166** | **204** | **170** | **247** |
| 12:00 PM | * | * | 169 | 207 | 174 | 222 | 180 | **269** | 177 | 261 | 197 | **275** | **178** | **243** | 179 | 246 |
| 01:00 | * | * | 150 | 180 | 148 | 216 | 177 | 236 | 195 | 248 | **201** | 237 | 171 | 200 | 174 | 220 |
| 02:00 | * | * | 144 | 202 | 149 | 217 | 147 | 225 | 169 | 284 | 197 | 221 | 149 | 196 | 159 | 224 |
| 03:00 | * | * | 163 | 194 | 200 | 215 | 191 | 236 | 226 | 231 | 172 | 246 | 147 | 222 | **183** | 224 |
| 04:00 | * | * | 174 | **243** | 183 | 282 | **209** | 249 | **232** | **316** | 175 | 259 | 109 | 169 | 180 | **253** |
| 05:00 | * | * | **187** | 221 | **209** | **289** | 184 | 226 | 227 | 263 | 125 | 161 | 104 | 141 | 173 | 217 |
| 06:00 | * | * | 132 | 228 | 148 | 158 | 132 | 240 | 165 | 206 | 101 | 127 | 84 | 97 | 127 | 176 |
| 07:00 | * | * | 111 | 104 | 105 | 90 | 107 | 120 | 192 | 259 | 77 | 93 | 73 | 51 | 111 | 120 |
| 08:00 | * | * | 59 | 68 | 60 | 61 | 88 | 91 | 107 | 119 | 61 | 72 | 51 | 47 | 71 | 76 |
| 09:00 | * | * | 52 | 41 | 35 | 43 | 67 | 53 | 94 | 84 | 48 | 77 | 57 | 45 | 59 | 57 |
| 10:00 | * | * | 24 | 16 | 15 | 26 | 37 | 24 | 52 | 38 | 43 | 45 | 12 | 21 | 30 | 28 |
| 11:00 | * | * | 19 | 10 | 19 | 14 | 16 | 11 | 34 | 27 | 35 | 19 | 9 | 6 | 22 | 14 |
| Lane | 0 | 0 | 1384 | 1714 | 2184 | 2953 | 2309 | 3163 | 2681 | 3522 | 2108 | 2860 | 1669 | 2213 | 2173 | 2913 |
| Day | 0 | | 3098 | | 5137 | | 5472 | | 6203 | | 4968 | | 3882 | | 5086 | |
| AM Peak | - | - | - | - | 08:00 | 07:00 | 08:00 | 11:00 | 11:00 | 11:00 | 10:00 | 11:00 | 11:00 | 11:00 | 11:00 | 11:00 |
| Vol. | - | - | - | - | 166 | 232 | 171 | 249 | 174 | 272 | 195 | 307 | 166 | 204 | 170 | 247 |
| PM Peak | - | - | 17:00 | 16:00 | 17:00 | 17:00 | 16:00 | 12:00 | 16:00 | 16:00 | 13:00 | 12:00 | 12:00 | 12:00 | 15:00 | 16:00 |
| Vol. | - | - | 187 | 243 | 209 | 289 | 209 | 269 | 232 | 316 | 201 | 275 | 178 | 243 | 183 | 253 |

Road: Aberdeen Ave
Segment: North of US 30
Counter: CP30

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Site Code: berdeen Ave.
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start | 12/5/2016 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB |
| 12:00 AM | 4 | 5 | 3 | 4 | * | * | * | * | * | * | * | * | * | * | 4 | 4 |
| 01:00 | 0 | 2 | 1 | 2 | * | * | * | * | * | * | * | * | * | * | 0 | 2 |
| 02:00 | 3 | 1 | 0 | 1 | * | * | * | * | * | * | * | * | * | * | 2 | 1 |
| 03:00 | 6 | 2 | 1 | 1 | * | * | * | * | * | * | * | * | * | * | 4 | 2 |
| 04:00 | 3 | 5 | 3 | 5 | * | * | * | * | * | * | * | * | * | * | 3 | 5 |
| 05:00 | 5 | 30 | 6 | 25 | * | * | * | * | * | * | * | * | * | * | 6 | 28 |
| 06:00 | 36 | 71 | 35 | 93 | * | * | * | * | * | * | * | * | * | * | 36 | 82 |
| 07:00 | 133 | **249** | 137 | **249** | * | * | * | * | * | * | * | * | * | * | 135 | **249** |
| 08:00 | **170** | 197 | **183** | 210 | * | * | * | * | * | * | * | * | * | * | **176** | 204 |
| 09:00 | 152 | 209 | 147 | 213 | * | * | * | * | * | * | * | * | * | * | 150 | 211 |
| 10:00 | 136 | 186 | 61 | 89 | * | * | * | * | * | * | * | * | * | * | 98 | 138 |
| 11:00 | 155 | 191 | 0 | 0 | * | * | * | * | * | * | * | * | * | * | 78 | 96 |
| 12:00 PM | 170 | 209 | * | * | * | * | * | * | * | * | * | * | * | * | 170 | 209 |
| 01:00 | 158 | 223 | * | * | * | * | * | * | * | * | * | * | * | * | 158 | 223 |
| 02:00 | 170 | 248 | * | * | * | * | * | * | * | * | * | * | * | * | 170 | 248 |
| 03:00 | **211** | 233 | * | * | * | * | * | * | * | * | * | * | * | * | **211** | 233 |
| 04:00 | 205 | 255 | * | * | * | * | * | * | * | * | * | * | * | * | 205 | 255 |
| 05:00 | 203 | **269** | * | * | * | * | * | * | * | * | * | * | * | * | 203 | **269** |
| 06:00 | 147 | 197 | * | * | * | * | * | * | * | * | * | * | * | * | 147 | 197 |
| 07:00 | 96 | 126 | * | * | * | * | * | * | * | * | * | * | * | * | 96 | 126 |
| 08:00 | 63 | 70 | * | * | * | * | * | * | * | * | * | * | * | * | 63 | 70 |
| 09:00 | 61 | 51 | * | * | * | * | * | * | * | * | * | * | * | * | 61 | 51 |
| 10:00 | 24 | 26 | * | * | * | * | * | * | * | * | * | * | * | * | 24 | 26 |
| 11:00 | 15 | 9 | * | * | * | * | * | * | * | * | * | * | * | * | 15 | 9 |
| Lane | 2326 | 3064 | 577 | 892 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2215 | 2938 |
| Day | 5390 | | 1469 | | 0 | | 0 | | 0 | | 0 | | 0 | | 5153 | |
| AM Peak | 08:00 | 07:00 | 08:00 | 07:00 | - | - | - | - | - | - | - | - | - | - | 08:00 | 07:00 |
| Vol. | 170 | 249 | 183 | 249 | - | - | - | - | - | - | - | - | - | - | 176 | 249 |
| PM Peak | 15:00 | 17:00 | - | - | - | - | - | - | - | - | - | - | - | - | 15:00 | 17:00 |
| Vol. | 211 | 269 | - | - | - | - | - | - | - | - | - | - | - | - | 211 | 269 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Comb. Total | 5390 | 4567 | 5137 | 5472 | 6203 | 4968 | 3882 | 10239 |

ADT ADT 5,038 AADT 5,038

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Road: Aberdeen Ave
Segment: South of US 30
Counter: JV41

Site Code: berdeen Ave.
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start | 11/28/2016 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB |
| 12:00 AM | * | * | * | * | 3 | 3 | 3 | 4 | 5 | 4 | 8 | 5 | 10 | 7 | 6 | 5 |
| 01:00 | * | * | * | * | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 |
| 02:00 | * | * | * | * | 0 | 1 | 0 | 2 | 0 | 1 | 5 | 1 | 2 | 5 | 1 | 2 |
| 03:00 | * | * | * | * | 3 | 2 | 2 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 |
| 04:00 | * | * | * | * | 1 | 4 | 3 | 2 | 4 | 4 | 1 | 0 | 1 | 0 | 2 | 2 |
| 05:00 | * | * | * | * | 8 | 6 | 12 | 7 | 6 | 9 | 1 | 6 | 1 | 0 | 6 | 6 |
| 06:00 | * | * | * | * | 24 | 24 | 39 | 28 | 43 | 37 | 20 | 5 | 7 | 4 | 27 | 20 |
| 07:00 | * | * | * | * | 144 | **97** | 152 | **110** | **154** | **120** | 35 | 45 | 24 | 45 | 102 | 83 |
| 08:00 | * | * | * | * | **161** | 89 | **161** | 90 | 146 | 85 | 98 | 50 | 57 | 50 | 125 | 73 |
| 09:00 | * | * | * | * | 130 | 93 | 115 | 93 | 140 | 85 | 108 | 84 | 106 | 109 | 120 | 93 |
| 10:00 | * | * | * | * | 122 | 89 | 151 | 91 | 119 | 85 | 151 | 128 | 136 | 101 | 136 | 99 |
| 11:00 | * | * | * | * | 111 | 82 | 151 | 98 | 120 | 90 | **155** | **130** | **155** | **117** | **138** | **103** |
| 12:00 PM | * | * | 119 | 69 | 123 | 97 | 142 | 125 | 134 | 96 | 165 | 134 | **145** | **112** | 138 | 106 |
| 01:00 | * | * | 101 | 90 | 126 | 91 | 132 | 123 | 141 | 102 | 158 | **173** | 118 | 88 | 129 | 111 |
| 02:00 | * | * | 116 | 106 | 138 | 123 | 128 | 117 | 169 | 130 | **190** | 96 | 103 | 97 | 141 | 112 |
| 03:00 | * | * | 136 | 117 | 167 | 129 | **166** | 107 | 186 | 170 | 134 | 110 | 105 | 96 | **149** | 122 |
| 04:00 | * | * | **139** | **156** | 171 | 193 | 124 | 137 | **193** | 213 | 122 | 141 | 75 | 83 | 137 | **154** |
| 05:00 | * | * | 88 | 150 | **186** | **218** | 122 | **149** | 163 | **222** | 100 | 88 | 98 | 68 | 126 | 149 |
| 06:00 | * | * | 100 | 131 | 81 | 94 | 92 | 126 | 167 | 141 | 93 | 53 | 61 | 47 | 99 | 99 |
| 07:00 | * | * | 92 | 64 | 51 | 46 | 80 | 94 | 126 | 114 | 38 | 33 | 50 | 56 | 73 | 68 |
| 08:00 | * | * | 35 | 35 | 33 | 26 | 49 | 64 | 73 | 63 | 31 | 38 | 35 | 35 | 43 | 44 |
| 09:00 | * | * | 35 | 28 | 30 | 24 | 35 | 31 | 74 | 62 | 28 | 34 | 18 | 11 | 37 | 32 |
| 10:00 | * | * | 3 | 7 | 11 | 16 | 16 | 12 | 38 | 32 | 24 | 25 | 4 | 8 | 16 | 17 |
| 11:00 | * | * | 2 | 2 | 7 | 6 | 9 | 6 | 15 | 12 | 18 | 10 | 3 | 2 | 9 | 6 |
| Lane | 0 | 0 | 966 | 955 | 1832 | 1554 | 1885 | 1619 | 2220 | 1881 | 1687 | 1392 | 1317 | 1144 | 1763 | 1509 |
| Day | 0 | | 1921 | | 3386 | | 3504 | | 4101 | | 3079 | | 2461 | | 3272 | |
| AM Peak | - | - | - | - | 08:00 | 07:00 | 08:00 | 07:00 | 07:00 | 07:00 | 11:00 | 11:00 | 11:00 | 11:00 | 11:00 | 11:00 |
| Vol. | - | - | - | - | 161 | 97 | 161 | 110 | 154 | 120 | 155 | 130 | 155 | 117 | 138 | 103 |
| PM Peak | - | - | 16:00 | 16:00 | 17:00 | 17:00 | 15:00 | 17:00 | 16:00 | 17:00 | 14:00 | 13:00 | 12:00 | 12:00 | 15:00 | 16:00 |
| Vol. | - | - | 139 | 156 | 186 | 218 | 166 | 149 | 193 | 222 | 190 | 173 | 145 | 112 | 149 | 154 |

Road: Aberdeen Ave
Segment: South of US 30
Counter: JV41

*Tri-State Traffic Data, Inc*
*(610) 466-1469*
*TSTData.com*

Site Code: berdeen Ave.
Station ID: 000000000000

Latitude: 0' 0.0000 Undefined

| Start | 12/5/2016 | | Tue | | Wed | | Thu | | Fri | | Sat | | Sun | | Week Average | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Time | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB | NB | SB |
| 12:00 AM | 1 | 0 | 0 | 2 | * | * | * | * | * | * | * | * | * | * | 0 | 1 |
| 01:00 | 1 | 0 | 2 | 3 | * | * | * | * | * | * | * | * | * | * | 2 | 2 |
| 02:00 | 2 | 0 | 0 | 0 | * | * | * | * | * | * | * | * | * | * | 1 | 0 |
| 03:00 | 1 | 0 | 1 | 0 | * | * | * | * | * | * | * | * | * | * | 1 | 0 |
| 04:00 | 1 | 1 | 3 | 1 | * | * | * | * | * | * | * | * | * | * | 2 | 1 |
| 05:00 | 17 | 7 | 11 | 9 | * | * | * | * | * | * | * | * | * | * | 14 | 8 |
| 06:00 | 41 | 27 | 41 | 28 | * | * | * | * | * | * | * | * | * | * | 41 | 28 |
| 07:00 | 149 | **103** | 140 | **110** | * | * | * | * | * | * | * | * | * | * | 144 | **106** |
| 08:00 | **173** | 90 | **181** | 93 | * | * | * | * | * | * | * | * | * | * | **177** | 92 |
| 09:00 | 127 | 99 | 145 | 103 | * | * | * | * | * | * | * | * | * | * | 136 | 101 |
| 10:00 | 100 | 95 | 41 | 40 | * | * | * | * | * | * | * | * | * | * | 70 | 68 |
| 11:00 | 143 | 98 | 0 | 0 | * | * | * | * | * | * | * | * | * | * | 72 | 49 |
| 12:00 PM | 136 | 103 | * | * | * | * | * | * | * | * | * | * | * | * | 136 | 103 |
| 01:00 | 123 | 105 | * | * | * | * | * | * | * | * | * | * | * | * | 123 | 105 |
| 02:00 | 160 | 108 | * | * | * | * | * | * | * | * | * | * | * | * | 160 | 108 |
| 03:00 | 153 | 122 | * | * | * | * | * | * | * | * | * | * | * | * | 153 | 122 |
| 04:00 | **165** | 148 | * | * | * | * | * | * | * | * | * | * | * | * | **165** | 148 |
| 05:00 | 102 | **164** | * | * | * | * | * | * | * | * | * | * | * | * | 102 | **164** |
| 06:00 | 100 | 137 | * | * | * | * | * | * | * | * | * | * | * | * | 100 | 137 |
| 07:00 | 79 | 91 | * | * | * | * | * | * | * | * | * | * | * | * | 79 | 91 |
| 08:00 | 34 | 48 | * | * | * | * | * | * | * | * | * | * | * | * | 34 | 48 |
| 09:00 | 26 | 26 | * | * | * | * | * | * | * | * | * | * | * | * | 26 | 26 |
| 10:00 | 7 | 15 | * | * | * | * | * | * | * | * | * | * | * | * | 7 | 15 |
| 11:00 | 5 | 5 | * | * | * | * | * | * | * | * | * | * | * | * | 5 | 5 |
| Lane | 1846 | 1592 | 565 | 389 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1750 | 1528 |
| Day | 3438 | | 954 | | 0 | | 0 | | 0 | | 0 | | 0 | | 3278 | |
| AM Peak | 08:00 | 07:00 | 08:00 | 07:00 | - | - | - | - | - | - | - | - | - | - | 08:00 | 07:00 |
| Vol. | 173 | 103 | 181 | 110 | - | - | - | - | - | - | - | - | - | - | 177 | 106 |
| PM Peak | 16:00 | 17:00 | - | - | - | - | - | - | - | - | - | - | - | - | 16:00 | 17:00 |
| Vol. | 165 | 164 | - | - | - | - | - | - | - | - | - | - | - | - | 165 | 164 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Comb. Total | 3438 | 2875 | 3386 | 3504 | 4101 | 3079 | 2461 | 6550 |

ADT ADT 3,241 AADT 3,241

# Speed Study Data Sheet

| | | | |
|---|---|---|---|
| Job Number | KARA.00010 | Road Name | Lancaster Ave |
| Start Time | 10:20 AM | Stop Time | 10:55am |
| Municipality | Radnor | County | Delaware |
| Date | 8/17/2018 | Weather | Clear |
| Direction | EB | Speed Limit | 35 |
| Location | | Technician | J Hudak |

| # | Speed | Truck | # | Speed | Truck | # | Speed | Truck | # | Speed | Truck |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 35 | | **26** | 26 | | **51** | 32 | | **76** | 43 | |
| **2** | 29 | | **27** | 42 | | **52** | 39 | | **77** | 37 | |
| **3** | 31 | | **28** | 31 | | **53** | 37 | | **78** | 29 | |
| **4** | 36 | | **29** | 39 | | **54** | 27 | | **79** | 31 | |
| **5** | 33 | | **30** | 38 | | **55** | 30 | | **80** | 28 | T |
| **6** | 31 | | **31** | 28 | | **56** | 25 | | **81** | 29 | |
| **7** | 38 | | **32** | 35 | | **57** | 32 | | **82** | 26 | |
| **8** | 28 | T | **33** | 33 | | **58** | 31 | | **83** | 31 | |
| **9** | 36 | | **34** | 31 | | **59** | 34 | | **84** | 35 | |
| **10** | 35 | | **35** | 37 | | **60** | 27 | | **85** | 31 | |
| **11** | 39 | | **36** | 46 | | **61** | 40 | | **86** | 36 | |
| **12** | 36 | | **37** | 48 | | **62** | 34 | | **87** | 29 | |
| **13** | 31 | | **38** | 30 | T | **63** | 28 | | **88** | 34 | |
| **14** | 33 | | **39** | 29 | | **64** | 31 | | **89** | 32 | |
| **15** | 35 | | **40** | 31 | | **65** | 36 | | **90** | 29 | |
| **16** | 39 | | **41** | 29 | | **66** | 41 | | **91** | 47 | |
| **17** | 34 | | **42** | 31 | | **67** | 33 | | **92** | 33 | |
| **18** | 36 | | **43** | 27 | | **68** | 31 | | **93** | 35 | |
| **19** | 41 | | **44** | 32 | | **69** | 38 | | **94** | 41 | |
| **20** | 37 | | **45** | 28 | | **70** | 29 | | **95** | 26 | |
| **21** | 28 | | **46** | 34 | | **71** | 31 | | **96** | 27 | |
| **22** | 27 | T | **47** | 29 | | **72** | 35 | | **97** | 26 | |
| **23** | 33 | | **48** | 27 | | **73** | 39 | | **98** | 35 | |
| **24** | 26 | | **49** | 33 | | **74** | 28 | | **99** | 40 | |
| **25** | 29 | | **50** | 29 | | **75** | 26 | | **100** | 36 | |

# Speed Study Data Sheet

| | | | |
|---|---|---|---|
| Job Number | KARA.00010 | Road Name | Lancaster Ave |
| Start Time | 11:00am | Stop Time | 11:30am |
| Municipality | Radnor | County | Delaware |
| Date | 8/17/2018 | Weather | Clear |
| Direction | WB | Speed Limit | 35 |
| Location | | Technician | J Hudak |

| # | Speed | Truck | # | Speed | Truck | # | Speed | Truck | # | Speed | Truck |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | 29 | | **26** | 31 | | **51** | 25 | | **76** | 29 | T |
| **2** | 37 | | **27** | 28 | | **52** | 38 | | **77** | 27 | |
| **3** | 35 | | **28** | 29 | | **53** | 41 | | **78** | 35 | |
| **4** | 32 | | **29** | 41 | | **54** | 39 | | **79** | 41 | |
| **5** | 44 | | **30** | 29 | T | **55** | 34 | | **80** | 34 | |
| **6** | 36 | | **31** | 35 | | **56** | 32 | | **81** | 32 | |
| **7** | 34 | | **32** | 31 | | **57** | 33 | | **82** | 39 | |
| **8** | 39 | | **33** | 29 | | **58** | 36 | | **83** | 33 | |
| **9** | 36 | | **34** | 28 | | **59** | 30 | | **84** | 37 | |
| **10** | 30 | | **35** | 29 | | **60** | 37 | | **85** | 27 | T |
| **11** | 41 | | **36** | 30 | | **61** | 34 | | **86** | 36 | |
| **12** | 37 | | **37** | 36 | | **62** | 39 | | **87** | 46 | |
| **13** | 34 | | **38** | 26 | | **63** | 38 | | **88** | 48 | |
| **14** | 31 | | **39** | 43 | | **64** | 34 | | **89** | 33 | |
| **15** | 38 | | **40** | 29 | | **65** | 30 | | **90** | 32 | |
| **16** | 36 | | **41** | 34 | | **66** | 32 | | **91** | 29 | |
| **17** | 29 | | **42** | 40 | | **67** | 31 | | **92** | 31 | |
| **18** | 35 | | **43** | 31 | | **68** | 37 | | **93** | 28 | |
| **19** | 29 | T | **44** | 36 | | **69** | 32 | T | **94** | 27 | |
| **20** | 47 | | **45** | 25 | | **70** | 33 | | **95** | 34 | |
| **21** | 42 | | **46** | 29 | | **71** | 37 | | **96** | 32 | |
| **22** | 32 | | **47** | 34 | | **72** | 28 | | **97** | 36 | |
| **23** | 30 | | **48** | 40 | | **73** | 32 | | **98** | 39 | |
| **24** | 28 | | **49** | 34 | | **74** | 44 | | **99** | 34 | |
| **25** | 27 | | **50** | 33 | | **75** | 35 | | **100** | 41 | |

# Speed Study Data Sheet

| | | | |
|---|---|---|---|
| Job Number | KARA.00010 | Road Name | Aberdeen Ave |
| Start Time | 11:45am | Stop Time | 12:50pm |
| Municipality | Radnor | County | Delaware |
| Date | 8/17/2018 | Weather | Clear |
| Direction | NB | Speed Limit | 25 |
| Location | | Technician | J Hudak |

| # | Speed | Truck | # | Speed | Truck | # | Speed | Truck | # | Speed | Truck |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 25 | | 26 | 24 | | 51 | 28 | | 76 | | |
| 2 | 26 | | 27 | 29 | | 52 | | | 77 | | |
| 3 | 29 | | 28 | 25 | | 53 | 25 | | 78 | | |
| 4 | 25 | | 29 | 25 | | 54 | 26 | | 79 | | |
| 5 | 27 | | 30 | 27 | | 55 | 26 | | 80 | | |
| 6 | | | 31 | 24 | | 56 | 25 | | 81 | | |
| 7 | | | 32 | | | 57 | | | 82 | | |
| 8 | 24 | | 33 | 25 | | 58 | | | 83 | | |
| 9 | 27 | | 34 | 26 | | 59 | 25 | | 84 | | |
| 10 | 24 | | 35 | 25 | | 60 | 26 | | 85 | | |
| 11 | 25 | | 36 | 27 | | 61 | | | 86 | | |
| 12 | | | 37 | 26 | | 62 | | | 87 | | |
| 13 | 24 | | 38 | 24 | | 63 | | | 88 | | |
| 14 | 27 | | 39 | 25 | | 64 | | | 89 | | |
| 15 | 26 | | 40 | 27 | | 65 | | | 90 | | |
| 16 | 25 | | 41 | 26 | | 66 | | | 91 | | |
| 17 | | | 42 | 24 | | 67 | | | 92 | | |
| 18 | 25 | | 43 | 29 | | 68 | | | 93 | | |
| 19 | 29 | | 44 | 24 | | 69 | | | 94 | | |
| 20 | | | 45 | 27 | | 70 | | | 95 | | |
| 21 | 25 | | 46 | 26 | | 71 | | | 96 | | |
| 22 | | | 47 | 24 | | 72 | | | 97 | | |
| 23 | 28 | | 48 | 24 | | 73 | | | 98 | | |
| 24 | 24 | | 49 | 28 | | 74 | | | 99 | | |
| 25 | 25 | | 50 | 29 | | 75 | | | 100 | | |

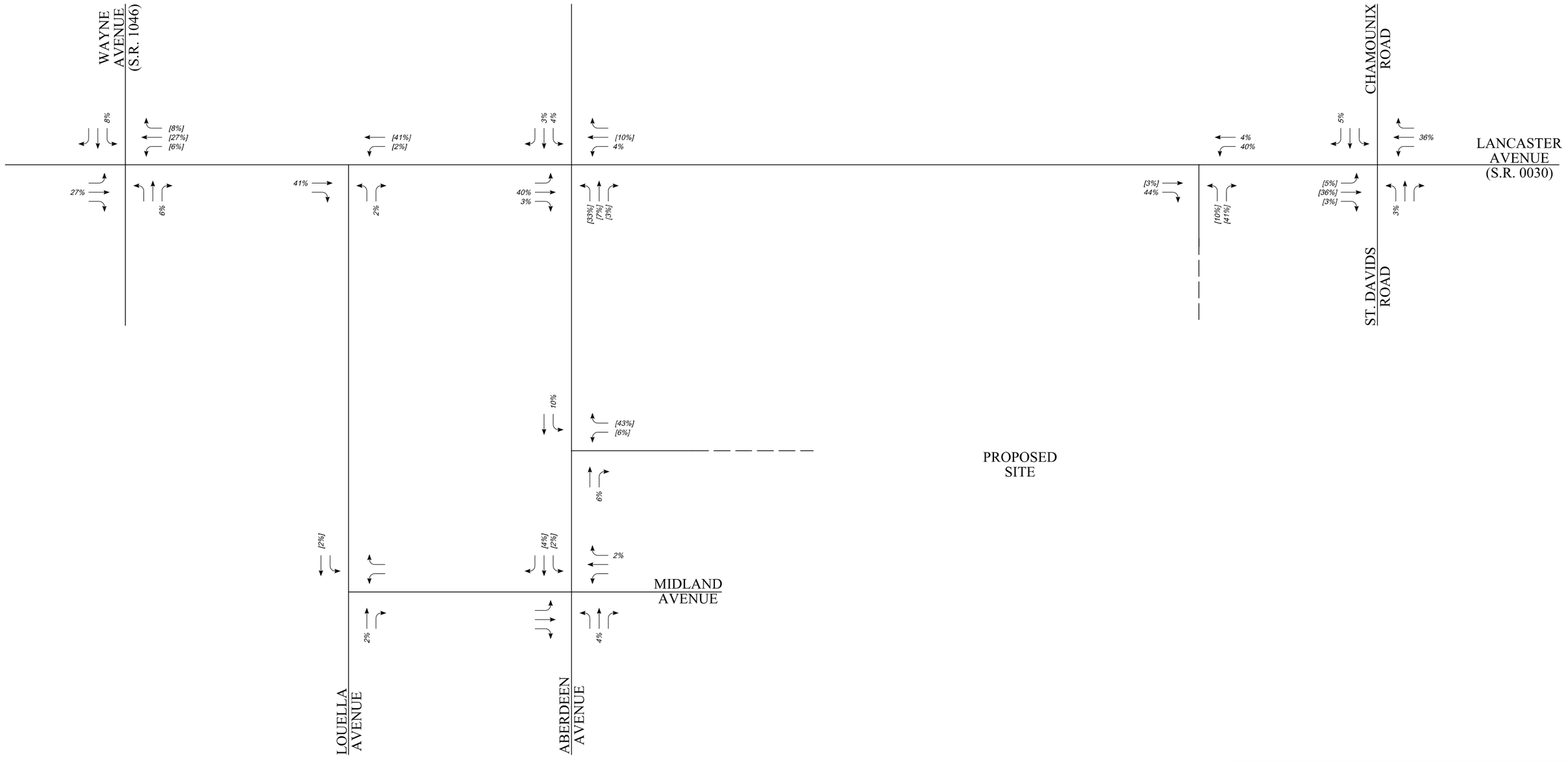
# Speed Study Data Sheet

| | | | |
|---|---|---|---|
| Job Number | KARA.00010 | Road Name | Aberdeen Ave |
| Start Time | 12:50pm | Stop Time | 1:55pm |
| Municipality | Radnor | County | Delaware |
| Date | 8/17/2018 | Weather | Clear |
| Direction | SB | Speed Limit | 25 |
| Location | | Technician | J Hudak |

| # | Speed | Truck | # | Speed | Truck | # | Speed | Truck | # | Speed | Truck |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26 | | 26 | | | 51 | | | 76 | | |
| 2 | 32 | | 27 | 27 | | 52 | 28 | | 77 | | |
| 3 | 26 | | 28 | 26 | | 53 | 27 | | 78 | | |
| 4 | 28 | | 29 | | | 54 | 26 | | 79 | | |
| 5 | 25 | | 30 | 27 | | 55 | | | 80 | | |
| 6 | 30 | | 31 | 25 | | 56 | 27 | | 81 | | |
| 7 | 26 | | 32 | 28 | | 57 | 25 | | 82 | | |
| 8 | 28 | | 33 | 26 | | 58 | 27 | | 83 | | |
| 9 | | | 34 | 25 | | 59 | 26 | | 84 | | |
| 10 | 27 | | 35 | | | 60 | | | 85 | | |
| 11 | | | 36 | 26 | | 61 | | | 86 | | |
| 12 | 29 | | 37 | | | 62 | 25 | | 87 | | |
| 13 | | | 38 | 27 | | 63 | 28 | | 88 | | |
| 14 | 27 | | 39 | 26 | | 64 | 27 | | 89 | | |
| 15 | 26 | | 40 | 25 | | 65 | 28 | | 90 | | |
| 16 | | | 41 | 29 | | 66 | 26 | | 91 | | |
| 17 | | | 42 | 27 | | 67 | | | 92 | | |
| 18 | 27 | | 43 | | | 68 | 27 | | 93 | | |
| 19 | 26 | | 44 | 27 | | 69 | | | 94 | | |
| 20 | | | 45 | 25 | | 70 | | | 95 | | |
| 21 | 27 | | 46 | | | 71 | | | 96 | | |
| 22 | 25 | | 47 | 27 | | 72 | | | 97 | | |
| 23 | | | 48 | 25 | | 73 | | | 98 | | |
| 24 | 27 | | 49 | 26 | | 74 | | | 99 | | |
| 25 | 28 | | 50 | 25 | | 75 | | | 100 | | |

# APPENDIX D

## *TRIP ASSIGNMENT DATA*




**KEY:**

**– – – – – – PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

N

www.TrafficPD.com

Est. 1989

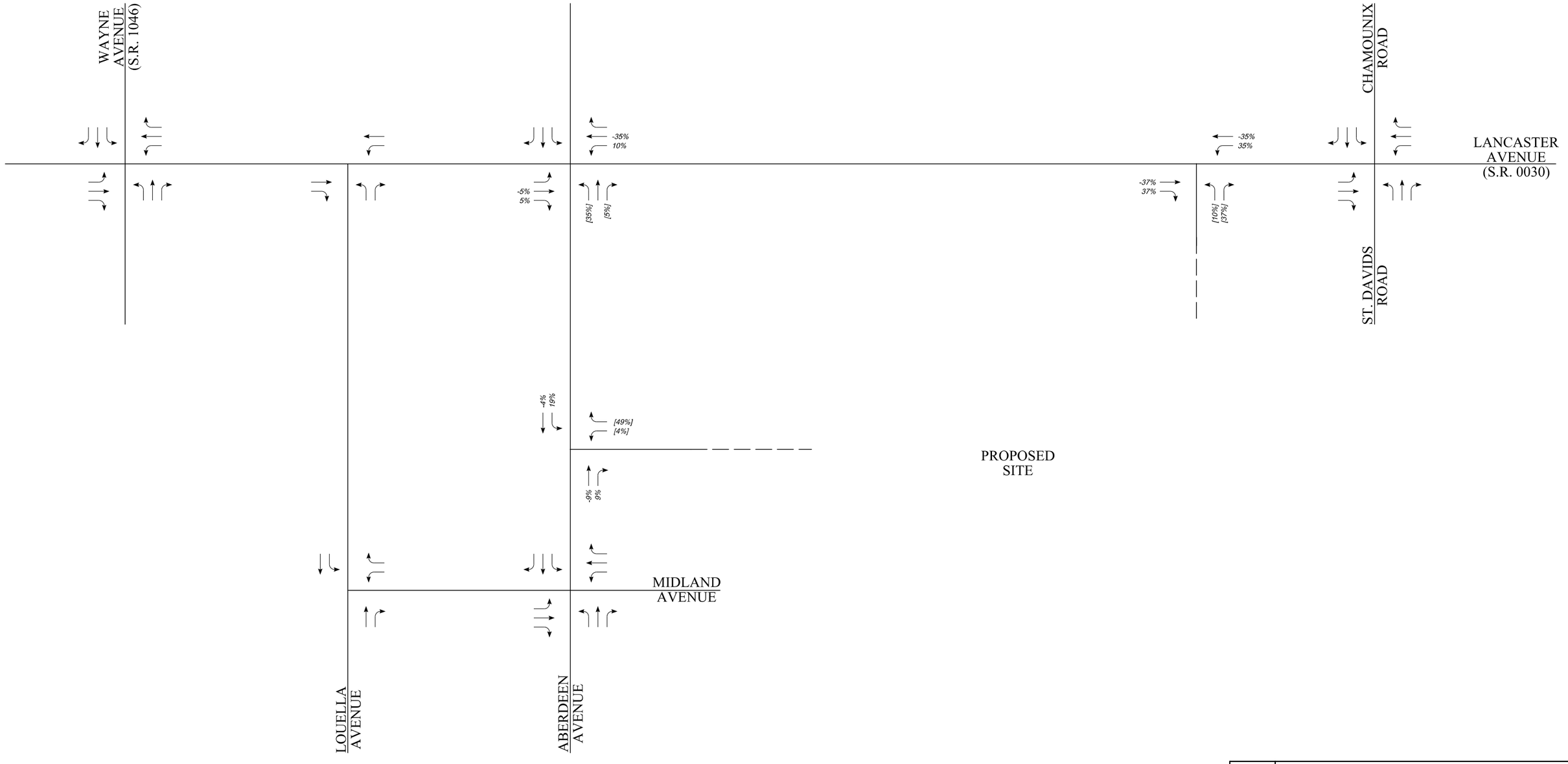
TRAFFIC PLANNING AND DESIGN, INC.

*Providing transportation engineering and related services across the eastern United States*

FIGURE D-1

TRIP ASSIGNMENT % - NEW TRIPS
ENTER% [EXIT%]

c:\pwwork\hg\projects\pglassman\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:13 PM pglassman $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

N

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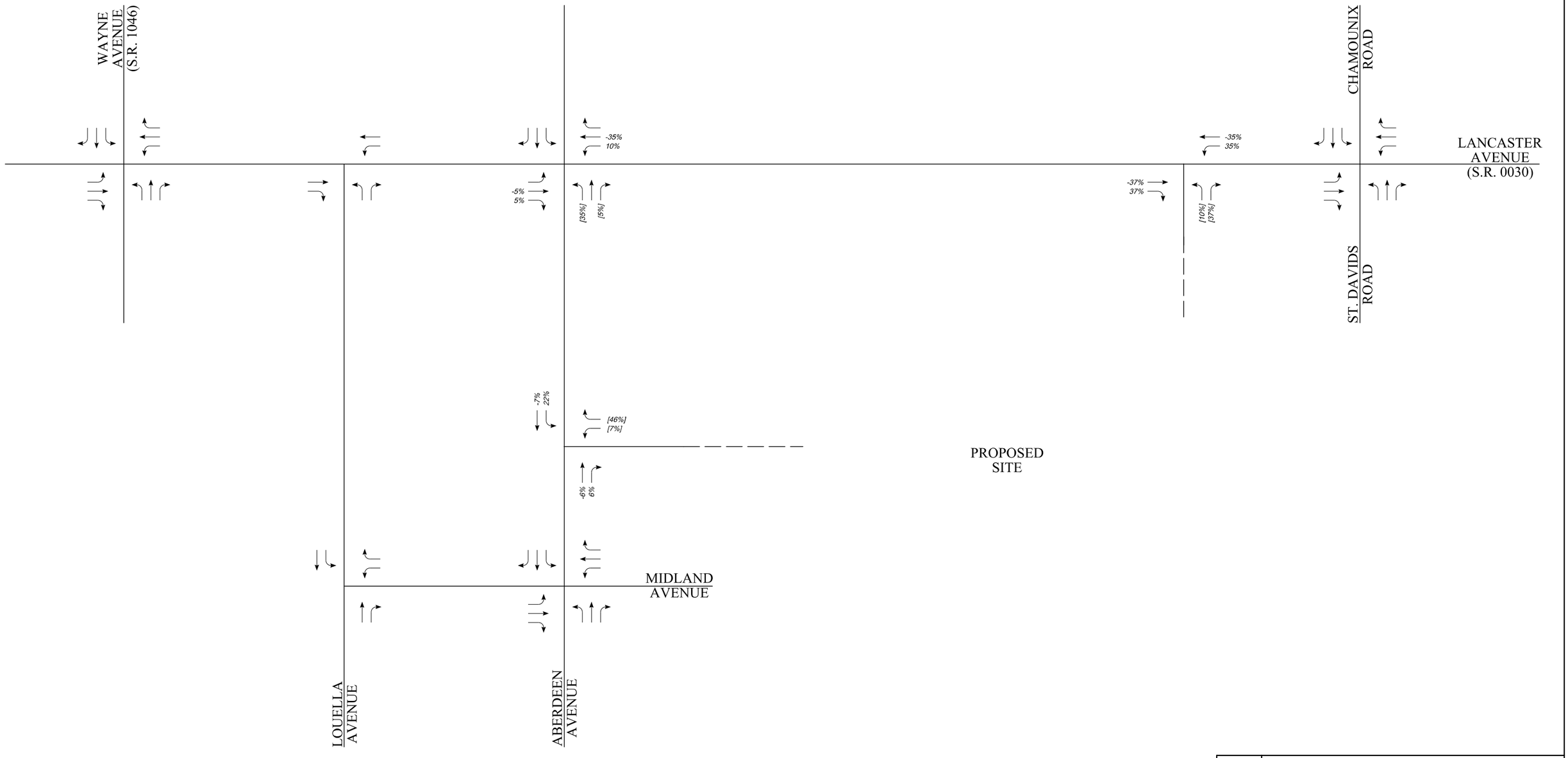
FIGURE D-2

TRIP ASSIGNMENT % - PASS-BY TRIPS
WEEKDAY AM PEAK HOUR
ENTER% [EXIT%]

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:14 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

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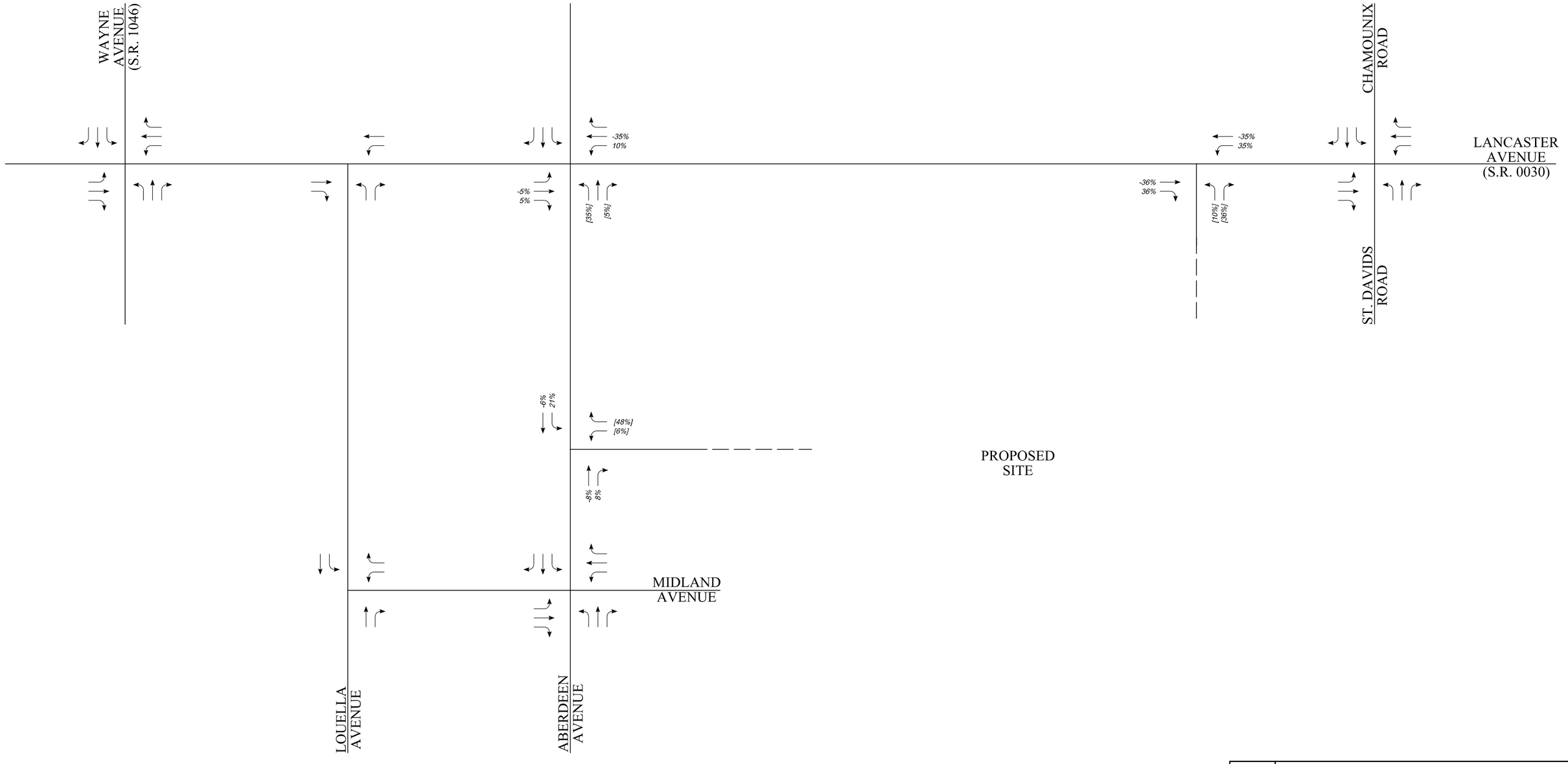
FIGURE D-3

TRIP ASSIGNMENT % - PASS-BY TRIPS
WEEKDAY PM PEAK HOUR
ENTER% [EXIT%]

c:\pwwork\hg\projects\pglassman\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:15 PM pglassman $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

N

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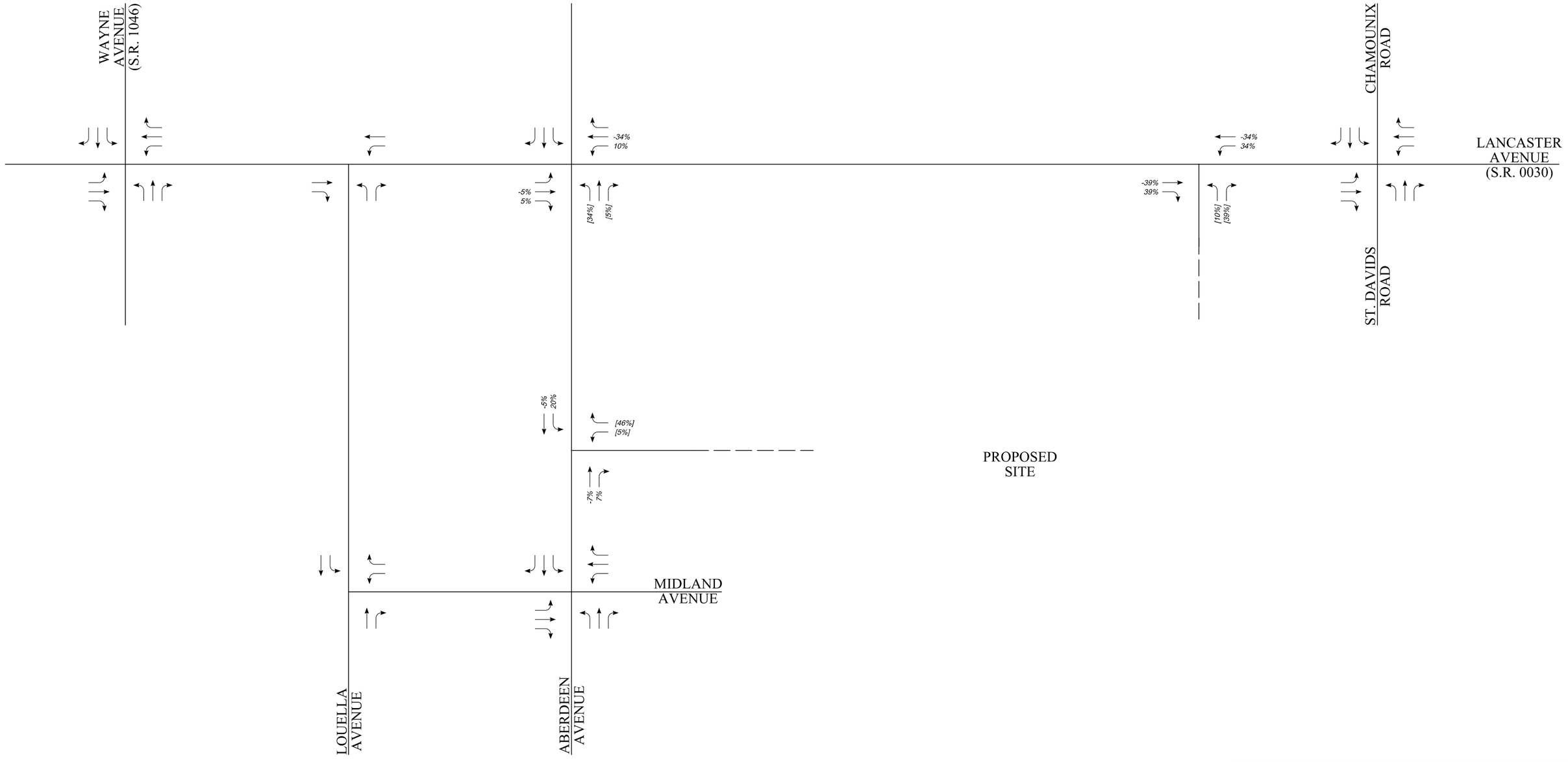
TRAFFIC PLANNING AND DESIGN, INC.

*Providing transportation engineering and related services across the eastern United States*

FIGURE D-4

TRIP ASSIGNMENT % - PASS-BY TRIPS
SATURDAY MIDDAY PEAK HOUR
ENTER% [EXIT%]

c:\pwwork\hg\projects\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:16 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

N

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Est. 1989

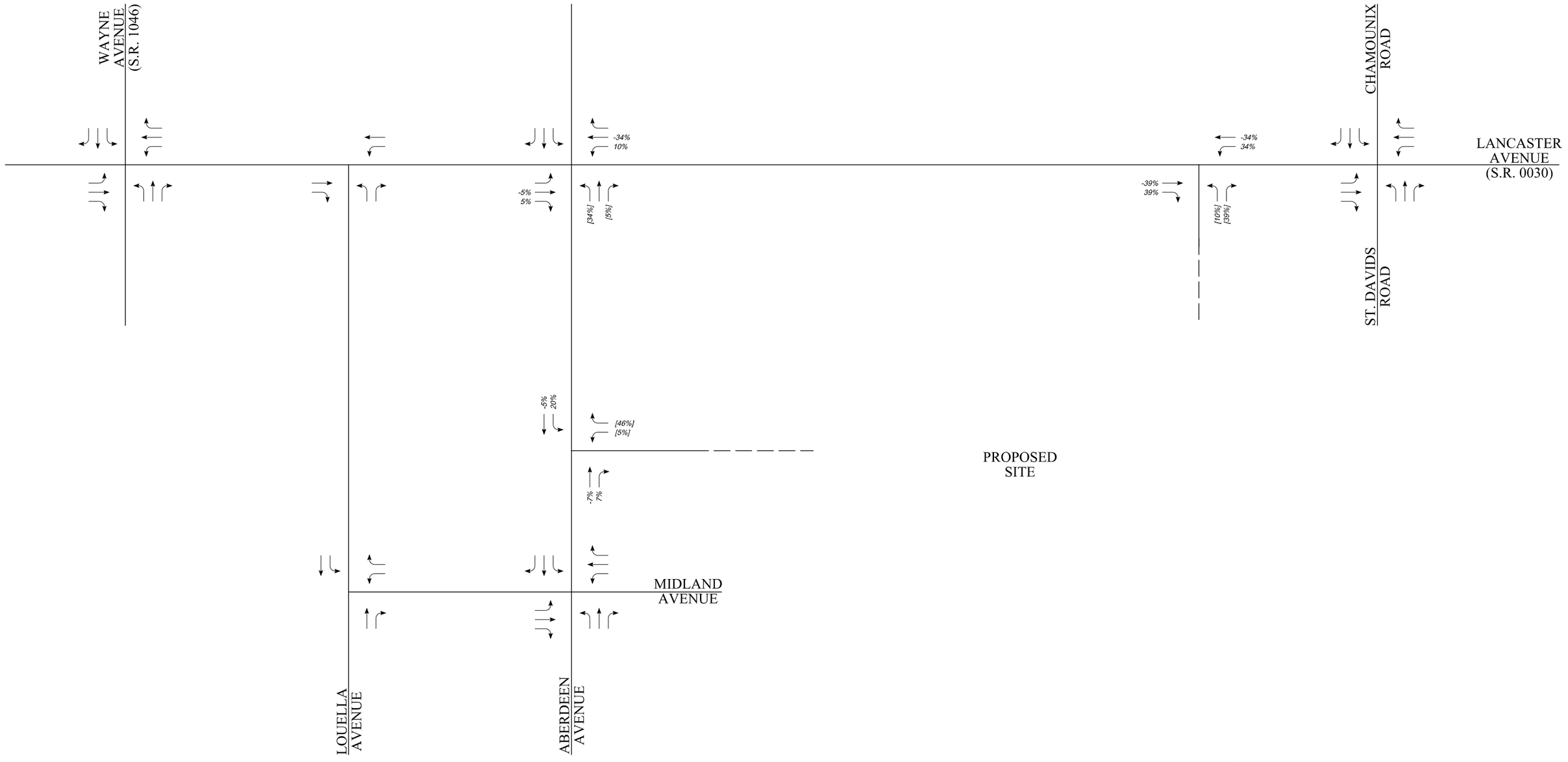
TRAFFIC PLANNING AND DESIGN, INC.

*Providing transportation engineering and related services across the eastern United States*

FIGURE D-5

TRIP ASSIGNMENT % - PASS-BY TRIPS
SUNDAY PEAK HOUR
ENTER% [EXIT%]

c:\pwwork\hg\projects\e\pglassmon\d0654778\2018-09-XX Figures.dgn
2/22/2019 12:29:17 PM pglassmon $MODEL$




**KEY:**

**- - - - - - PROPOSED DRIVEWAY**

**SCHEMATIC DRAWING:NOT TO SCALE**

N

www.TrafficPD.com

Est. 1989

TRAFFIC PLANNING AND DESIGN, INC.

*Providing transportation engineering and related services across the eastern United States*

FIGURE D-6

TRIP ASSIGNMENT % - PASS-BY TRIPS
WEEKDAY MIDDAY PEAK HOUR
ENTER% [EXIT%]

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# APPENDIX E

## *VOLUME DEVELOPMENT SPREADSHEETS*

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Lancaster Avenue (S.R. 0030) & Aberdeen Avenue** | | | | | | | | |
| **Synchro Node:** | **1** | **Adjacent intersections:** | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **35** | **785** | **34** | **11** | **956** | **43** | **72** | **108** | **33** | **140** | **85** | **68** | **2370** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **35** | **785** | **34** | **11** | **956** | **43** | **72** | **108** | **33** | **140** | **85** | **68** | **2370** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 1 | 1 | 0 | 1 | 1 | 1 | 18 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 21 | 1 | 0 | 26 | 1 | 2 | 3 | 1 | 4 | 2 | 2 | 64 |
| **2020 Base Volumes** | **35** | **791** | **34** | **11** | **963** | **43** | **73** | **109** | **33** | **141** | **86** | **69** | **2388** |
| **2025 Base Volumes** | **36** | **806** | **35** | **11** | **982** | **44** | **74** | **111** | **34** | **144** | **87** | **70** | **2434** |

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|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 40.0% | 3.0% | 4.0% | | | | | | 4.0% | 3.0% | | |
| Trip Assignment % - New Exit | | | | | 10.0% | | 33.0% | 7.0% | 3.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -5.0% | 5.0% | 10.0% | -35.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 35.0% | | 5.0% | | | | |
| **New Trips** | | 19 | 1 | 2 | 5 | | 16 | 3 | 1 | 2 | 1 | | **50** |
| **Pass-by Trips** | | -8 | 8 | 15 | -53 | | 53 | | 8 | | | | **23** |
| **Base Re-Distribution** | | -13 | -1 | | -3 | | | -1 | | -2 | -3 | | **-23** |
| **2020 Projected Volumes** | **35** | **789** | **42** | **28** | **912** | **43** | **142** | **111** | **42** | **141** | **84** | **69** | **2438** |
| **2025 Projected Volumes** | **36** | **804** | **43** | **28** | **931** | **44** | **143** | **113** | **43** | **144** | **85** | **70** | **2484** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **33** | **844** | **30** | **10** | **955** | **59** | **39** | **63** | **26** | **117** | **112** | **67** | **2355** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **33** | **844** | **30** | **10** | **955** | **59** | **39** | **63** | **26** | **117** | **112** | **67** | **2355** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 16 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 23 | 1 | 0 | 26 | 2 | 1 | 2 | 1 | 3 | 3 | 2 | 65 |
| **2020 Base Volumes** | **33** | **850** | **30** | **10** | **962** | **59** | **39** | **63** | **26** | **118** | **113** | **68** | **2371** |
| **2025 Base Volumes** | **34** | **867** | **31** | **10** | **981** | **61** | **40** | **65** | **27** | **120** | **115** | **69** | **2420** |

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| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 40.0% | 3.0% | 4.0% | | | | | | 4.0% | 3.0% | | |
| Trip Assignment % - New Exit | | | | | 10.0% | | 33.0% | 7.0% | 3.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -5.0% | 5.0% | 10.0% | -35.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 35.0% | | 5.0% | | | | |
| **New Trips** | | 16 | 1 | 2 | 4 | | 13 | 3 | 1 | 2 | 1 | | **43** |
| **Pass-by Trips** | | -6 | 6 | 13 | -44 | | 44 | | 6 | | | | **19** |
| **Base Re-Distribution** | | -36 | -2 | | -1 | | 1 | | | | -2 | | **-40** |
| **2020 Projected Volumes** | **33** | **824** | **35** | **25** | **921** | **59** | **97** | **66** | **33** | **120** | **112** | **68** | **2393** |
| **2025 Projected Volumes** | **34** | **841** | **36** | **25** | **940** | **61** | **98** | **68** | **34** | **122** | **114** | **69** | **2442** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **39** | **688** | **42** | **14** | **850** | **50** | **39** | **93** | **36** | **116** | **70** | **64** | **2101** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **39** | **688** | **42** | **14** | **850** | **50** | **39** | **93** | **36** | **116** | **70** | **64** | **2101** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 14 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 19 | 1 | 0 | 23 | 1 | 1 | 3 | 1 | 3 | 2 | 2 | 57 |
| **2020 Base Volumes** | **39** | **693** | **42** | **14** | **856** | **50** | **39** | **94** | **36** | **117** | **71** | **64** | **2115** |
| **2025 Base Volumes** | **40** | **707** | **43** | **14** | **873** | **51** | **40** | **96** | **37** | **119** | **72** | **66** | **2158** |

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| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 40.0% | 3.0% | 4.0% | | | | | | 4.0% | 3.0% | | |
| Trip Assignment % - New Exit | | | | | 10.0% | | 33.0% | 7.0% | 3.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -5.0% | 5.0% | 10.0% | -35.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 35.0% | | 5.0% | | | | |
| **New Trips** | | 20 | 2 | 2 | 5 | | 17 | 4 | 2 | 2 | 2 | | **56** |
| **Pass-by Trips** | | -5 | 5 | 10 | -35 | | 35 | | 5 | | | | **15** |
| **Base Re-Distribution** | | -32 | | | | | -1 | -2 | | -5 | -1 | | **-41** |
| **2020 Projected Volumes** | **39** | **676** | **49** | **26** | **826** | **50** | **90** | **96** | **43** | **114** | **72** | **64** | **2145** |
| **2025 Projected Volumes** | **40** | **690** | **50** | **26** | **843** | **51** | **91** | **98** | **44** | **116** | **73** | **66** | **2188** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **28** | **542** | **26** | **13** | **579** | **32** | **29** | **47** | **23** | **61** | **48** | **37** | **1465** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **28** | **542** | **26** | **13** | **579** | **32** | **29** | **47** | **23** | **61** | **48** | **37** | **1465** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 14 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 19 | 1 | 0 | 23 | 1 | 1 | 3 | 1 | 3 | 2 | 2 | 57 |
| **2020 Base Volumes** | **28** | **547** | **26** | **13** | **585** | **32** | **29** | **48** | **23** | **62** | **49** | **37** | **1479** |
| **2025 Base Volumes** | **29** | **561** | **27** | **13** | **602** | **33** | **30** | **50** | **24** | **64** | **50** | **39** | **1522** |

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| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 40.0% | 3.0% | 4.0% | | | | | | 4.0% | 3.0% | | |
| Trip Assignment % - New Exit | | | | | 10.0% | | 33.0% | 7.0% | 3.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -5.0% | 5.0% | 10.0% | -34.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 34.0% | | 5.0% | | | | |
| **New Trips** | | 20 | 2 | 2 | 5 | | 17 | 4 | 2 | 2 | 2 | | **56** |
| **Pass-by Trips** | | -5 | 5 | 10 | -34 | | 34 | | 5 | | | | **15** |
| **Base Re-Distribution** | | -18 | -1 | | -8 | | -3 | -3 | | | -3 | | **-36** |
| **2020 Projected Volumes** | **28** | **544** | **32** | **25** | **548** | **32** | **77** | **49** | **30** | **64** | **48** | **37** | **1514** |
| **2025 Projected Volumes** | **29** | **558** | **33** | **25** | **565** | **33** | **78** | **51** | **31** | **66** | **49** | **39** | **1557** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **38** | **694** | **37** | **15** | **805** | **72** | **41** | **63** | **34** | **113** | **61** | **81** | **2054** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **38** | **694** | **37** | **15** | **805** | **72** | **41** | **63** | **34** | **113** | **61** | **81** | **2054** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 5 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 1 | 1 | 0 | 14 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 19 | 1 | 0 | 23 | 1 | 1 | 3 | 1 | 3 | 2 | 2 | 57 |
| **2020 Base Volumes** | **38** | **699** | **37** | **15** | **811** | **72** | **41** | **64** | **34** | **114** | **62** | **81** | **2068** |
| **2025 Base Volumes** | **39** | **713** | **38** | **15** | **828** | **73** | **42** | **66** | **35** | **116** | **63** | **83** | **2111** |

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| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 40.0% | 3.0% | 4.0% | | | | | | 4.0% | 3.0% | | |
| Trip Assignment % - New Exit | | | | | 10.0% | | 33.0% | 7.0% | 3.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -5.0% | 5.0% | 10.0% | -34.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 34.0% | | 5.0% | | | | |
| **New Trips** | | 19 | 1 | 2 | 5 | | 16 | 3 | 1 | 2 | 1 | | **50** |
| **Pass-by Trips** | | -8 | 8 | 15 | -51 | | 51 | | 8 | | | | **23** |
| **Base Re-Distribution** | | | -1 | | -3 | 1 | -2 | -2 | | | -1 | | **-8** |
| **2020 Projected Volumes** | **38** | **710** | **45** | **32** | **762** | **73** | **106** | **65** | **43** | **116** | **62** | **81** | **2133** |
| **2025 Projected Volumes** | **39** | **724** | **46** | **32** | **779** | **74** | **107** | **67** | **44** | **118** | **63** | **83** | **2176** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Lancaster Avenue (S.R. 0030) & Western Sunoco Driveway** | | | | | | | | | | | |
| **Synchro Node:** | **2** | **Adjacent intersections:** | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** | | |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **12** | **0** | | | **0** | | **0** | | | | **12** |
| Balancing | | 946 | | | 1010 | | | | | | | | 1956 |
| **Existing Volumes (Balanced)** | **0** | **946** | **12** | **0** | **1010** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1968** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 25 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| **2020 Base Volumes** | **0** | **953** | **12** | **0** | **1018** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1983** |
| **2025 Base Volumes** | **0** | **971** | **12** | **0** | **1037** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2020** |

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| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 22 | | | 7 | | | | | | | | **29** |
| **Pass-by Trips** | | | | | -38 | | | | | | | | **-38** |
| **Base Re-Distribution** | | -3 | -12 | | -3 | | | | | | | | **-18** |
| **2020 Projected Volumes** | **0** | **972** | **0** | **0** | **984** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1956** |
| **2025 Projected Volumes** | **0** | **990** | **0** | **0** | **1003** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1993** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **18** | **2** | | | **0** | | **3** | | | | **23** |
| Balancing | | 969 | | | 1024 | | | | | | | | 1993 |
| **Existing Volumes (Balanced)** | **0** | **969** | **18** | **2** | **1024** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **2016** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 26 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| **2020 Base Volumes** | **0** | **976** | **18** | **2** | **1032** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **2031** |
| **2025 Base Volumes** | **0** | **995** | **18** | **2** | **1052** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **2070** |

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| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 18 | | | 6 | | | | | | | | **24** |
| **Pass-by Trips** | | | | | -31 | | | | | | | | **-31** |
| **Base Re-Distribution** | | -18 | -18 | -2 | -1 | | | | -3 | | | | **-42** |
| **2020 Projected Volumes** | **0** | **976** | **0** | **0** | **1006** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1982** |
| **2025 Projected Volumes** | **0** | **995** | **0** | **0** | **1026** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2021** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **17** | **0** | | | **0** | | **2** | | | | **19** |
| Balancing | | 823 | | | 914 | | | | | | | | 1737 |
| **Existing Volumes (Balanced)** | **0** | **823** | **17** | **0** | **914** | **0** | **0** | **0** | **2** | **0** | **0** | **0** | **1756** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 22 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| **2020 Base Volumes** | **0** | **829** | **17** | **0** | **921** | **0** | **0** | **0** | **2** | **0** | **0** | **0** | **1769** |
| **2025 Base Volumes** | **0** | **845** | **17** | **0** | **939** | **0** | **0** | **0** | **2** | **0** | **0** | **0** | **1803** |

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| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 24 | | | 7 | | | | | | | | **31** |
| **Pass-by Trips** | | | | | -25 | | | | | | | | **-25** |
| **Base Re-Distribution** | | -20 | -17 | | | | | | -2 | | | | **-39** |
| **2020 Projected Volumes** | **0** | **833** | **0** | **0** | **903** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1736** |
| **2025 Projected Volumes** | **0** | **849** | **0** | **0** | **921** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1770** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **9** | **1** | | | **0** | | **2** | | | | **12** |
| Balancing | | 617 | | | 624 | | | | | | | | 1241 |
| **Existing Volumes (Balanced)** | **0** | **617** | **9** | **1** | **624** | **0** | **0** | **0** | **2** | **0** | **0** | **0** | **1253** |
| | | | | | | | | | | | | | |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 22 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| | | | | | | | | | | | | | |
| **2020 Base Volumes** | **0** | **623** | **9** | **1** | **631** | **0** | **0** | **0** | **2** | **0** | **0** | **0** | **1266** |
| **2025 Base Volumes** | **0** | **639** | **9** | **1** | **649** | **0** | **0** | **0** | **2** | **0** | **0** | **0** | **1300** |

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|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -24.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 24 | | | 7 | | | | | | | | **31** |
| **Pass-by Trips** | | | | | -24 | | | | | | | | **-24** |
| **Base Re-Distribution** | | -9 | -9 | -1 | -8 | | | | -2 | | | | **-29** |
| | | | | | | | | | | | | | |
| **2020 Projected Volumes** | **0** | **638** | **0** | **0** | **606** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1244** |
| **2025 Projected Volumes** | **0** | **654** | **0** | **0** | **624** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1278** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **12** | **0** | | | **0** | | **3** | | | | **15** |
| Balancing | | 829 | | | 892 | | | | | | | | 1721 |
| **Existing Volumes (Balanced)** | **0** | **829** | **12** | **0** | **892** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **1736** |
| | | | | | | | | | | | | | |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 22 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| | | | | | | | | | | | | | |
| **2020 Base Volumes** | **0** | **835** | **12** | **0** | **899** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **1749** |
| **2025 Base Volumes** | **0** | **851** | **12** | **0** | **917** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **1783** |

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|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -24.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 22 | | | 7 | | | | | | | | **29** |
| **Pass-by Trips** | | | | | -36 | | | | | | | | **-36** |
| **Base Re-Distribution** | | 3 | -12 | | 2 | | | | -3 | | | | **-10** |
| | | | | | | | | | | | | | |
| **2020 Projected Volumes** | **0** | **860** | **0** | **0** | **872** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1732** |
| **2025 Projected Volumes** | **0** | **876** | **0** | **0** | **890** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1766** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Lancaster Avenue (S.R. 0030) & Eastern Sunoco/Western Proposed Driveway** | | | | | | | | | | | |
| **Synchro Node:** | **3** | **Adjacent intersections:** | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** | | |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **2** | **0** | | | **5** | | **15** | | | | **22** |
| Balancing | | 944 | | | 1005 | | | | | | | | 1949 |
| **Existing Volumes (Balanced)** | **0** | **944** | **2** | **0** | **1005** | **0** | **5** | **0** | **15** | **0** | **0** | **0** | **1971** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 25 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| **2020 Base Volumes** | **0** | **951** | **2** | **0** | **1013** | **0** | **5** | **0** | **15** | **0** | **0** | **0** | **1986** |
| **2025 Base Volumes** | **0** | **969** | **2** | **0** | **1032** | **0** | **5** | **0** | **15** | **0** | **0** | **0** | **2023** |

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| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 22 | | | 7 | | | | | | | | **29** |
| **Pass-by Trips** | | | | | -38 | | | | | | | | **-38** |
| **Base Re-Distribution** | | -1 | -2 | | 2 | | -5 | | -15 | | | | **-21** |
| **2020 Projected Volumes** | **0** | **972** | **0** | **0** | **984** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1956** |
| **2025 Projected Volumes** | **0** | **990** | **0** | **0** | **1003** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1993** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **24** | **3** | | | **2** | | **21** | | | | **50** |
| Balancing | | 948 | | | 1024 | | | | | | | | 1972 |
| **Existing Volumes (Balanced)** | **0** | **948** | **24** | **3** | **1024** | **0** | **2** | **0** | **21** | **0** | **0** | **0** | **2022** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 26 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 |
| **2020 Base Volumes** | **0** | **955** | **24** | **3** | **1032** | **0** | **2** | **0** | **21** | **0** | **0** | **0** | **2037** |
| **2025 Base Volumes** | **0** | **974** | **24** | **3** | **1052** | **0** | **2** | **0** | **21** | **0** | **0** | **0** | **2076** |

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| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 18 | | | 6 | | | | | | | | **24** |
| **Pass-by Trips** | | | | | -31 | | | | | | | | **-31** |
| **Base Re-Distribution** | | 3 | -24 | -3 | -1 | | -2 | | -21 | | | | **-48** |
| **2020 Projected Volumes** | **0** | **976** | **0** | **0** | **1006** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1982** |
| **2025 Projected Volumes** | **0** | **995** | **0** | **0** | **1026** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2021** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **1** | **0** | | | **1** | | **22** | | | | **24** |
| Balancing | | 824 | | | 913 | | | | | | | | 1737 |
| **Existing Volumes (Balanced)** | **0** | **824** | **1** | **0** | **913** | **0** | **1** | **0** | **22** | **0** | **0** | **0** | **1761** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 22 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| **2020 Base Volumes** | **0** | **830** | **1** | **0** | **920** | **0** | **1** | **0** | **22** | **0** | **0** | **0** | **1774** |
| **2025 Base Volumes** | **0** | **846** | **1** | **0** | **938** | **0** | **1** | **0** | **22** | **0** | **0** | **0** | **1808** |

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| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 24 | | | 7 | | | | | | | | **31** |
| **Pass-by Trips** | | | | | -25 | | | | | | | | **-25** |
| **Base Re-Distribution** | | -22 | -1 | | | | -1 | | -22 | | | | **-46** |
| **2020 Projected Volumes** | **0** | **832** | **0** | **0** | **902** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1734** |
| **2025 Projected Volumes** | **0** | **848** | **0** | **0** | **920** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1768** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **3** | **2** | | | **4** | | **14** | | | | **23** |
| Balancing | | 616 | | | 621 | | | | | | | | 1237 |
| **Existing Volumes (Balanced)** | **0** | **616** | **3** | **2** | **621** | **0** | **4** | **0** | **14** | **0** | **0** | **0** | **1260** |
| | | | | | | | | | | | | | |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 22 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| | | | | | | | | | | | | | |
| **2020 Base Volumes** | **0** | **622** | **3** | **2** | **628** | **0** | **4** | **0** | **14** | **0** | **0** | **0** | **1273** |
| **2025 Base Volumes** | **0** | **638** | **3** | **2** | **646** | **0** | **4** | **0** | **14** | **0** | **0** | **0** | **1307** |

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| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -24.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 24 | | | 7 | | | | | | | | **31** |
| **Pass-by Trips** | | | | | -24 | | | | | | | | **-24** |
| **Base Re-Distribution** | | -8 | -3 | -2 | -5 | | -4 | | -14 | | | | **-36** |
| | | | | | | | | | | | | | |
| **2020 Projected Volumes** | **0** | **638** | **0** | **0** | **606** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1244** |
| **2025 Projected Volumes** | **0** | **654** | **0** | **0** | **624** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1278** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **2** | **3** | | | **1** | | **20** | | | | **26** |
| Balancing | | 830 | | | 891 | | | | | | | | 1721 |
| **Existing Volumes (Balanced)** | **0** | **830** | **2** | **3** | **891** | **0** | **1** | **0** | **20** | **0** | **0** | **0** | **1747** |
| | | | | | | | | | | | | | |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 22 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 |
| | | | | | | | | | | | | | |
| **2020 Base Volumes** | **0** | **836** | **2** | **3** | **898** | **0** | **1** | **0** | **20** | **0** | **0** | **0** | **1760** |
| **2025 Base Volumes** | **0** | **852** | **2** | **3** | **916** | **0** | **1** | **0** | **20** | **0** | **0** | **0** | **1794** |

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| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -24.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 22 | | | 7 | | | | | | | | **29** |
| **Pass-by Trips** | | | | | -36 | | | | | | | | **-36** |
| **Base Re-Distribution** | | 2 | -2 | -3 | 3 | | -1 | | -20 | | | | **-21** |
| | | | | | | | | | | | | | |
| **2020 Projected Volumes** | **0** | **860** | **0** | **0** | **872** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1732** |
| **2025 Projected Volumes** | **0** | **876** | **0** | **0** | **890** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1766** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Lancaster Avenue (S.R. 0030) & Western BP Driveway** | | | | | | | | | | | | |
| **Synchro Node:** | **4** | **Adjacent intersections:** | | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** | | |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **20** | **3** | | | **0** | | **6** | | | | **29** |
| Balancing | | 939 | | | 1005 | | | | | | | | 1944 |
| **Existing Volumes (Balanced)** | **0** | **939** | **20** | **3** | **1005** | **0** | **0** | **0** | **6** | **0** | **0** | **0** | **1973** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 25 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| **2020 Base Volumes** | **0** | **946** | **20** | **3** | **1013** | **0** | **0** | **0** | **6** | **0** | **0** | **0** | **1988** |
| **2025 Base Volumes** | **0** | **964** | **20** | **3** | **1032** | **0** | **0** | **0** | **6** | **0** | **0** | **0** | **2025** |

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| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 18.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 29 | | | 7 | | | | | | | | **36** |
| **Pass-by Trips** | | | | | -38 | | | | | | | | **-38** |
| **Base Re-Distribution** | | 4 | -20 | -3 | 2 | | | | -6 | | | | **-23** |
| **2020 Projected Volumes** | **0** | **979** | **0** | **0** | **984** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1963** |
| **2025 Projected Volumes** | **0** | **997** | **0** | **0** | **1003** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2000** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **36** | **5** | | | **0** | | **3** | | | | **44** |
| Balancing | | 933 | | | 1027 | | | | | | | | 1960 |
| **Existing Volumes (Balanced)** | **0** | **933** | **36** | **5** | **1027** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **2004** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 25 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| **2020 Base Volumes** | **0** | **940** | **36** | **5** | **1035** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **2019** |
| **2025 Base Volumes** | **0** | **958** | **36** | **5** | **1055** | **0** | **0** | **0** | **3** | **0** | **0** | **0** | **2057** |

| | | |
|---|---|---|
| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 18.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 24 | | | 6 | | | | | | | | **30** |
| **Pass-by Trips** | | | | | -31 | | | | | | | | **-31** |
| **Base Re-Distribution** | | 18 | -36 | -5 | -4 | | | | -3 | | | | **-30** |
| **2020 Projected Volumes** | **0** | **982** | **0** | **0** | **1006** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1988** |
| **2025 Projected Volumes** | **0** | **1000** | **0** | **0** | **1026** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **2026** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **47** | **8** | | | **2** | | **4** | | | | **61** |
| Balancing | | 799 | | | 911 | | | | | | | | 1710 |
| **Existing Volumes (Balanced)** | **0** | **799** | **47** | **8** | **911** | **0** | **2** | **0** | **4** | **0** | **0** | **0** | **1771** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| **2020 Base Volumes** | **0** | **805** | **47** | **8** | **918** | **0** | **2** | **0** | **4** | **0** | **0** | **0** | **1784** |
| **2025 Base Volumes** | **0** | **820** | **47** | **8** | **936** | **0** | **2** | **0** | **4** | **0** | **0** | **0** | **1817** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 18.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -25.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 31 | | | 7 | | | | | | | | **38** |
| **Pass-by Trips** | | | | | -25 | | | | | | | | **-25** |
| **Base Re-Distribution** | | 3 | -47 | -8 | 3 | | -2 | | -4 | | | | **-55** |
| **2020 Projected Volumes** | **0** | **839** | **0** | **0** | **903** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1742** |
| **2025 Projected Volumes** | **0** | **854** | **0** | **0** | **921** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1775** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **21** | **3** | | | **1** | | **2** | | | | **27** |
| Balancing | | 609 | | | 622 | | | | | | | | 1231 |
| **Existing Volumes (Balanced)** | **0** | **609** | **21** | **3** | **622** | **0** | **1** | **0** | **2** | **0** | **0** | **0** | **1258** |
| | | | | | | | | | | | | | |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| | | | | | | | | | | | | | |
| **2020 Base Volumes** | **0** | **615** | **21** | **3** | **629** | **0** | **1** | **0** | **2** | **0** | **0** | **0** | **1271** |
| **2025 Base Volumes** | **0** | **630** | **21** | **3** | **647** | **0** | **1** | **0** | **2** | **0** | **0** | **0** | **1304** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 18.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -24.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 31 | | | 7 | | | | | | | | **38** |
| **Pass-by Trips** | | | | | -24 | | | | | | | | **-24** |
| **Base Re-Distribution** | | -1 | -21 | -3 | -6 | | -1 | | -2 | | | | **-34** |
| | | | | | | | | | | | | | |
| **2020 Projected Volumes** | **0** | **645** | **0** | **0** | **606** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1251** |
| **2025 Projected Volumes** | **0** | **660** | **0** | **0** | **624** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1284** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **18** | **6** | | | **1** | | **3** | | | | **28** |
| Balancing | | 832 | | | 893 | | | | | | | | 1725 |
| **Existing Volumes (Balanced)** | **0** | **832** | **18** | **6** | **893** | **0** | **1** | **0** | **3** | **0** | **0** | **0** | **1753** |
| | | | | | | | | | | | | | |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| | | | | | | | | | | | | | |
| **2020 Base Volumes** | **0** | **838** | **18** | **6** | **900** | **0** | **1** | **0** | **3** | **0** | **0** | **0** | **1766** |
| **2025 Base Volumes** | **0** | **853** | **18** | **6** | **918** | **0** | **1** | **0** | **3** | **0** | **0** | **0** | **1799** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 44.0% | | | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 18.0% | | | 10.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | -24.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 29 | | | 7 | | | | | | | | **36** |
| **Pass-by Trips** | | | | | -36 | | | | | | | | **-36** |
| **Base Re-Distribution** | | | -18 | -6 | 1 | | -1 | | -3 | | | | **-27** |
| | | | | | | | | | | | | | |
| **2020 Projected Volumes** | **0** | **867** | **0** | **0** | **872** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1739** |
| **2025 Projected Volumes** | **0** | **882** | **0** | **0** | **890** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1772** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**
**Intersection:** **Lancaster Avenue (S.R. 0030) & Eastern BP/Eastern Proposed Driveway**
**Synchro Node:** **5** **Adjacent intersections:** **West** 0 **East** 0 **North** 0 **South** 0

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **3** | **3** | | | **2** | | **16** | | | | **24** |
| Balancing | | 942 | | | 1006 | | | | | | | | 1948 |
| **Existing Volumes (Balanced)** | **0** | **942** | **3** | **3** | **1006** | **0** | **2** | **0** | **16** | **0** | **0** | **0** | **1972** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 25 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 52 |
| **2020 Base Volumes** | **0** | **949** | **3** | **3** | **1014** | **0** | **2** | **0** | **16** | **0** | **0** | **0** | **1987** |
| **2025 Base Volumes** | **0** | **967** | **3** | **3** | **1033** | **0** | **2** | **0** | **16** | **0** | **0** | **0** | **2024** |

**ENTER =** **47** **(150)**
**EXIT =** **47** **(150)**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | 44.0% | 40.0% | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | | | 10.0% | | 41.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -37.0% | 37.0% | 35.0% | -35.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 10.0% | | 37.0% | | | | |
| **New Trips** | | 1 | 21 | 19 | 2 | | 5 | | 19 | | | | **67** |
| **Pass-by Trips** | | -56 | 56 | 53 | -53 | | 15 | | 56 | | | | **71** |
| **Base Re-Distribution** | | 1 | -3 | -3 | 1 | | -2 | | -16 | | | | **-22** |
| **2020 Projected Volumes** | **0** | **895** | **77** | **72** | **964** | **0** | **20** | **0** | **75** | **0** | **0** | **0** | **2103** |
| **2025 Projected Volumes** | **0** | **913** | **77** | **72** | **983** | **0** | **20** | **0** | **75** | **0** | **0** | **0** | **2140** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **1** | **4** | | | **7** | | **28** | | | | **40** |
| Balancing | | 935 | | | 1025 | | | | | | | | 1960 |
| **Existing Volumes (Balanced)** | **0** | **935** | **1** | **4** | **1025** | **0** | **7** | **0** | **28** | **0** | **0** | **0** | **2000** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 25 | 0 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53 |
| **2020 Base Volumes** | **0** | **942** | **1** | **4** | **1033** | **0** | **7** | **0** | **28** | **0** | **0** | **0** | **2015** |
| **2025 Base Volumes** | **0** | **960** | **1** | **4** | **1053** | **0** | **7** | **0** | **28** | **0** | **0** | **0** | **2053** |

**ENTER =** **39** **(125)**
**EXIT =** **39** **(125)**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | 44.0% | 40.0% | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | | | 10.0% | | 41.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -37.0% | 37.0% | 35.0% | -35.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 10.0% | | 37.0% | | | | |
| **New Trips** | | 1 | 17 | 16 | 2 | | 4 | | 16 | | | | **56** |
| **Pass-by Trips** | | -45 | 45 | 44 | -44 | | 13 | | 45 | | | | **58** |
| **Base Re-Distribution** | | 16 | -1 | -4 | -2 | | -7 | | -28 | | | | **-26** |
| **2020 Projected Volumes** | **0** | **914** | **62** | **60** | **989** | **0** | **17** | **0** | **61** | **0** | **0** | **0** | **2103** |
| **2025 Projected Volumes** | **0** | **932** | **62** | **60** | **1009** | **0** | **17** | **0** | **61** | **0** | **0** | **0** | **2141** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **4** | **4** | | | **3** | | **54** | | | | **65** |
| Balancing | | 799 | | | 916 | | | | | | | | 1715 |
| **Existing Volumes (Balanced)** | **0** | **799** | **4** | **4** | **916** | **0** | **3** | **0** | **54** | **0** | **0** | **0** | **1780** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| **2020 Base Volumes** | **0** | **805** | **4** | **4** | **923** | **0** | **3** | **0** | **54** | **0** | **0** | **0** | **1793** |
| **2025 Base Volumes** | **0** | **820** | **4** | **4** | **941** | **0** | **3** | **0** | **54** | **0** | **0** | **0** | **1826** |

**ENTER =** **51** **(100)**
**EXIT =** **51** **(100)**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | 44.0% | 40.0% | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | | | 10.0% | | 41.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -36.0% | 36.0% | 35.0% | -35.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 10.0% | | 36.0% | | | | |
| **New Trips** | | 2 | 22 | 20 | 2 | | 5 | | 21 | | | | **72** |
| **Pass-by Trips** | | -36 | 36 | 35 | -35 | | 10 | | 36 | | | | **46** |
| **Base Re-Distribution** | | 3 | -4 | -4 | -2 | | -3 | | -54 | | | | **-64** |
| **2020 Projected Volumes** | **0** | **774** | **58** | **55** | **888** | **0** | **15** | **0** | **57** | **0** | **0** | **0** | **1847** |
| **2025 Projected Volumes** | **0** | **789** | **58** | **55** | **906** | **0** | **15** | **0** | **57** | **0** | **0** | **0** | **1880** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **0** | **6** | | | **8** | | **14** | | | | **28** |
| Balancing | | 611 | | | 617 | | | | | | | | 1228 |
| **Existing Volumes (Balanced)** | **0** | **611** | **0** | **6** | **617** | **0** | **8** | **0** | **14** | **0** | **0** | **0** | **1256** |
| | | | | | | | | | | | | | |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| | | | | | | | | | | | | | |
| **2020 Base Volumes** | **0** | **617** | **0** | **6** | **624** | **0** | **8** | **0** | **14** | **0** | **0** | **0** | **1269** |
| **2025 Base Volumes** | **0** | **632** | **0** | **6** | **642** | **0** | **8** | **0** | **14** | **0** | **0** | **0** | **1302** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | 44.0% | 40.0% | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | | | 10.0% | | 41.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -39.0% | 39.0% | 34.0% | -34.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 10.0% | | 39.0% | | | | |
| **New Trips** | | 2 | 22 | 20 | 2 | | 5 | | 21 | | | | **72** |
| **Pass-by Trips** | | -39 | 39 | 34 | -34 | | 10 | | 39 | | | | **49** |
| **Base Re-Distribution** | | -3 | | -6 | -1 | | -8 | | -14 | | | | **-32** |
| | | | | | | | | | | | | | |
| **2020 Projected Volumes** | **0** | **577** | **61** | **54** | **591** | **0** | **15** | **0** | **60** | **0** | **0** | **0** | **1358** |
| **2025 Projected Volumes** | **0** | **592** | **61** | **54** | **609** | **0** | **15** | **0** | **60** | **0** | **0** | **0** | **1391** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | **3** | **15** | | | **3** | | **35** | | | | **56** |
| Balancing | | 832 | | | 896 | | | | | | | | 1728 |
| **Existing Volumes (Balanced)** | **0** | **832** | **3** | **15** | **896** | **0** | **3** | **0** | **35** | **0** | **0** | **0** | **1784** |
| | | | | | | | | | | | | | |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 46 |
| | | | | | | | | | | | | | |
| **2020 Base Volumes** | **0** | **838** | **3** | **15** | **903** | **0** | **3** | **0** | **35** | **0** | **0** | **0** | **1797** |
| **2025 Base Volumes** | **0** | **853** | **3** | **15** | **921** | **0** | **3** | **0** | **35** | **0** | **0** | **0** | **1830** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | 44.0% | 40.0% | 4.0% | | | | | | | | |
| Trip Assignment % - New Exit | | 3.0% | | | | | 10.0% | | 41.0% | | | | |
| Trip Assignment % - Pass-by Enter | | -39.0% | 39.0% | 34.0% | -34.0% | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | 10.0% | | 39.0% | | | | |
| **New Trips** | | 1 | 21 | 19 | 2 | | 5 | | 19 | | | | **67** |
| **Pass-by Trips** | | -58 | 58 | 51 | -51 | | 15 | | 58 | | | | **73** |
| **Base Re-Distribution** | | | -3 | -15 | -2 | | -3 | | -35 | | | | **-58** |
| | | | | | | | | | | | | | |
| **2020 Projected Volumes** | **0** | **781** | **79** | **70** | **852** | **0** | **20** | **0** | **77** | **0** | **0** | **0** | **1879** |
| **2025 Projected Volumes** | **0** | **796** | **79** | **70** | **870** | **0** | **20** | **0** | **77** | **0** | **0** | **0** | **1912** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Aberdeen Driveway & Northern Sunoco Driveway** | | | | | | | | |
| **Synchro Node:** | **6** | **Adjacent intersections:** | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **1** | | **8** | | | **5** | **11** | | | **25** |
| Balancing | | | | | | | | 205 | | | 119 | | 324 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **1** | **0** | **8** | **0** | **205** | **5** | **11** | **119** | **0** | **349** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 3 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 3 | 0 | 9 |
| **2020 Base Volumes** | **0** | **0** | **0** | **1** | **0** | **8** | **0** | **207** | **5** | **11** | **120** | **0** | **352** |
| **2025 Base Volumes** | **0** | **0** | **0** | **1** | **0** | **8** | **0** | **211** | **5** | **11** | **122** | **0** | **358** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | | | 10.0% | | |
| Trip Assignment % - New Exit | | | | | | | | 43.0% | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | 15.0% | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | 40.0% | | | | | |
| **New Trips** | | | | | | | | 20 | | | 5 | | **25** |
| **Pass-by Trips** | | | | | | | | 60 | | | 23 | | **83** |
| **Base Re-Distribution** | | | | -1 | | -8 | | 7 | -5 | -11 | 7 | | **-11** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **294** | **0** | **0** | **155** | **0** | **449** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **298** | **0** | **0** | **157** | **0** | **455** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **8** | | **4** | | | **12** | **2** | | | **26** |
| Balancing | | | | | | | | 124 | | | 150 | | 274 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **8** | **0** | **4** | **0** | **124** | **12** | **2** | **150** | **0** | **300** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 7 |
| **2020 Base Volumes** | **0** | **0** | **0** | **8** | **0** | **4** | **0** | **125** | **12** | **2** | **151** | **0** | **302** |
| **2025 Base Volumes** | **0** | **0** | **0** | **8** | **0** | **4** | **0** | **127** | **12** | **2** | **154** | **0** | **307** |

| | | |
|---|---|---|
| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | | | 10.0% | | |
| Trip Assignment % - New Exit | | | | | | | | 43.0% | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | 15.0% | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | 40.0% | | | | | |
| **New Trips** | | | | | | | | 17 | | | 4 | | **21** |
| **Pass-by Trips** | | | | | | | | 50 | | | 19 | | **69** |
| **Base Re-Distribution** | | | | -8 | | -4 | | 5 | -12 | -2 | -2 | | **-23** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **197** | **0** | **0** | **172** | **0** | **369** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **199** | **0** | **0** | **175** | **0** | **374** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **6** | | **10** | | | **10** | **2** | | | **28** |
| Balancing | | | | | | | | 158 | | | 124 | | 282 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **6** | **0** | **10** | **0** | **158** | **10** | **2** | **124** | **0** | **310** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **0** | **0** | **0** | **6** | **0** | **10** | **0** | **159** | **10** | **2** | **125** | **0** | **312** |
| **2025 Base Volumes** | **0** | **0** | **0** | **6** | **0** | **10** | **0** | **162** | **10** | **2** | **127** | **0** | **317** |

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|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | | | 10.0% | | |
| Trip Assignment % - New Exit | | | | | | | | 43.0% | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | 15.0% | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | 40.0% | | | | | |
| **New Trips** | | | | | | | | 22 | | | 5 | | **27** |
| **Pass-by Trips** | | | | | | | | 40 | | | 15 | | **55** |
| **Base Re-Distribution** | | | | -6 | | -10 | | 7 | -10 | -2 | 1 | | **-20** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **228** | **0** | **0** | **146** | **0** | **374** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **231** | **0** | **0** | **148** | **0** | **379** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **4** | | **5** | | | **4** | **5** | | | **18** |
| Balancing | | | | | | | | 94 | | | 82 | | 176 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **4** | **0** | **5** | **0** | **94** | **4** | **5** | **82** | **0** | **194** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **0** | **0** | **0** | **4** | **0** | **5** | **0** | **95** | **4** | **5** | **83** | **0** | **196** |
| **2025 Base Volumes** | **0** | **0** | **0** | **4** | **0** | **5** | **0** | **98** | **4** | **5** | **85** | **0** | **201** |

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|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | | | 10.0% | | |
| Trip Assignment % - New Exit | | | | | | | | 43.0% | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | 15.0% | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | 39.0% | | | | | |
| **New Trips** | | | | | | | | 22 | | | 5 | | **27** |
| **Pass-by Trips** | | | | | | | | 39 | | | 15 | | **54** |
| **Base Re-Distribution** | | | | -4 | | -5 | | -1 | -4 | -5 | 1 | | **-18** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **155** | **0** | **0** | **104** | **0** | **259** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **158** | **0** | **0** | **106** | **0** | **264** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **2** | | **4** | | | **9** | **2** | | | **17** |
| Balancing | | | | | | | | 134 | | | 111 | | 245 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **2** | **0** | **4** | **0** | **134** | **9** | **2** | **111** | **0** | **262** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **0** | **0** | **0** | **2** | **0** | **4** | **0** | **135** | **9** | **2** | **112** | **0** | **264** |
| **2025 Base Volumes** | **0** | **0** | **0** | **2** | **0** | **4** | **0** | **138** | **9** | **2** | **114** | **0** | **269** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | | | 10.0% | | |
| Trip Assignment % - New Exit | | | | | | | | 43.0% | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | 15.0% | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | 39.0% | | | | | |
| **New Trips** | | | | | | | | 20 | | | 5 | | **25** |
| **Pass-by Trips** | | | | | | | | 59 | | | 23 | | **82** |
| **Base Re-Distribution** | | | | -2 | | -4 | | -1 | -9 | -2 | | | **-18** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **213** | **0** | **0** | **140** | **0** | **353** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **216** | **0** | **0** | **142** | **0** | **358** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Aberdeen Driveway & Southern Sunoco/Proposed Driveway** | | | | | | | | | | | | |
| **Synchro Node:** | **7** | **Adjacent intersections:** | | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** | | |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **4** | | **1** | | | **12** | **1** | | | **18** |
| Balancing | | | | | | | | 209 | | | 119 | | 328 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **4** | **0** | **1** | **0** | **209** | **12** | **1** | **119** | **0** | **346** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 3 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 3 | 0 | 9 |
| **2020 Base Volumes** | **0** | **0** | **0** | **4** | **0** | **1** | **0** | **211** | **12** | **1** | **120** | **0** | **349** |
| **2025 Base Volumes** | **0** | **0** | **0** | **4** | **0** | **1** | **0** | **215** | **12** | **1** | **122** | **0** | **355** |

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| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | 6.0% | 10.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | | 43.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | -9.0% | 9.0% | 19.0% | -4.0% | | |
| Trip Assignment % - Pass-by Exit | | | | 4.0% | | 49.0% | | | | | | | |
| **New Trips** | | | | 3 | | 20 | | | 3 | 4 | | | **30** |
| **Pass-by Trips** | | | | 6 | | 73 | | -12 | 12 | 29 | -6 | | **102** |
| **Base Re-Distribution** | | | | -4 | | -1 | | 3 | -12 | -1 | 7 | | **-8** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **9** | **0** | **93** | **0** | **202** | **15** | **33** | **121** | **0** | **473** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **9** | **0** | **93** | **0** | **206** | **15** | **33** | **123** | **0** | **479** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **2** | | **5** | | | **7** | **5** | | | **19** |
| Balancing | | | | | | | | 131 | | | 153 | | 284 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **2** | **0** | **5** | **0** | **131** | **7** | **5** | **153** | **0** | **303** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 | 0 | 8 |
| **2020 Base Volumes** | **0** | **0** | **0** | **2** | **0** | **5** | **0** | **132** | **7** | **5** | **154** | **0** | **305** |
| **2025 Base Volumes** | **0** | **0** | **0** | **2** | **0** | **5** | **0** | **135** | **7** | **5** | **157** | **0** | **311** |

| | | |
|---|---|---|
| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | 6.0% | 10.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | | 43.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | -6.0% | 6.0% | 22.0% | -7.0% | | |
| Trip Assignment % - Pass-by Exit | | | | 7.0% | | 46.0% | | | | | | | |
| **New Trips** | | | | 2 | | 17 | | | 2 | 4 | | | **25** |
| **Pass-by Trips** | | | | 9 | | 58 | | -8 | 8 | 28 | -9 | | **86** |
| **Base Re-Distribution** | | | | -2 | | -5 | | -2 | -5 | -7 | -3 | | **-24** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **11** | **0** | **75** | **0** | **122** | **12** | **30** | **142** | **0** | **392** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **11** | **0** | **75** | **0** | **125** | **12** | **30** | **145** | **0** | **398** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **2** | | **2** | | | **8** | **0** | | | **12** |
| Balancing | | | | | | | | 166 | | | 130 | | 296 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **2** | **0** | **2** | **0** | **166** | **8** | **0** | **130** | **0** | **308** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **0** | **0** | **0** | **2** | **0** | **2** | **0** | **167** | **8** | **0** | **131** | **0** | **310** |
| **2025 Base Volumes** | **0** | **0** | **0** | **2** | **0** | **2** | **0** | **170** | **8** | **0** | **133** | **0** | **315** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | 6.0% | 10.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | | 43.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | -8.0% | 8.0% | 21.0% | -6.0% | | |
| Trip Assignment % - Pass-by Exit | | | | 6.0% | | 48.0% | | | | | | | |
| **New Trips** | | | | 3 | | 22 | | | 3 | 6 | | | **34** |
| **Pass-by Trips** | | | | 6 | | 48 | | -8 | 8 | 21 | -6 | | **69** |
| **Base Re-Distribution** | | | | -2 | | -2 | | -1 | -8 | | -5 | | **-18** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **9** | **0** | **70** | **0** | **158** | **11** | **27** | **120** | **0** | **395** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **9** | **0** | **70** | **0** | **161** | **11** | **27** | **122** | **0** | **400** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **4** | | **5** | | | **5** | **2** | | | **16** |
| Balancing | | | | | | | | 93 | | | 84 | | 177 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **4** | **0** | **5** | **0** | **93** | **5** | **2** | **84** | **0** | **193** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **0** | **0** | **0** | **4** | **0** | **5** | **0** | **94** | **5** | **2** | **85** | **0** | **195** |
| **2025 Base Volumes** | **0** | **0** | **0** | **4** | **0** | **5** | **0** | **97** | **5** | **2** | **87** | **0** | **200** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | 6.0% | 10.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | | 43.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | -7.0% | 7.0% | 20.0% | -5.0% | | |
| Trip Assignment % - Pass-by Exit | | | | 5.0% | | 46.0% | | | | | | | |
| **New Trips** | | | | 3 | | 22 | | | 3 | 6 | | | **34** |
| **Pass-by Trips** | | | | 5 | | 46 | | -7 | 7 | 20 | -5 | | **66** |
| **Base Re-Distribution** | | | | -4 | | -4 | | | -5 | -2 | -1 | | **-16** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **8** | **0** | **69** | **0** | **87** | **10** | **26** | **79** | **0** | **279** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **8** | **0** | **69** | **0** | **90** | **10** | **26** | **81** | **0** | **284** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **2** | | **4** | | | **9** | **2** | | | **17** |
| Balancing | | | | | | | | 130 | | | 111 | | 241 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **2** | **0** | **4** | **0** | **130** | **9** | **2** | **111** | **0** | **258** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **0** | **0** | **0** | **2** | **0** | **4** | **0** | **131** | **9** | **2** | **112** | **0** | **260** |
| **2025 Base Volumes** | **0** | **0** | **0** | **2** | **0** | **4** | **0** | **134** | **9** | **2** | **114** | **0** | **265** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | | 6.0% | 10.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | | 43.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | -7.0% | 7.0% | 20.0% | -5.0% | | |
| Trip Assignment % - Pass-by Exit | | | | 5.0% | | 46.0% | | | | | | | |
| **New Trips** | | | | 3 | | 20 | | | 3 | 4 | | | **30** |
| **Pass-by Trips** | | | | 8 | | 69 | | -11 | 11 | 30 | -8 | | **99** |
| **Base Re-Distribution** | | | | -2 | | -4 | | -6 | -9 | -2 | 1 | | **-22** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **11** | **0** | **89** | **0** | **114** | **14** | **34** | **105** | **0** | **367** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **11** | **0** | **89** | **0** | **117** | **14** | **34** | **107** | **0** | **372** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Lancaster Avenue (S.R. 0030) & Wayne Avenue (S.R. 1046)** | | | | | | | | | | | | |
| **Synchro Node:** | **8** | **Adjacent intersections:** | | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** | | |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **29** | **650** | **25** | **33** | **787** | **112** | **40** | **98** | **43** | **93** | **91** | **35** | **2036** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **29** | **650** | **25** | **33** | **787** | **112** | **40** | **98** | **43** | **93** | **91** | **35** | **2036** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 5 | 0 | 0 | 6 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 17 | 1 | 1 | 21 | 3 | 1 | 3 | 1 | 3 | 2 | 1 | 55 |
| **2020 Base Volumes** | **29** | **655** | **25** | **33** | **793** | **113** | **40** | **99** | **43** | **94** | **92** | **35** | **2051** |
| **2025 Base Volumes** | **30** | **667** | **26** | **34** | **808** | **115** | **41** | **101** | **44** | **96** | **93** | **36** | **2091** |

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|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 27.0% | | | | | | | 6.0% | 8.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | 27.0% | 8.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 13 | | 3 | 13 | 4 | | | 3 | 4 | | | **40** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -7 | | | -2 | -1 | | | -3 | -4 | | | **-17** |
| **2020 Projected Volumes** | **29** | **661** | **25** | **36** | **804** | **116** | **40** | **99** | **43** | **94** | **92** | **35** | **2074** |
| **2025 Projected Volumes** | **30** | **673** | **26** | **37** | **819** | **118** | **41** | **101** | **44** | **96** | **93** | **36** | **2114** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **40** | **739** | **53** | **32** | **670** | **91** | **22** | **88** | **39** | **106** | **144** | **46** | **2070** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **40** | **739** | **53** | **32** | **670** | **91** | **22** | **88** | **39** | **106** | **144** | **46** | **2070** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 5 | 1 | 0 | 1 | 0 | 1 | 1 | 0 | 15 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 20 | 1 | 1 | 18 | 2 | 1 | 2 | 1 | 3 | 4 | 1 | 55 |
| **2020 Base Volumes** | **40** | **745** | **53** | **32** | **675** | **92** | **22** | **89** | **39** | **107** | **145** | **46** | **2085** |
| **2025 Base Volumes** | **41** | **759** | **54** | **33** | **688** | **93** | **23** | **90** | **40** | **109** | **148** | **47** | **2125** |

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| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 27.0% | | | | | | | 6.0% | 8.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | 27.0% | 8.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 11 | | 2 | 11 | 3 | | | 2 | 3 | | | **32** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -27 | | -1 | -3 | -1 | | | -5 | -7 | | | **-44** |
| **2020 Projected Volumes** | **40** | **729** | **53** | **33** | **683** | **94** | **22** | **89** | **36** | **103** | **145** | **46** | **2073** |
| **2025 Projected Volumes** | **41** | **743** | **54** | **34** | **696** | **95** | **23** | **90** | **37** | **105** | **148** | **47** | **2113** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **38** | **689** | **38** | **44** | **769** | **86** | **60** | **80** | **70** | **67** | **79** | **60** | **2080** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **38** | **689** | **38** | **44** | **769** | **86** | **60** | **80** | **70** | **67** | **79** | **60** | **2080** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 5 | 0 | 0 | 6 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 16 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 19 | 1 | 1 | 21 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 57 |
| **2020 Base Volumes** | **38** | **694** | **38** | **44** | **775** | **87** | **60** | **81** | **71** | **68** | **80** | **60** | **2096** |
| **2025 Base Volumes** | **39** | **708** | **39** | **45** | **790** | **88** | **62** | **82** | **72** | **69** | **81** | **62** | **2137** |

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|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 27.0% | | | | | | | 6.0% | 8.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | 27.0% | 8.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 14 | | 3 | 14 | 4 | | | 3 | 4 | | | **42** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -20 | | | -1 | | | | -4 | -6 | | | **-31** |
| **2020 Projected Volumes** | **38** | **688** | **38** | **47** | **788** | **91** | **60** | **81** | **70** | **66** | **80** | **60** | **2107** |
| **2025 Projected Volumes** | **39** | **702** | **39** | **48** | **803** | **92** | **62** | **82** | **71** | **67** | **81** | **62** | **2148** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **57** | **486** | **27** | **40** | **482** | **95** | **29** | **52** | **58** | **71** | **66** | **53** | **1516** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **57** | **486** | **27** | **40** | **482** | **95** | **29** | **52** | **58** | **71** | **66** | **53** | **1516** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 5 | 0 | 0 | 6 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 16 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 19 | 1 | 1 | 21 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 57 |
| **2020 Base Volumes** | **57** | **491** | **27** | **40** | **488** | **96** | **29** | **53** | **59** | **72** | **67** | **53** | **1532** |
| **2025 Base Volumes** | **58** | **505** | **28** | **41** | **503** | **97** | **31** | **54** | **60** | **73** | **68** | **55** | **1573** |

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|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 27.0% | | | | | | | 6.0% | 8.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | 27.0% | 8.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 14 | | 3 | 14 | 4 | | | 3 | 4 | | | **42** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -13 | | -1 | -7 | -2 | | | -2 | -3 | | | **-28** |
| **2020 Projected Volumes** | **57** | **492** | **27** | **42** | **495** | **98** | **29** | **53** | **60** | **73** | **67** | **53** | **1546** |
| **2025 Projected Volumes** | **58** | **506** | **28** | **43** | **510** | **99** | **31** | **54** | **61** | **74** | **68** | **55** | **1587** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **68** | **616** | **82** | **28** | **632** | **86** | **42** | **113** | **63** | **101** | **119** | **74** | **2024** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **68** | **616** | **82** | **28** | **632** | **86** | **42** | **113** | **63** | **101** | **119** | **74** | **2024** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 5 | 0 | 0 | 6 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 16 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 19 | 1 | 1 | 21 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 57 |
| **2020 Base Volumes** | **68** | **621** | **82** | **28** | **638** | **87** | **42** | **114** | **64** | **102** | **120** | **74** | **2040** |
| **2025 Base Volumes** | **69** | **635** | **83** | **29** | **653** | **88** | **44** | **115** | **65** | **103** | **121** | **76** | **2081** |

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| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 27.0% | | | | | | | 6.0% | 8.0% | | | |
| Trip Assignment % - New Exit | | | | 6.0% | 27.0% | 8.0% | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 13 | | 3 | 13 | 4 | | | 3 | 4 | | | **40** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -1 | | | -2 | | | | | | | | **-3** |
| **2020 Projected Volumes** | **68** | **633** | **82** | **31** | **649** | **91** | **42** | **114** | **67** | **106** | **120** | **74** | **2077** |
| **2025 Projected Volumes** | **69** | **647** | **83** | **32** | **664** | **92** | **44** | **115** | **68** | **107** | **121** | **76** | **2118** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Lancaster Avenue (S.R. 0030) & Louella Avenue** | | | | | | | | | | | | |
| **Synchro Node:** | **9** | **Adjacent intersections:** | | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** | | |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | **773** | **50** | **94** | **945** | | **31** | | **44** | | | | **1937** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **773** | **50** | **94** | **945** | **0** | **31** | **0** | **44** | **0** | **0** | **0** | **1937** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 1 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 1 | 3 | 25 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 52 |
| **2020 Base Volumes** | **0** | **779** | **50** | **95** | **952** | **0** | **31** | **0** | **44** | **0** | **0** | **0** | **1951** |
| **2025 Base Volumes** | **0** | **794** | **51** | **97** | **970** | **0** | **32** | **0** | **45** | **0** | **0** | **0** | **1989** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 41.0% | | | | | | | 2.0% | | | | |
| Trip Assignment % - New Exit | | | | 2.0% | 41.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 19 | | 1 | 19 | | | | 1 | | | | **40** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -13 | | | -3 | | | | -1 | | | | **-17** |
| **2020 Projected Volumes** | **0** | **785** | **50** | **96** | **968** | **0** | **31** | **0** | **44** | **0** | **0** | **0** | **1974** |
| **2025 Projected Volumes** | **0** | **800** | **51** | **98** | **986** | **0** | **32** | **0** | **45** | **0** | **0** | **0** | **2012** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | **890** | **32** | **53** | **840** | | **15** | | **30** | | | | **1860** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **890** | **32** | **53** | **840** | **0** | **15** | **0** | **30** | **0** | **0** | **0** | **1860** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 24 | 1 | 1 | 23 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 50 |
| **2020 Base Volumes** | **0** | **897** | **32** | **53** | **846** | **0** | **15** | **0** | **30** | **0** | **0** | **0** | **1873** |
| **2025 Base Volumes** | **0** | **914** | **33** | **54** | **863** | **0** | **15** | **0** | **31** | **0** | **0** | **0** | **1910** |

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| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 41.0% | | | | | | | 2.0% | | | | |
| Trip Assignment % - New Exit | | | | 2.0% | 41.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 16 | | 1 | 16 | | | | 1 | | | | **34** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -36 | | -1 | -5 | | | | -2 | | | | **-44** |
| **2020 Projected Volumes** | **0** | **877** | **32** | **53** | **857** | **0** | **15** | **0** | **29** | **0** | **0** | **0** | **1863** |
| **2025 Projected Volumes** | **0** | **894** | **33** | **54** | **874** | **0** | **15** | **0** | **30** | **0** | **0** | **0** | **1900** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | **782** | **57** | **48** | **910** | | **41** | | **65** | | | | **1903** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **782** | **57** | **48** | **910** | **0** | **41** | **0** | **65** | **0** | **0** | **0** | **1903** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 2 | 1 | 24 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 51 |
| **2020 Base Volumes** | **0** | **788** | **57** | **48** | **917** | **0** | **41** | **0** | **65** | **0** | **0** | **0** | **1916** |
| **2025 Base Volumes** | **0** | **803** | **59** | **49** | **934** | **0** | **42** | **0** | **67** | **0** | **0** | **0** | **1954** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 41.0% | | | | | | | 2.0% | | | | |
| Trip Assignment % - New Exit | | | | 2.0% | 41.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 21 | | 1 | 21 | | | | 1 | | | | **44** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -30 | | | -1 | | | | -2 | | | | **-33** |
| **2020 Projected Volumes** | **0** | **779** | **57** | **49** | **937** | **0** | **41** | **0** | **64** | **0** | **0** | **0** | **1927** |
| **2025 Projected Volumes** | **0** | **794** | **59** | **50** | **954** | **0** | **42** | **0** | **66** | **0** | **0** | **0** | **1965** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | **574** | **63** | **22** | **606** | | **26** | | **16** | | | | **1307** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **574** | **63** | **22** | **606** | **0** | **26** | **0** | **16** | **0** | **0** | **0** | **1307** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 2 | 1 | 24 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 51 |
| **2020 Base Volumes** | **0** | **580** | **63** | **22** | **613** | **0** | **26** | **0** | **16** | **0** | **0** | **0** | **1320** |
| **2025 Base Volumes** | **0** | **595** | **65** | **23** | **630** | **0** | **27** | **0** | **18** | **0** | **0** | **0** | **1358** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 41.0% | | | | | | | 2.0% | | | | |
| Trip Assignment % - New Exit | | | | 2.0% | 41.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 21 | | 1 | 21 | | | | 1 | | | | **44** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -18 | | -1 | -10 | | | | -1 | | | | **-30** |
| **2020 Projected Volumes** | **0** | **583** | **63** | **22** | **624** | **0** | **26** | **0** | **16** | **0** | **0** | **0** | **1334** |
| **2025 Projected Volumes** | **0** | **598** | **65** | **23** | **641** | **0** | **27** | **0** | **18** | **0** | **0** | **0** | **1372** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | **748** | **62** | **73** | **823** | | **19** | | **40** | | | | **1765** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **748** | **62** | **73** | **823** | **0** | **19** | **0** | **40** | **0** | **0** | **0** | **1765** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 21 | 2 | 1 | 24 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 51 |
| **2020 Base Volumes** | **0** | **754** | **62** | **73** | **830** | **0** | **19** | **0** | **40** | **0** | **0** | **0** | **1778** |
| **2025 Base Volumes** | **0** | **769** | **64** | **74** | **847** | **0** | **20** | **0** | **42** | **0** | **0** | **0** | **1816** |

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|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | 41.0% | | | | | | | 2.0% | | | | |
| Trip Assignment % - New Exit | | | | 2.0% | 41.0% | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | 19 | | 1 | 19 | | | | 1 | | | | **40** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | -1 | | | -2 | | | | | | | | **-3** |
| **2020 Projected Volumes** | **0** | **772** | **62** | **74** | **847** | **0** | **19** | **0** | **41** | **0** | **0** | **0** | **1815** |
| **2025 Projected Volumes** | **0** | **787** | **64** | **75** | **864** | **0** | **20** | **0** | **43** | **0** | **0** | **0** | **1853** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Lancaster Avenue (S.R. 0030) & St. Davids Road/Chamounix Road** | | | | | | | | |
| **Synchro Node:** | **10** | **Adjacent intersections:** | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **14** | **855** | **9** | **13** | **1113** | **285** | **19** | **67** | **70** | **92** | **38** | **38** | **2613** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **14** | **855** | **9** | **13** | **1113** | **285** | **19** | **67** | **70** | **92** | **38** | **38** | **2613** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 6 | 0 | 0 | 8 | 2 | 0 | 1 | 1 | 1 | 0 | 0 | 19 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 23 | 0 | 0 | 30 | 8 | 1 | 2 | 2 | 2 | 1 | 1 | 70 |
| **2020 Base Volumes** | **14** | **861** | **9** | **13** | **1121** | **287** | **19** | **68** | **71** | **93** | **38** | **38** | **2632** |
| **2025 Base Volumes** | **14** | **878** | **9** | **13** | **1143** | **293** | **20** | **69** | **72** | **94** | **39** | **39** | **2683** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | 36.0% | | 3.0% | | | | | 5.0% | |
| Trip Assignment % - New Exit | 5.0% | 36.0% | 3.0% | | | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | 2 | 17 | 1 | | 17 | | 1 | | | | | 2 | **40** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | -2 | -12 | -1 | | -2 | | | | | | | | **-17** |
| **2020 Projected Volumes** | **14** | **866** | **9** | **13** | **1136** | **287** | **20** | **68** | **71** | **93** | **38** | **40** | **2655** |
| **2025 Projected Volumes** | **14** | **883** | **9** | **13** | **1158** | **293** | **21** | **69** | **72** | **94** | **39** | **41** | **2706** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **35** | **954** | **17** | **39** | **1005** | **141** | **4** | **25** | **32** | **74** | **22** | **42** | **2390** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **35** | **954** | **17** | **39** | **1005** | **141** | **4** | **25** | **32** | **74** | **22** | **42** | **2390** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 17 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 26 | 0 | 1 | 27 | 4 | 0 | 1 | 1 | 2 | 1 | 1 | 65 |
| **2020 Base Volumes** | **35** | **961** | **17** | **39** | **1013** | **142** | **4** | **25** | **32** | **75** | **22** | **42** | **2407** |
| **2025 Base Volumes** | **36** | **980** | **17** | **40** | **1032** | **145** | **4** | **26** | **33** | **76** | **23** | **43** | **2455** |

| | | |
|---|---|---|
| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | 36.0% | | 3.0% | | | | | 5.0% | |
| Trip Assignment % - New Exit | 5.0% | 36.0% | 3.0% | | | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | 2 | 14 | 1 | | 14 | | 1 | | | | | 2 | **34** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | -3 | -7 | -2 | | -4 | | -1 | | | | | -1 | **-18** |
| **2020 Projected Volumes** | **34** | **968** | **16** | **39** | **1023** | **142** | **4** | **25** | **32** | **75** | **22** | **43** | **2423** |
| **2025 Projected Volumes** | **35** | **987** | **16** | **40** | **1042** | **145** | **4** | **26** | **33** | **76** | **23** | **44** | **2471** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **30** | **880** | **18** | **36** | **984** | **63** | **13** | **17** | **41** | **55** | **17** | **38** | **2192** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **30** | **880** | **18** | **36** | **984** | **63** | **13** | **17** | **41** | **55** | **17** | **38** | **2192** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 24 | 0 | 1 | 26 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 57 |
| **2020 Base Volumes** | **30** | **887** | **18** | **36** | **991** | **63** | **13** | **17** | **41** | **55** | **17** | **38** | **2206** |
| **2025 Base Volumes** | **31** | **904** | **18** | **37** | **1010** | **65** | **13** | **17** | **42** | **56** | **17** | **39** | **2249** |

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|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | 36.0% | | 3.0% | | | | | 5.0% | |
| Trip Assignment % - New Exit | 5.0% | 36.0% | 3.0% | | | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | 3 | 18 | 2 | | 18 | | 2 | | | | | 3 | **46** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | -6 | -42 | -3 | | -4 | | -1 | | | | | -1 | **-57** |
| **2020 Projected Volumes** | **27** | **863** | **17** | **36** | **1005** | **63** | **14** | **17** | **41** | **55** | **17** | **40** | **2195** |
| **2025 Projected Volumes** | **28** | **880** | **17** | **37** | **1024** | **65** | **14** | **17** | **42** | **56** | **17** | **41** | **2238** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **22** | **604** | **7** | **30** | **634** | **33** | **11** | **6** | **42** | **37** | **13** | **23** | **1462** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **22** | **604** | **7** | **30** | **634** | **33** | **11** | **6** | **42** | **37** | **13** | **23** | **1462** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 24 | 0 | 1 | 26 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 57 |
| **2020 Base Volumes** | **22** | **611** | **7** | **30** | **641** | **33** | **11** | **6** | **42** | **37** | **13** | **23** | **1476** |
| **2025 Base Volumes** | **23** | **628** | **7** | **31** | **660** | **35** | **11** | **6** | **43** | **38** | **13** | **24** | **1519** |

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|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | 36.0% | | 3.0% | | | | | 5.0% | |
| Trip Assignment % - New Exit | 5.0% | 36.0% | 3.0% | | | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | 3 | 18 | 2 | | 18 | | 2 | | | | | 3 | **46** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | -4 | -10 | -3 | | -4 | | -1 | | | | | -2 | **-24** |
| **2020 Projected Volumes** | **21** | **619** | **6** | **30** | **655** | **33** | **12** | **6** | **42** | **37** | **13** | **24** | **1498** |
| **2025 Projected Volumes** | **22** | **636** | **6** | **31** | **674** | **35** | **12** | **6** | **43** | **38** | **13** | **25** | **1541** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **31** | **870** | **18** | **31** | **1079** | **77** | **10** | **9** | **41** | **58** | **19** | **40** | **2283** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **31** | **870** | **18** | **31** | **1079** | **77** | **10** | **9** | **41** | **58** | **19** | **40** | **2283** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 7 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| Base growth (0.38% compounded for 7 yrs) | 1 | 24 | 0 | 1 | 26 | 2 | 0 | 0 | 1 | 1 | 0 | 1 | 57 |
| **2020 Base Volumes** | **31** | **877** | **18** | **31** | **1086** | **77** | **10** | **9** | **41** | **58** | **19** | **40** | **2297** |
| **2025 Base Volumes** | **32** | **894** | **18** | **32** | **1105** | **79** | **10** | **9** | **42** | **59** | **19** | **41** | **2340** |

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|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | 36.0% | | 3.0% | | | | | 5.0% | |
| Trip Assignment % - New Exit | 5.0% | 36.0% | 3.0% | | | | | | | | | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | 2 | 17 | 1 | | 17 | | 1 | | | | | 2 | **40** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | -1 | -33 | -1 | | -16 | | | | | | | -1 | **-52** |
| **2020 Projected Volumes** | **32** | **861** | **18** | **31** | **1087** | **77** | **11** | **9** | **41** | **58** | **19** | **41** | **2285** |
| **2025 Projected Volumes** | **33** | **878** | **18** | **32** | **1106** | **79** | **11** | **9** | **42** | **59** | **19** | **42** | **2328** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Aberdeen Avenue & Midland Avenue** | | | | | | | | |
| **Synchro Node:** | **11** | **Adjacent intersections:** | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **5** | **17** | **6** | **5** | **92** | **12** | **28** | **172** | **11** | **3** | **61** | **19** | **431** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **5** | **17** | **6** | **5** | **92** | **12** | **28** | **172** | **11** | **3** | **61** | **19** | **431** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 5 | 0 | 0 | 2 | 1 | 11 |
| **2020 Base Volumes** | **5** | **17** | **6** | **5** | **93** | **12** | **28** | **173** | **11** | **3** | **61** | **19** | **433** |
| **2025 Base Volumes** | **5** | **17** | **6** | **5** | **94** | **12** | **29** | **177** | **11** | **3** | **63** | **20** | **442** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | 2.0% | | 4.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | 2.0% | 4.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | 1 | | 2 | | 1 | 2 | | **6** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | -3 | | -6 | | 1 | 2 | | **-6** |
| **2020 Projected Volumes** | **5** | **17** | **6** | **5** | **93** | **10** | **28** | **169** | **11** | **5** | **65** | **19** | **433** |
| **2025 Projected Volumes** | **5** | **17** | **6** | **5** | **94** | **10** | **29** | **173** | **11** | **5** | **67** | **20** | **442** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **15** | **9** | **5** | **7** | **70** | **11** | **9** | **119** | **6** | **6** | **99** | **14** | **370** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **15** | **9** | **5** | **7** | **70** | **11** | **9** | **119** | **6** | **6** | **99** | **14** | **370** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 3 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 8 |
| **2020 Base Volumes** | **15** | **9** | **5** | **7** | **71** | **11** | **9** | **120** | **6** | **6** | **100** | **14** | **373** |
| **2025 Base Volumes** | **15** | **9** | **5** | **7** | **72** | **11** | **9** | **122** | **6** | **6** | **102** | **14** | **378** |

| | | |
|---|---|---|
| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | 2.0% | | 4.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | 2.0% | 4.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | 1 | | 2 | | 1 | 2 | | **6** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | -2 | | -5 | | -2 | -3 | | **-12** |
| **2020 Projected Volumes** | **15** | **9** | **5** | **7** | **71** | **10** | **9** | **117** | **6** | **5** | **99** | **14** | **367** |
| **2025 Projected Volumes** | **15** | **9** | **5** | **7** | **72** | **10** | **9** | **119** | **6** | **5** | **101** | **14** | **372** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **7** | **14** | **3** | **4** | **27** | **18** | **3** | **110** | **11** | **6** | **101** | **18** | **322** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **7** | **14** | **3** | **4** | **27** | **18** | **3** | **110** | **11** | **6** | **101** | **18** | **322** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **7** | **14** | **3** | **4** | **27** | **18** | **3** | **111** | **11** | **6** | **102** | **18** | **324** |
| **2025 Base Volumes** | **7** | **14** | **3** | **4** | **28** | **18** | **3** | **113** | **11** | **6** | **104** | **18** | **329** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | 2.0% | | 4.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | 2.0% | 4.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | 1 | | 2 | | 1 | 2 | | **6** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | -3 | | -6 | | -2 | -5 | | **-16** |
| **2020 Projected Volumes** | **7** | **14** | **3** | **4** | **27** | **16** | **3** | **107** | **11** | **5** | **99** | **18** | **314** |
| **2025 Projected Volumes** | **7** | **14** | **3** | **4** | **28** | **16** | **3** | **109** | **11** | **5** | **101** | **18** | **319** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **24** | **2** | **2** | **3** | **10** | **9** | **5** | **72** | **2** | **6** | **43** | **12** | **190** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **24** | **2** | **2** | **3** | **10** | **9** | **5** | **72** | **2** | **6** | **43** | **12** | **190** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **24** | **2** | **2** | **3** | **10** | **9** | **5** | **73** | **2** | **6** | **44** | **12** | **192** |
| **2025 Base Volumes** | **24** | **2** | **2** | **3** | **11** | **9** | **5** | **75** | **2** | **6** | **46** | **12** | **197** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | 2.0% | | 4.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | 2.0% | 4.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | 1 | | 2 | | 1 | 2 | | **6** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | -2 | | -3 | | -2 | -3 | | **-10** |
| **2020 Projected Volumes** | **24** | **2** | **2** | **3** | **10** | **8** | **5** | **72** | **2** | **5** | **43** | **12** | **188** |
| **2025 Projected Volumes** | **24** | **2** | **2** | **3** | **11** | **8** | **5** | **74** | **2** | **5** | **45** | **12** | **193** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | **14** | **10** | **5** | **2** | **36** | **23** | **2** | **110** | **4** | **3** | **91** | **41** | **341** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **14** | **10** | **5** | **2** | **36** | **23** | **2** | **110** | **4** | **3** | **91** | **41** | **341** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 3 | 0 | 0 | 3 | 0 | 7 |
| **2020 Base Volumes** | **14** | **10** | **5** | **2** | **36** | **23** | **2** | **111** | **4** | **3** | **92** | **41** | **343** |
| **2025 Base Volumes** | **14** | **10** | **5** | **2** | **37** | **23** | **2** | **113** | **4** | **3** | **94** | **41** | **348** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | 2.0% | | 4.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | 2.0% | 4.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | 1 | | 2 | | 1 | 2 | | **6** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | -1 | | | | | -3 | | -11 | | | -1 | | **-16** |
| **2020 Projected Volumes** | **13** | **10** | **5** | **2** | **36** | **21** | **2** | **102** | **4** | **4** | **93** | **41** | **333** |
| **2025 Projected Volumes** | **13** | **10** | **5** | **2** | **37** | **21** | **2** | **104** | **4** | **4** | **95** | **41** | **338** |

**TPD# KARA.00010**
**2/27/2019**
**Traffic Volumes Worksheet**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Intersection:** | **Louella Avenue & Midland Avenue** | | | | | | | | |
| **Synchro Node:** | **12** | **Adjacent intersections:** | **West** | **0** | **East** | **0** | **North** | **0** | **South** | **0** |

**Time Period: Weekday A.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **5** | | **29** | | **88** | **31** | **17** | **42** | | **212** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **5** | **0** | **29** | **0** | **88** | **31** | **17** | **42** | **0** | **212** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 0 | 1 | 0 | 5 |
| **2020 Base Volumes** | **0** | **0** | **0** | **5** | **0** | **29** | **0** | **89** | **31** | **17** | **42** | **0** | **213** |
| **2025 Base Volumes** | **0** | **0** | **0** | **5** | **0** | **30** | **0** | **90** | **32** | **17** | **43** | **0** | **217** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | 2.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | | 2.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | | | 1 | | | 1 | | **2** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | | | -1 | | | | | **-1** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **5** | **0** | **29** | **0** | **89** | **31** | **17** | **43** | **0** | **214** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **5** | **0** | **30** | **0** | **90** | **32** | **17** | **44** | **0** | **218** |

**Time Period: Weekday P.M. Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **9** | | **44** | | **85** | **11** | **16** | **60** | | **225** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **9** | **0** | **44** | **0** | **85** | **11** | **16** | **60** | **0** | **225** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 5 |
| **2020 Base Volumes** | **0** | **0** | **0** | **9** | **0** | **44** | **0** | **86** | **11** | **16** | **60** | **0** | **226** |
| **2025 Base Volumes** | **0** | **0** | **0** | **9** | **0** | **45** | **0** | **87** | **11** | **16** | **62** | **0** | **230** |

| | | |
|---|---|---|
| **ENTER =** | **39** | **(125)** |
| **EXIT =** | **39** | **(125)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | 2.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | | 2.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | | | 1 | | | 1 | | **2** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | | | -2 | | | -1 | | **-3** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **9** | **0** | **44** | **0** | **85** | **11** | **16** | **60** | **0** | **225** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **9** | **0** | **45** | **0** | **86** | **11** | **16** | **62** | **0** | **229** |

**Time Period: SAT Midday Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **9** | | **50** | | **74** | **8** | **18** | **36** | | **195** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **9** | **0** | **50** | **0** | **74** | **8** | **18** | **36** | **0** | **195** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 4 |
| **2020 Base Volumes** | **0** | **0** | **0** | **9** | **0** | **50** | **0** | **75** | **8** | **18** | **36** | **0** | **196** |
| **2025 Base Volumes** | **0** | **0** | **0** | **9** | **0** | **51** | **0** | **76** | **8** | **18** | **37** | **0** | **199** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | 2.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | | 2.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | | | 1 | | | 1 | | **2** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | | | -2 | | | | | **-2** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **9** | **0** | **50** | **0** | **74** | **8** | **18** | **37** | **0** | **196** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **9** | **0** | **51** | **0** | **75** | **8** | **18** | **38** | **0** | **199** |

**Time Period: SUN Peak Hour**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **4** | | **36** | | **20** | **3** | **10** | **29** | | **102** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **4** | **0** | **36** | **0** | **20** | **3** | **10** | **29** | **0** | **102** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 4 |
| **2020 Base Volumes** | **0** | **0** | **0** | **4** | **0** | **36** | **0** | **21** | **3** | **10** | **29** | **0** | **103** |
| **2025 Base Volumes** | **0** | **0** | **0** | **4** | **0** | **37** | **0** | **22** | **3** | **10** | **30** | **0** | **106** |

| | | |
|---|---|---|
| **ENTER =** | **51** | **(100)** |
| **EXIT =** | **51** | **(100)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | 2.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | | 2.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | | | 1 | | | 1 | | **2** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | | | -1 | | | -1 | | **-2** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **4** | **0** | **36** | **0** | **21** | **3** | **10** | **29** | **0** | **103** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **4** | **0** | **37** | **0** | **22** | **3** | **10** | **30** | **0** | **106** |

**Time Period: Weekday Midday**

| | Eastbound | | | Westbound | | | Northbound | | | Southbound | | | Intersection |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | left | thru | right | left | thru | right | left | thru | right | left | thru | right | Volume |
| **2018 Existing Counts** | | | | **3** | | **43** | | **33** | **11** | **12** | **30** | | **132** |
| Balancing | | | | | | | | | | | | | 0 |
| **Existing Volumes (Balanced)** | **0** | **0** | **0** | **3** | **0** | **43** | **0** | **33** | **11** | **12** | **30** | **0** | **132** |
| Base growth (0.38% compounded for 2 yrs) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| Base growth (0.38% compounded for 7 yrs) | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 1 | 0 | 4 |
| **2020 Base Volumes** | **0** | **0** | **0** | **3** | **0** | **43** | **0** | **34** | **11** | **12** | **30** | **0** | **133** |
| **2025 Base Volumes** | **0** | **0** | **0** | **3** | **0** | **44** | **0** | **35** | **11** | **12** | **31** | **0** | **136** |

| | | |
|---|---|---|
| **ENTER =** | **47** | **(150)** |
| **EXIT =** | **47** | **(150)** |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Trip Assignment % - New Enter | | | | | | | | 2.0% | | | | | |
| Trip Assignment % - New Exit | | | | | | | | | | | 2.0% | | |
| Trip Assignment % - Pass-by Enter | | | | | | | | | | | | | |
| Trip Assignment % - Pass-by Exit | | | | | | | | | | | | | |
| **New Trips** | | | | | | | | 1 | | | 1 | | **2** |
| **Pass-by Trips** | | | | | | | | | | | | | **0** |
| **Base Re-Distribution** | | | | | | | | | -1 | | | | **-1** |
| **2020 Projected Volumes** | **0** | **0** | **0** | **3** | **0** | **43** | **0** | **35** | **10** | **12** | **31** | **0** | **134** |
| **2025 Projected Volumes** | **0** | **0** | **0** | **3** | **0** | **44** | **0** | **36** | **10** | **12** | **32** | **0** | **137** |

# APPENDIX F

## *CRITICAL/FOLLOW-UP GAP DATA*

**CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT**
**BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46**

$t_{c,x} = t_{c,\,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
$P_{HV}$ = proportion of heavy vehciles for movement (expressed as a decimal; e.g., $P_{HV}$=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

**LEFT TURN FROM MAJOR ROADWAY - FOUR LANES ($t_{c,\,base}$ = 3.9)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 1 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 2 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 3 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 4 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 5 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 6 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 7 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 8 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 9 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 10 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |

**LEFT TURN FROM MINOR ROADWAY - FOUR LANES - 4-LEG INTERSECTION ($t_{c,\,base}$ = 8.4)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 8.4 | 8.2 | 8.6 | 8.0 | 8.8 | 7.8 | 9.0 | 7.6 | 9.2 | 7.4 | 9.4 | 7.2 | 9.6 | 7.0 | 9.8 | 6.8 | 10.0 | 6.6 | 10.2 | 6.4 | 10.4 |
| 1 | 8.4 | 8.2 | 8.6 | 8.0 | 8.8 | 7.8 | 9.0 | 7.6 | 9.2 | 7.4 | 9.4 | 7.2 | 9.6 | 7.0 | 9.8 | 6.8 | 10.0 | 6.6 | 10.2 | 6.4 | 10.4 |
| 2 | 8.4 | 8.2 | 8.6 | 8.0 | 8.8 | 7.8 | 9.0 | 7.6 | 9.2 | 7.4 | 9.4 | 7.2 | 9.6 | 7.0 | 9.8 | 6.8 | 10.0 | 6.6 | 10.2 | 6.4 | 10.4 |
| 3 | 8.5 | 8.3 | 8.7 | 8.1 | 8.9 | 7.9 | 9.1 | 7.7 | 9.3 | 7.5 | 9.5 | 7.3 | 9.7 | 7.1 | 9.9 | 6.9 | 10.1 | 6.7 | 10.3 | 6.5 | 10.5 |
| 4 | 8.5 | 8.3 | 8.7 | 8.1 | 8.9 | 7.9 | 9.1 | 7.7 | 9.3 | 7.5 | 9.5 | 7.3 | 9.7 | 7.1 | 9.9 | 6.9 | 10.1 | 6.7 | 10.3 | 6.5 | 10.5 |
| 5 | 8.5 | 8.3 | 8.7 | 8.1 | 8.9 | 7.9 | 9.1 | 7.7 | 9.3 | 7.5 | 9.5 | 7.3 | 9.7 | 7.1 | 9.9 | 6.9 | 10.1 | 6.7 | 10.3 | 6.5 | 10.5 |
| 6 | 8.5 | 8.3 | 8.7 | 8.1 | 8.9 | 7.9 | 9.1 | 7.7 | 9.3 | 7.5 | 9.5 | 7.3 | 9.7 | 7.1 | 9.9 | 6.9 | 10.1 | 6.7 | 10.3 | 6.5 | 10.5 |
| 7 | 8.5 | 8.3 | 8.7 | 8.1 | 8.9 | 7.9 | 9.1 | 7.7 | 9.3 | 7.5 | 9.5 | 7.3 | 9.7 | 7.1 | 9.9 | 6.9 | 10.1 | 6.7 | 10.3 | 6.5 | 10.5 |
| 8 | 8.6 | 8.4 | 8.8 | 8.2 | 9.0 | 8.0 | 9.2 | 7.8 | 9.4 | 7.6 | 9.6 | 7.4 | 9.8 | 7.2 | 10.0 | 7.0 | 10.2 | 6.8 | 10.4 | 6.6 | 10.6 |
| 9 | 8.6 | 8.4 | 8.8 | 8.2 | 9.0 | 8.0 | 9.2 | 7.8 | 9.4 | 7.6 | 9.6 | 7.4 | 9.8 | 7.2 | 10.0 | 7.0 | 10.2 | 6.8 | 10.4 | 6.6 | 10.6 |
| 10 | 8.6 | 8.4 | 8.8 | 8.2 | 9.0 | 8.0 | 9.2 | 7.8 | 9.4 | 7.6 | 9.6 | 7.4 | 9.8 | 7.2 | 10.0 | 7.0 | 10.2 | 6.8 | 10.4 | 6.6 | 10.6 |

**THROUGH TRAFFIC ON MINOR ROADWAY - FOUR LANES ($t_{c,\,base}$ = 6.5)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 1 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 2 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 3 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 4 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 5 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 6 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 7 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 8 | 6.7 | 6.5 | 6.9 | 6.3 | 7.1 | 6.1 | 7.3 | 5.9 | 7.5 | 5.7 | 7.7 | 5.5 | 7.9 | 5.3 | 8.1 | 5.1 | 8.3 | 4.9 | 8.5 | 4.7 | 8.7 |
| 9 | 6.7 | 6.5 | 6.9 | 6.3 | 7.1 | 6.1 | 7.3 | 5.9 | 7.5 | 5.7 | 7.7 | 5.5 | 7.9 | 5.3 | 8.1 | 5.1 | 8.3 | 4.9 | 8.5 | 4.7 | 8.7 |
| 10 | 6.7 | 6.5 | 6.9 | 6.3 | 7.1 | 6.1 | 7.3 | 5.9 | 7.5 | 5.7 | 7.7 | 5.5 | 7.9 | 5.3 | 8.1 | 5.1 | 8.3 | 4.9 | 8.5 | 4.7 | 8.7 |

**RIGHT TURN FROM MINOR ROADWAY - FOUR LANES ($t_{c,\,base}$ = 7.2)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 7.2 | 7.1 | 7.3 | 7.0 | 7.4 | 6.9 | 7.5 | 6.8 | 7.6 | 6.7 | 7.7 | 6.6 | 7.8 | 6.5 | 7.9 | 6.4 | 8.0 | 6.3 | 8.1 | 6.2 | 8.2 |
| 1 | 7.2 | 7.1 | 7.3 | 7.0 | 7.4 | 6.9 | 7.5 | 6.8 | 7.6 | 6.7 | 7.7 | 6.6 | 7.8 | 6.5 | 7.9 | 6.4 | 8.0 | 6.3 | 8.1 | 6.2 | 8.2 |
| 2 | 7.2 | 7.1 | 7.3 | 7.0 | 7.4 | 6.9 | 7.5 | 6.8 | 7.6 | 6.7 | 7.7 | 6.6 | 7.8 | 6.5 | 7.9 | 6.4 | 8.0 | 6.3 | 8.1 | 6.2 | 8.2 |
| 3 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 4 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 5 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 6 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 7 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 8 | 7.4 | 7.3 | 7.5 | 7.2 | 7.6 | 7.1 | 7.7 | 7.0 | 7.8 | 6.9 | 7.9 | 6.8 | 8.0 | 6.7 | 8.1 | 6.6 | 8.2 | 6.5 | 8.3 | 6.4 | 8.4 |
| 9 | 7.4 | 7.3 | 7.5 | 7.2 | 7.6 | 7.1 | 7.7 | 7.0 | 7.8 | 6.9 | 7.9 | 6.8 | 8.0 | 6.7 | 8.1 | 6.6 | 8.2 | 6.5 | 8.3 | 6.4 | 8.4 |
| 10 | 7.4 | 7.3 | 7.5 | 7.2 | 7.6 | 7.1 | 7.7 | 7.0 | 7.8 | 6.9 | 7.9 | 6.8 | 8.0 | 6.7 | 8.1 | 6.6 | 8.2 | 6.5 | 8.3 | 6.4 | 8.4 |

**CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT**
**BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46**

$t_{c,x} = t_{c,\,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
$P_{HV}$ = proportion of heavy vehciles for movement (expressed as a decimal; e.g., $P_{HV}$=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

**LEFT TURN FROM MAJOR ROADWAY - FOUR LANES ($t_{c,\,base}$ = 3.9)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 1 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 2 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 |
| 3 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 4 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 5 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 6 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 7 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 8 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 9 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 10 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |

**LEFT TURN FROM MINOR ROADWAY - FOUR LANES - 3-LEG INTERSECTION ($t_{c,\,base}$ = 8.4)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 7.7 | 7.5 | 7.9 | 7.3 | 8.1 | 7.1 | 8.3 | 6.9 | 8.5 | 6.7 | 8.7 | 6.5 | 8.9 | 6.3 | 9.1 | 6.1 | 9.3 | 5.9 | 9.5 | 5.7 | 9.7 |
| 1 | 7.7 | 7.5 | 7.9 | 7.3 | 8.1 | 7.1 | 8.3 | 6.9 | 8.5 | 6.7 | 8.7 | 6.5 | 8.9 | 6.3 | 9.1 | 6.1 | 9.3 | 5.9 | 9.5 | 5.7 | 9.7 |
| 2 | 7.7 | 7.5 | 7.9 | 7.3 | 8.1 | 7.1 | 8.3 | 6.9 | 8.5 | 6.7 | 8.7 | 6.5 | 8.9 | 6.3 | 9.1 | 6.1 | 9.3 | 5.9 | 9.5 | 5.7 | 9.7 |
| 3 | 7.8 | 7.6 | 8.0 | 7.4 | 8.2 | 7.2 | 8.4 | 7.0 | 8.6 | 6.8 | 8.8 | 6.6 | 9.0 | 6.4 | 9.2 | 6.2 | 9.4 | 6.0 | 9.6 | 5.8 | 9.8 |
| 4 | 7.8 | 7.6 | 8.0 | 7.4 | 8.2 | 7.2 | 8.4 | 7.0 | 8.6 | 6.8 | 8.8 | 6.6 | 9.0 | 6.4 | 9.2 | 6.2 | 9.4 | 6.0 | 9.6 | 5.8 | 9.8 |
| 5 | 7.8 | 7.6 | 8.0 | 7.4 | 8.2 | 7.2 | 8.4 | 7.0 | 8.6 | 6.8 | 8.8 | 6.6 | 9.0 | 6.4 | 9.2 | 6.2 | 9.4 | 6.0 | 9.6 | 5.8 | 9.8 |
| 6 | 7.8 | 7.6 | 8.0 | 7.4 | 8.2 | 7.2 | 8.4 | 7.0 | 8.6 | 6.8 | 8.8 | 6.6 | 9.0 | 6.4 | 9.2 | 6.2 | 9.4 | 6.0 | 9.6 | 5.8 | 9.8 |
| 7 | 7.8 | 7.6 | 8.0 | 7.4 | 8.2 | 7.2 | 8.4 | 7.0 | 8.6 | 6.8 | 8.8 | 6.6 | 9.0 | 6.4 | 9.2 | 6.2 | 9.4 | 6.0 | 9.6 | 5.8 | 9.8 |
| 8 | 7.9 | 7.7 | 8.1 | 7.5 | 8.3 | 7.3 | 8.5 | 7.1 | 8.7 | 6.9 | 8.9 | 6.7 | 9.1 | 6.5 | 9.3 | 6.3 | 9.5 | 6.1 | 9.7 | 5.9 | 9.9 |
| 9 | 7.9 | 7.7 | 8.1 | 7.5 | 8.3 | 7.3 | 8.5 | 7.1 | 8.7 | 6.9 | 8.9 | 6.7 | 9.1 | 6.5 | 9.3 | 6.3 | 9.5 | 6.1 | 9.7 | 5.9 | 9.9 |
| 10 | 7.9 | 7.7 | 8.1 | 7.5 | 8.3 | 7.3 | 8.5 | 7.1 | 8.7 | 6.9 | 8.9 | 6.7 | 9.1 | 6.5 | 9.3 | 6.3 | 9.5 | 6.1 | 9.7 | 5.9 | 9.9 |

**RIGHT TURN FROM MINOR ROADWAY - FOUR LANES ($t_{c,\,base}$ = 7.2)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 7.2 | 7.1 | 7.3 | 7.0 | 7.4 | 6.9 | 7.5 | 6.8 | 7.6 | 6.7 | 7.7 | 6.6 | 7.8 | 6.5 | 7.9 | 6.4 | 8.0 | 6.3 | 8.1 | 6.2 | 8.2 |
| 1 | 7.2 | 7.1 | 7.3 | 7.0 | 7.4 | 6.9 | 7.5 | 6.8 | 7.6 | 6.7 | 7.7 | 6.6 | 7.8 | 6.5 | 7.9 | 6.4 | 8.0 | 6.3 | 8.1 | 6.2 | 8.2 |
| 2 | 7.2 | 7.1 | 7.3 | 7.0 | 7.4 | 6.9 | 7.5 | 6.8 | 7.6 | 6.7 | 7.7 | 6.6 | 7.8 | 6.5 | 7.9 | 6.4 | 8.0 | 6.3 | 8.1 | 6.2 | 8.2 |
| 3 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 4 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 5 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 6 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 7 | 7.3 | 7.2 | 7.4 | 7.1 | 7.5 | 7.0 | 7.6 | 6.9 | 7.7 | 6.8 | 7.8 | 6.7 | 7.9 | 6.6 | 8.0 | 6.5 | 8.1 | 6.4 | 8.2 | 6.3 | 8.3 |
| 8 | 7.4 | 7.3 | 7.5 | 7.2 | 7.6 | 7.1 | 7.7 | 7.0 | 7.8 | 6.9 | 7.9 | 6.8 | 8.0 | 6.7 | 8.1 | 6.6 | 8.2 | 6.5 | 8.3 | 6.4 | 8.4 |
| 9 | 7.4 | 7.3 | 7.5 | 7.2 | 7.6 | 7.1 | 7.7 | 7.0 | 7.8 | 6.9 | 7.9 | 6.8 | 8.0 | 6.7 | 8.1 | 6.6 | 8.2 | 6.5 | 8.3 | 6.4 | 8.4 |
| 10 | 7.4 | 7.3 | 7.5 | 7.2 | 7.6 | 7.1 | 7.7 | 7.0 | 7.8 | 6.9 | 7.9 | 6.8 | 8.0 | 6.7 | 8.1 | 6.6 | 8.2 | 6.5 | 8.3 | 6.4 | 8.4 |

**FOLLOW-UP HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT**
**BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46**

$t_{f,x} = t_{f,\,base} + t_{f,HV} * P_{HV}$

where:

$t_{f,x}$ = follow-up headway for movement x (s)
$t_{f,base}$ = base follow-up headway from Chapter 10 of PennDOT Publication 46
$t_{f,HV}$ = adjustment factor for heavy vehciles (0.9 for major streets with one lane in each direction; 1.0 for major streets with two or three lanes in each direction) (s)
$P_{HV}$ = proportion of heavy vehciles for movement (expressed as a decimal; e.g., $P_{HV}$=0.02 for 2% heavy vehciles)

**LEFT TURN FROM MAJOR ROADWAY - FOUR LANES ($t_{f,\,base}$ = 2.4)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 1 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 2 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 3 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |
| 5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 6 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 7 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 8 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 9 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| 10 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |

**LEFT TURN FROM MINOR ROADWAY - FOUR LANES ($t_{f,\,base}$ = 2.8)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 1 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 2 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 3 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 4 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 |
| 5 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 6 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 7 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 10 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |

**THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 4.0)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 1 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 2 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 3 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 4 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 5 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 6 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 7 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 8 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 9 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 10 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |

**RIGHT TURN FROM MINOR ROADWAY - FOUR LANES ($t_{f,\,base}$ = 2.9)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 1 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 2 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 3 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 4 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 6 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 7 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 8 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 9 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 10 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |

**CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT**
**BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46**

$t_{c,x} = t_{c,\,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
$P_{HV}$ = proportion of heavy vehciles for movement (expressed as a decimal; e.g., $P_{HV}$=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

**LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 4.3)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 1 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 2 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 4 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 5 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 6 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 7 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 8 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 9 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 10 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |

**LEFT TURN FROM MINOR ROADWAY - TWO LANES - 4-LEG INTERSECTION ($t_{c,\,base}$ = 7.1)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 7.1 | 6.9 | 7.3 | 6.7 | 7.5 | 6.5 | 7.7 | 6.3 | 7.9 | 6.1 | 8.1 | 5.9 | 8.3 | 5.7 | 8.5 | 5.5 | 8.7 | 5.3 | 8.9 | 5.1 | 9.1 |
| 1 | 7.1 | 6.9 | 7.3 | 6.7 | 7.5 | 6.5 | 7.7 | 6.3 | 7.9 | 6.1 | 8.1 | 5.9 | 8.3 | 5.7 | 8.5 | 5.5 | 8.7 | 5.3 | 8.9 | 5.1 | 9.1 |
| 2 | 7.1 | 6.9 | 7.3 | 6.7 | 7.5 | 6.5 | 7.7 | 6.3 | 7.9 | 6.1 | 8.1 | 5.9 | 8.3 | 5.7 | 8.5 | 5.5 | 8.7 | 5.3 | 8.9 | 5.1 | 9.1 |
| 3 | 7.1 | 6.9 | 7.3 | 6.7 | 7.5 | 6.5 | 7.7 | 6.3 | 7.9 | 6.1 | 8.1 | 5.9 | 8.3 | 5.7 | 8.5 | 5.5 | 8.7 | 5.3 | 8.9 | 5.1 | 9.1 |
| 4 | 7.1 | 6.9 | 7.3 | 6.7 | 7.5 | 6.5 | 7.7 | 6.3 | 7.9 | 6.1 | 8.1 | 5.9 | 8.3 | 5.7 | 8.5 | 5.5 | 8.7 | 5.3 | 8.9 | 5.1 | 9.1 |
| 5 | 7.2 | 7.0 | 7.4 | 6.8 | 7.6 | 6.6 | 7.8 | 6.4 | 8.0 | 6.2 | 8.2 | 6.0 | 8.4 | 5.8 | 8.6 | 5.6 | 8.8 | 5.4 | 9.0 | 5.2 | 9.2 |
| 6 | 7.2 | 7.0 | 7.4 | 6.8 | 7.6 | 6.6 | 7.8 | 6.4 | 8.0 | 6.2 | 8.2 | 6.0 | 8.4 | 5.8 | 8.6 | 5.6 | 8.8 | 5.4 | 9.0 | 5.2 | 9.2 |
| 7 | 7.2 | 7.0 | 7.4 | 6.8 | 7.6 | 6.6 | 7.8 | 6.4 | 8.0 | 6.2 | 8.2 | 6.0 | 8.4 | 5.8 | 8.6 | 5.6 | 8.8 | 5.4 | 9.0 | 5.2 | 9.2 |
| 8 | 7.2 | 7.0 | 7.4 | 6.8 | 7.6 | 6.6 | 7.8 | 6.4 | 8.0 | 6.2 | 8.2 | 6.0 | 8.4 | 5.8 | 8.6 | 5.6 | 8.8 | 5.4 | 9.0 | 5.2 | 9.2 |
| 9 | 7.2 | 7.0 | 7.4 | 6.8 | 7.6 | 6.6 | 7.8 | 6.4 | 8.0 | 6.2 | 8.2 | 6.0 | 8.4 | 5.8 | 8.6 | 5.6 | 8.8 | 5.4 | 9.0 | 5.2 | 9.2 |
| 10 | 7.2 | 7.0 | 7.4 | 6.8 | 7.6 | 6.6 | 7.8 | 6.4 | 8.0 | 6.2 | 8.2 | 6.0 | 8.4 | 5.8 | 8.6 | 5.6 | 8.8 | 5.4 | 9.0 | 5.2 | 9.2 |

**THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.5)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 1 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 2 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 3 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 4 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 5 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 6 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 7 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 8 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 9 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |
| 10 | 6.6 | 6.4 | 6.8 | 6.2 | 7.0 | 6.0 | 7.2 | 5.8 | 7.4 | 5.6 | 7.6 | 5.4 | 7.8 | 5.2 | 8.0 | 5.0 | 8.2 | 4.8 | 8.4 | 4.6 | 8.6 |

**RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.2)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 1 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 2 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 3 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 4 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 5 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 6 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 7 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 8 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 9 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 10 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |

**CRITICAL HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT**
**BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46**

$t_{c,x} = t_{c,\,base} + t_{c,HV} * P_{HV} + t_{c,G} * G - t_{3,LT}$

where:

$t_{c,x}$ = critical headway for movement x (s)
$t_{c,base}$ = base crtitcal headway from Chapter 10 of PennDOT Publication 46
$t_{c,HV}$ = adjustment factor for heavy vehciles (1.0 for major streets with one lane in each direction; 2.0 for major streets with two or three lanes in each direction) (s)
$P_{HV}$ = proportion of heavy vehciles for movement (expressed as a decimal; e.g., $P_{HV}$=0.02 for 2% heavy vehciles)
$t_{c,G}$ = adjustment factor for grade (0.1 for Movement 9 and 12; 0.2 for Movements 7,8,10, and 11) (s)
G = percent grade (expressed as an integer; e.g., G= -2 for a 2% downhill grade)
$t_{c,base}$ = adjustment factor for intersction geometry (0.7 for minor street left-turn movement at three-leg intersections; 0.0 otherwise) (s)

**LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 4.3)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 1 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 2 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 4 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 | 4.3 |
| 5 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 6 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 7 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 8 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 9 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |
| 10 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 | 4.4 |

**LEFT TURN FROM MINOR ROADWAY - TWO LANES - 3-LEG INTERSECTION ($t_{c,\,base}$ = 7.1)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 6.4 | 6.2 | 6.6 | 6.0 | 6.8 | 5.8 | 7.0 | 5.6 | 7.2 | 5.4 | 7.4 | 5.2 | 7.6 | 5.0 | 7.8 | 4.8 | 8.0 | 4.6 | 8.2 | 4.4 | 8.4 |
| 1 | 6.4 | 6.2 | 6.6 | 6.0 | 6.8 | 5.8 | 7.0 | 5.6 | 7.2 | 5.4 | 7.4 | 5.2 | 7.6 | 5.0 | 7.8 | 4.8 | 8.0 | 4.6 | 8.2 | 4.4 | 8.4 |
| 2 | 6.4 | 6.2 | 6.6 | 6.0 | 6.8 | 5.8 | 7.0 | 5.6 | 7.2 | 5.4 | 7.4 | 5.2 | 7.6 | 5.0 | 7.8 | 4.8 | 8.0 | 4.6 | 8.2 | 4.4 | 8.4 |
| 3 | 6.4 | 6.2 | 6.6 | 6.0 | 6.8 | 5.8 | 7.0 | 5.6 | 7.2 | 5.4 | 7.4 | 5.2 | 7.6 | 5.0 | 7.8 | 4.8 | 8.0 | 4.6 | 8.2 | 4.4 | 8.4 |
| 4 | 6.4 | 6.2 | 6.6 | 6.0 | 6.8 | 5.8 | 7.0 | 5.6 | 7.2 | 5.4 | 7.4 | 5.2 | 7.6 | 5.0 | 7.8 | 4.8 | 8.0 | 4.6 | 8.2 | 4.4 | 8.4 |
| 5 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 6 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 7 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 8 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 9 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |
| 10 | 6.5 | 6.3 | 6.7 | 6.1 | 6.9 | 5.9 | 7.1 | 5.7 | 7.3 | 5.5 | 7.5 | 5.3 | 7.7 | 5.1 | 7.9 | 4.9 | 8.1 | 4.7 | 8.3 | 4.5 | 8.5 |

**RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{c,\,base}$ = 6.2)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 1 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 2 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 3 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 4 | 6.2 | 6.1 | 6.3 | 6.0 | 6.4 | 5.9 | 6.5 | 5.8 | 6.6 | 5.7 | 6.7 | 5.6 | 6.8 | 5.5 | 6.9 | 5.4 | 7.0 | 5.3 | 7.1 | 5.2 | 7.2 |
| 5 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 6 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 7 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 8 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 9 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |
| 10 | 6.3 | 6.2 | 6.4 | 6.1 | 6.5 | 6.0 | 6.6 | 5.9 | 6.7 | 5.8 | 6.8 | 5.7 | 6.9 | 5.6 | 7.0 | 5.5 | 7.1 | 5.4 | 7.2 | 5.3 | 7.3 |

**FOLLOW-UP HEADWAY CALCULATIONS FOR TWSC INTERSECTION WITHIN SUBURBAN LAND USE CONTEXT**
**BASED ON PENNSYLVANIA DEFAULT VALUES FROM CHAPTER 10 OF PENNDOT PUBLICATION 46**

$t_{f,x} = t_{f,\,base} + t_{f,HV} * P_{HV}$

where:

$t_{f,x}$ = follow-up headway for movement x (s)
$t_{f,base}$ = base follow-up headway from Chapter 10 of PennDOT Publication 46
$t_{f,HV}$ = adjustment factor for heavy vehciles (0.9 for major streets with one lane in each direction; 1.0 for major streets with two or three lanes in each direction) (s)
$P_{HV}$ = proportion of heavy vehciles for movement (expressed as a decimal; e.g., $P_{HV}$=0.02 for 2% heavy vehciles)

**LEFT TURN FROM MAJOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.0)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 1 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 2 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 3 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 4 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 6 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 7 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 8 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 9 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 10 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |

**LEFT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.0)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 1 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 2 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 3 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 4 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 5 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| 6 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 7 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 8 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 9 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 10 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |

**THROUGH TRAFFIC ON MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 4.0)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 1 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 2 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 3 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 4 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 5 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| 6 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 7 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 8 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 9 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |
| 10 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 | 4.1 |

**RIGHT TURN FROM MINOR ROADWAY - TWO LANES ($t_{f,\,base}$ = 3.1)**

| GRADE | 0 | -1 | 1 | -2 | 2 | -3 | 3 | -4 | 4 | -5 | 5 | -6 | 6 | -7 | 7 | -8 | 8 | -9 | 9 | -10 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HV % | | | | | | | | | | | | | | | | | | | | | |
| 0 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 2 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 3 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 4 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 5 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 | 3.1 |
| 6 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 7 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 8 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 9 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |
| 10 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 | 3.2 |

# APPENDIX G

## *LANE UTILIZATION*

Est. 1989 TPD
TRAFFIC PLANNING AND DESIGN, INC.
www.TrafficPD.com

JOB KARA.00010
SHEET NO. ____ OF ____
CALCULATED BY ____ DATE ____
CHECKED BY ____ DATE ____
SCALE Lane Utilization Lancaster / Aberdeen

Video Observations: 2018 Existing (3 cycles)

AM (Thrus):

EB1* - 28

EB2 - 51

PM:

WB1* - 38

WB2 - 47

* Includes left-turns

$$L_u = \frac{\text{TOTAL}}{2 \cdot \text{Max}}$$

$$EB = \frac{28 + 51}{2 \times 5} = \boxed{0.77}$$

$$WB = \frac{38 + 47}{2 \times 47} = \boxed{0.90}$$

TRAFFIC PLANNING AND DESIGN, INC.
www.TrafficPD.com

JOB KARA.00010
SHEET NO. ____ OF ____
CALCULATED BY ____ DATE ____
CHECKED BY ____ DATE ____
SCALE Lane Utilization Lancaster / Aberdeen

## Video Observations: 2018 Existing (3 cycles)

PM (Thrus):

EB1* - 24

EB2 - 36

PM:

WB1* - 18

WB2 - 30

* Includes left-thrus

$$L_u = \frac{\text{Total}}{2 \times \text{Max}}$$

$$EB = \frac{24+36}{2 \times 36} = \boxed{0.83}$$

$$WB = \frac{18+30}{2 \times 30} = \boxed{0.80}$$

Est. 1989 TPD
TRAFFIC PLANNING AND DESIGN, INC.
www.TrafficPD.com

JOB KARA.00010
SHEET NO. ____ OF ____
CALCULATED BY ____ DATE ____
CHECKED BY ____ DATE ____
SCALE Lane Utilization
Lancaster / Aberdeen

# Video Observations: 2018 Existing (3 cycles)

SAT (thrus):

EB1* - 30
EB2 - 34

WB1* - 21
WB2 - 28

* Includes left turns

$$L_u = \frac{\text{TOTAL}}{2 \times \text{Max}}$$

$$EB = \frac{30+34}{2 \times 34} = \boxed{0.94}$$

$$WB = \frac{21+28}{2 \times 28} = \boxed{0.88}$$

TRAFFIC PLANNING AND DESIGN, INC.
www.TrafficPD.com

JOB KARA.10
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____
SCALE Lane Utilization

Lancaster / Aberdeen

Video Observations: 2018 Existing (3 cycles)

Sun (Thrus)

EB1* - 23
EB2 - 29

WB1* - 26
WB2 - 31

* Includes left-turns

$$LU = \frac{TOTAL}{2 \cdot Max}$$

$$EB = \frac{(23+29)}{2 \times 29} = \boxed{0.90}$$

$$WB = \frac{(26+31)}{2 \times 31} = \boxed{0.92}$$

Est. 1989

TRAFFIC PLANNING AND DESIGN, INC.

www.TrafficPD.com

JOB KARA 10 Lane Utilization

SHEET NO. _____ OF _____

CALCULATED BY _____ DATE _____

CHECKED BY _____ DATE _____

SCALE Lancaster / Aberdeen

Video Observations

Weekday Midday 2018 Existing (3 cycles)

WB T/R = 52

WB L/T = 37

EB L/T = 29

EB T/R = 58

$$LU = \frac{\text{Total}}{2 * \text{Max}}$$

$$WB = \frac{52 + 37}{52 * 2} = \boxed{0.86}$$

$$EB = \frac{29 + 58}{58 * 2} = \boxed{0.75}$$

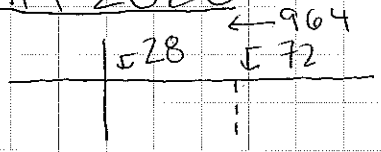
Est. 1989
TRAFFIC PLANNING AND DESIGN, INC.
www.TrafficPD.com

JOB KARA.10 LANE UTILIZATION
SHEET NO. 1 OF 2
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____

PROJECTED CONDITIONS

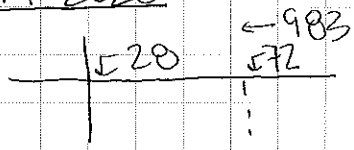
LANCASTER / DRIVEWAY WBL
ASSUME ONLY WBL @ ABERDEEN & DRIVEWAY USE INSIDE LANE TO BE CONSERVATIVE

AM-2020



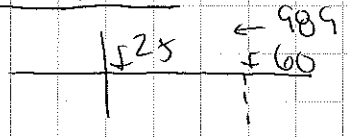

$$LU = \frac{964+72}{2(964-28)} = 0.55$$

AM-2025



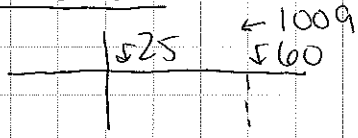

$$LU = \frac{983+72}{2(983-28)} = 0.55$$

PM-2020



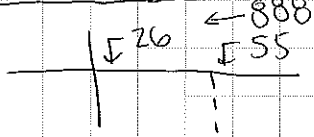

$$LU = \frac{989+60}{(2(989-25))} = 0.54$$

PM-2025



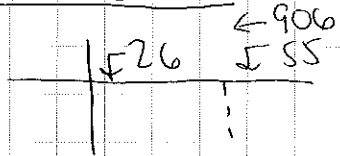

$$LU = \frac{1009+60}{2(1009-25)} = 0.54$$

SAT-2020




$$LU = \frac{888+55}{2(888-26)} = 0.55$$

SAT-2025



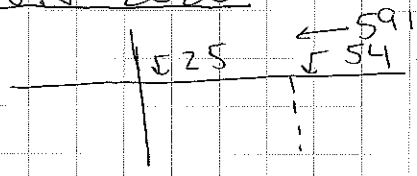

$$LU = \frac{906+55}{2(906-26)} = 0.55$$

Est. 1989 TPD
TRAFFIC PLANNING AND DESIGN, INC.
www.TrafficPD.com

JOB KARA.10 LANE UTILIZATION
SHEET NO. 2 OF 2
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____

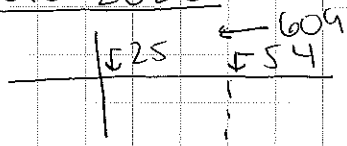
PROJECTED CONDITIONS

SUN-2020



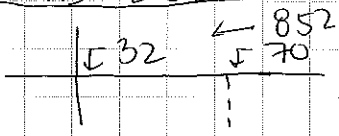

$$LU = \frac{591+54}{2(591-25)} = 0.57$$

SUN-2025



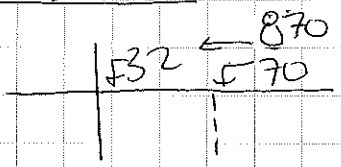

$$LU = \frac{609+54}{2(609-25)} = 0.57$$

MID-2020




$$LU = \frac{852+70}{2(852-32)} = 0.56$$

MID-2025

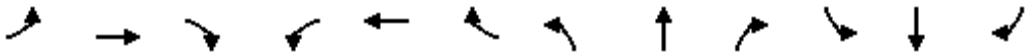



$$LU = \frac{870+70}{2(870-32)} = 0.56$$

# APPENDIX H

## *CAPACITY ANALYSES*

# *2018 EXISTING CONDITIONS*

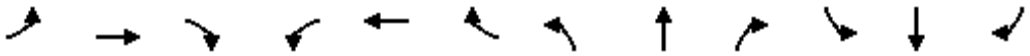


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 785 | 34 | 11 | 956 | 43 | 72 | 108 | 33 | 140 | 85 | 68 |
| Future Volume (vph) | 35 | 785 | 34 | 11 | 956 | 43 | 72 | 108 | 33 | 140 | 85 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 928 | 0 | 0 | 1098 | 0 | 0 | 231 | 0 | 0 | 318 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 62.0 | 62.0 | | 62.0 | 62.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Total Split (%) | 59.0% | 59.0% | | 59.0% | 59.0% | | 41.0% | 41.0% | | 41.0% | 41.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.70 | | | 0.64 | | | 0.61 | | | 0.85 | |
| Control Delay | | 24.7 | | | 15.8 | | | 37.9 | | | 55.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 24.7 | | | 15.8 | | | 37.9 | | | 55.0 | |
| Queue Length 50th (ft) | | 305 | | | 242 | | | 131 | | | 198 | |
| Queue Length 95th (ft) | | 452 | | | 380 | | | 193 | | | 283 | |
| Internal Link Dist (ft) | | 1072 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1318 | | | 1704 | | | 471 | | | 466 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.70 | | | 0.64 | | | 0.49 | | | 0.68 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 6 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 785 | 34 | 11 | 956 | 43 | 72 | 108 | 33 | 140 | 85 | 68 |
| Future Volume (vph) | 35 | 785 | 34 | 11 | 956 | 43 | 72 | 108 | 33 | 140 | 85 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.77 | | | *0.90 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.98 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2461 | | | 2898 | | | 1603 | | | 1813 | |
| Flt Permitted | | 0.85 | | | 0.94 | | | 0.78 | | | 0.68 | |
| Satd. Flow (perm) | | 2105 | | | 2720 | | | 1269 | | | 1256 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 38 | 853 | 37 | 12 | 1039 | 47 | 78 | 117 | 36 | 152 | 92 | 74 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 928 | 0 | 0 | 1098 | 0 | 0 | 231 | 0 | 0 | 318 | 0 |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 64.8 | | | 64.8 | | | 30.2 | | | 30.2 | |
| Effective Green, g (s) | | 65.8 | | | 65.8 | | | 31.2 | | | 31.2 | |
| Actuated g/C Ratio | | 0.63 | | | 0.63 | | | 0.30 | | | 0.30 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1319 | | | 1704 | | | 377 | | | 373 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.44 | | | 0.40 | | | 0.18 | | | c0.25 | |
| v/c Ratio | | 0.70 | | | 0.64 | | | 0.61 | | | 0.85 | |
| Uniform Delay, d1 | | 13.1 | | | 12.3 | | | 31.7 | | | 34.7 | |
| Progression Factor | | 1.42 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 3.0 | | | 1.9 | | | 2.9 | | | 16.9 | |
| Delay (s) | | 21.6 | | | 14.2 | | | 34.7 | | | 51.6 | |
| Level of Service | | C | | | B | | | C | | | D | |
| Approach Delay (s) | | 21.6 | | | 14.2 | | | 34.7 | | | 51.6 | |
| Approach LOS | | C | | | B | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 23.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 84.5% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 946 | 12 | 0 | 1010 | 0 | 0 |
| Future Volume (vph) | 946 | 12 | 0 | 1010 | 0 | 0 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 946 | 12 | 0 | 1010 | 0 | 0 |
| Future Vol, veh/h | 946 | 12 | 0 | 1010 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1028 | 13 | 0 | 1098 | 0 | 0 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1041 | 0 | 1588 | 525 |
| Stage 1 | - | - | - | - | 1035 | - |
| Stage 2 | - | - | - | - | 553 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 875 | - | *75 | *892 |
| Stage 1 | - | - | - | - | *621 | - |
| Stage 2 | - | - | - | - | *843 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 875 | - | *75 | *889 |
| Mov Cap-2 Maneuver | - | - | - | - | *75 | - |
| Stage 1 | - | - | - | - | *621 | - |
| Stage 2 | - | - | - | - | *841 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 875 | - |
| HCM Lane V/C Ratio | - | - | - | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 944 | 2 | 0 | 1005 | 5 | 15 |
| Future Volume (vph) | 944 | 2 | 0 | 1005 | 5 | 15 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 944 | 2 | 0 | 1005 | 5 | 15 |
| Future Vol, veh/h | 944 | 2 | 0 | 1005 | 5 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1026 | 2 | 0 | 1092 | 5 | 16 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1028 | 0 | 1577 | 518 |
| Stage 1 | - | - | - | - | 1027 | - |
| Stage 2 | - | - | - | - | 550 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *77 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *843 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *77 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *77 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *841 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 21.6 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 238 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.091 | - | - | - | - |
| HCM Control Delay (s) | 21.6 | - | - | 0 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 939 | 20 | 3 | 1005 | 0 | 6 |
| Future Volume (vph) | 939 | 20 | 3 | 1005 | 0 | 6 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 939 | 20 | 3 | 1005 | 0 | 6 |
| Future Vol, veh/h | 939 | 20 | 3 | 1005 | 0 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1021 | 22 | 3 | 1092 | 0 | 7 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1043 | 0 | 1588 | 526 |
| Stage 1 | - | - | - | - | 1032 | - |
| Stage 2 | - | - | - | - | 556 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *75 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *843 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *74 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *74 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *834 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 9.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 792 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.008 | - | - | 0.003 | - |
| HCM Control Delay (s) | 9.6 | - | - | 8.8 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 942 | 3 | 3 | 1006 | 2 | 16 |
| Future Volume (vph) | 942 | 3 | 3 | 1006 | 2 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1639 | 89 | |
| Travel Time (s) | 1.7 | | | 31.9 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 942 | 3 | 3 | 1006 | 2 | 16 |
| Future Vol, veh/h | 942 | 3 | 3 | 1006 | 2 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1024 | 3 | 3 | 1093 | 2 | 17 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1027 | 0 | 1583 | 518 |
| Stage 1 | - | - | - | - | 1026 | - |
| Stage 2 | - | - | - | - | 557 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *76 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *843 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *75 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *75 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *834 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 14.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 384 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.051 | - | - | 0.003 | - |
| HCM Control Delay (s) | 14.9 | - | - | 8.8 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 1 | 8 | 205 | 5 | 11 | 119 |
| Future Volume (vph) | 1 | 8 | 205 | 5 | 11 | 119 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 4 | 4 | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 8% | 2% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 1 | 8 | 205 | 5 | 11 | 119 |
| Future Vol, veh/h | 1 | 8 | 205 | 5 | 11 | 119 |
| Conflicting Peds, #/hr | 4 | 4 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 8 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 9 | 223 | 5 | 12 | 129 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 383 | 230 | 0 | 0 | 228 | 0 |
| Stage 1 | 226 | - | - | - | - | - |
| Stage 2 | 157 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 753 | 860 | - | - | 1003 | - |
| Stage 1 | 937 | - | - | - | - | - |
| Stage 2 | 1067 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 740 | 857 | - | - | 1003 | - |
| Mov Cap-2 Maneuver | 740 | - | - | - | - | - |
| Stage 1 | 937 | - | - | - | - | - |
| Stage 2 | 1049 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.3 | 0 | 0.7 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 842 | 1003 | - |
| HCM Lane V/C Ratio | - | - | 0.012 | 0.012 | - |
| HCM Control Delay (s) | - | - | 9.3 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 1 | 209 | 12 | 1 | 119 |
| Future Volume (vph) | 4 | 1 | 209 | 12 | 1 | 119 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 69 |
| Travel Time (s) | 2.0 | | 8.5 | | | 1.9 |
| Confl. Peds. (#/hr) | 4 | 4 | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 8% | 2% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

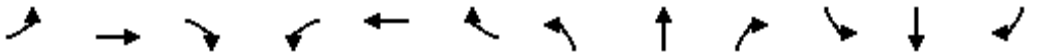
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 1 | 209 | 12 | 1 | 119 |
| Future Vol, veh/h | 4 | 1 | 209 | 12 | 1 | 119 |
| Conflicting Peds, #/hr | 4 | 4 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 8 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 1 | 227 | 13 | 1 | 129 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 369 | 238 | 0 | 0 | 240 | 0 |
| Stage 1 | 234 | - | - | - | - | - |
| Stage 2 | 135 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *770 | 851 | - | - | 994 | - |
| Stage 1 | *929 | - | - | - | - | - |
| Stage 2 | *1085 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *766 | 848 | - | - | 994 | - |
| Mov Cap-2 Maneuver | *766 | - | - | - | - | - |
| Stage 1 | *929 | - | - | - | - | - |
| Stage 2 | *1080 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.6 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 781 | 994 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.001 | - |
| HCM Control Delay (s) | - | - | 9.6 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 650 | 25 | 33 | 787 | 112 | 40 | 98 | 43 | 93 | 91 | 35 |
| Future Volume (vph) | 29 | 650 | 25 | 33 | 787 | 112 | 40 | 98 | 43 | 93 | 91 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 773 | 0 | 0 | 901 | 123 | 44 | 155 | 0 | 102 | 138 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 13.0 | 49.0 | | 36.0 | 36.0 | 36.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 12.4% | 46.7% | | 34.3% | 34.3% | 34.3% | 28.6% | 28.6% | | 28.6% | 28.6% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.39 | | | 0.44 | 0.13 | 0.30 | 0.57 | | 0.72 | 0.54 | |
| Control Delay | | 6.5 | | | 6.0 | 5.9 | 41.2 | 47.1 | | 67.2 | 46.5 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 6.5 | | | 6.0 | 5.9 | 41.2 | 47.1 | | 67.2 | 46.5 | |
| Queue Length 50th (ft) | | 86 | | | 67 | 17 | 26 | 97 | | 65 | 85 | |
| Queue Length 95th (ft) | | 151 | | | 148 | m51 | 56 | 151 | | 117 | 137 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2004 | | | 2030 | 957 | 205 | 382 | | 198 | 358 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.39 | | | 0.44 | 0.13 | 0.21 | 0.41 | | 0.52 | 0.39 | |

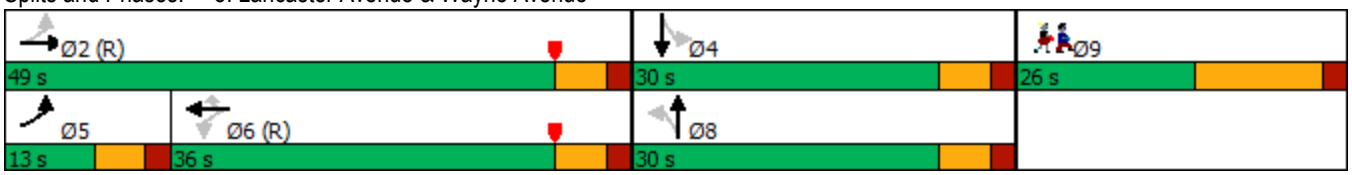
Intersection Summary

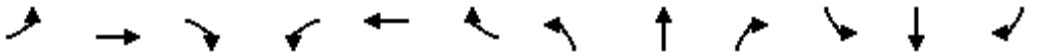
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 25% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 33 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 650 | 25 | 33 | 787 | 112 | 40 | 98 | 43 | 93 | 91 | 35 |
| Future Volume (vph) | 29 | 650 | 25 | 33 | 787 | 112 | 40 | 98 | 43 | 93 | 91 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.98 | 1.00 | | 0.97 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3077 | | | 3089 | 1335 | 1397 | 1600 | | 1454 | 1502 | |
| Flt Permitted | | 0.88 | | | 0.89 | 1.00 | 0.59 | 1.00 | | 0.54 | 1.00 | |
| Satd. Flow (perm) | | 2727 | | | 2765 | 1335 | 861 | 1600 | | 828 | 1502 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 32 | 714 | 27 | 36 | 865 | 123 | 44 | 108 | 47 | 102 | 100 | 38 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 773 | 0 | 0 | 901 | 123 | 44 | 155 | 0 | 102 | 138 | 0 |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 76.1 | | | 76.1 | 76.1 | 16.9 | 16.9 | | 16.9 | 16.9 | |
| Effective Green, g (s) | | 77.1 | | | 77.1 | 76.1 | 17.9 | 17.9 | | 17.9 | 17.9 | |
| Actuated g/C Ratio | | 0.73 | | | 0.73 | 0.72 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2002 | | | 2030 | 967 | 146 | 272 | | 141 | 256 | |
| v/s Ratio Prot | | | | | | | | 0.10 | | | 0.09 | |
| v/s Ratio Perm | | 0.28 | | | c0.33 | 0.09 | 0.05 | | | c0.12 | | |
| v/c Ratio | | 0.39 | | | 0.44 | 0.13 | 0.30 | 0.57 | | 0.72 | 0.54 | |
| Uniform Delay, d1 | | 5.2 | | | 5.5 | 4.4 | 38.1 | 40.0 | | 41.2 | 39.8 | |
| Progression Factor | | 1.00 | | | 0.86 | 1.05 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.6 | 0.2 | 1.2 | 2.7 | | 16.7 | 2.2 | |
| Delay (s) | | 5.3 | | | 5.3 | 4.8 | 39.2 | 42.7 | | 57.9 | 42.0 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 5.3 | | | 5.2 | | | 42.0 | | | 48.7 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 75.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 773 | 50 | 94 | 945 | 31 | 44 |
| Future Volume (vph) | 773 | 50 | 94 | 945 | 31 | 44 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Satd. Flow (prot) | 3041 | 0 | 0 | 3069 | 1714 | 0 |
| Flt Permitted | | | | 0.749 | 0.980 | |
| Satd. Flow (perm) | 3041 | 0 | 0 | 2307 | 1711 | 0 |
| Right Turn on Red | | No | | | | No |
| Satd. Flow (RTOR) | | | | | | |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 915 | 0 | 0 | 1154 | 83 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 61.0 | | 12.0 | 73.0 | 32.0 | |
| Total Split (%) | 58.1% | | 11.4% | 69.5% | 30.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| Act Effct Green (s) | 84.6 | | | 84.6 | 11.4 | |
| Actuated g/C Ratio | 0.81 | | | 0.81 | 0.11 | |
| v/c Ratio | 0.37 | | | 0.62 | 0.45 | |
| Control Delay | 2.6 | | | 3.2 | 50.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.6 | | | 3.2 | 50.6 | |
| LOS | A | | | A | D | |
| Approach Delay | 2.6 | | | 3.2 | 50.6 | |
| Approach LOS | A | | | A | D | |
| Queue Length 50th (ft) | 66 | | | 35 | 53 | |
| Queue Length 95th (ft) | 70 | | | 43 | 98 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2449 | | | 1858 | 440 | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.37 | | | 0.62 | 0.19 | |

| Intersection Summary | | | |
|---|---|---|---|
| Area Type: | Other | | |
| Cycle Length: 105 | | | |
| Actuated Cycle Length: 105 | | | |
| Offset: 48 (46%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow | | | |
| Natural Cycle: 40 | | | |
| Control Type: Actuated-Coordinated | | | |
| Maximum v/c Ratio: 0.62 | | | |
| Intersection Signal Delay: 4.8 | | Intersection LOS: A | |
| Intersection Capacity Utilization 70.4% | | ICU Level of Service C | |
| Analysis Period (min) 15 | | | |

Splits and Phases: 9: Louella Avenue & Lancaster Avenue

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 773 | 50 | 94 | 945 | 31 | 44 |
| Future Volume (vph) | 773 | 50 | 94 | 945 | 31 | 44 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3041 | | | 3067 | 1712 | |
| Flt Permitted | 1.00 | | | 0.75 | 0.98 | |
| Satd. Flow (perm) | 3041 | | | 2309 | 1712 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 859 | 56 | 104 | 1050 | 34 | 49 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 915 | 0 | 0 | 1154 | 83 | 0 |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 83.6 | | | 83.6 | 10.4 | |
| Effective Green, g (s) | 84.6 | | | 84.6 | 11.4 | |
| Actuated g/C Ratio | 0.81 | | | 0.81 | 0.11 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2450 | | | 1860 | 185 | |
| v/s Ratio Prot | 0.30 | | | | c0.05 | |
| v/s Ratio Perm | | | | c0.50 | | |
| v/c Ratio | 0.37 | | | 0.62 | 0.45 | |
| Uniform Delay, d1 | 2.8 | | | 4.0 | 43.9 | |
| Progression Factor | 0.71 | | | 0.44 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.5 | 1.7 | |
| Delay (s) | 2.4 | | | 2.2 | 45.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.4 | | | 2.2 | 45.6 | |
| Approach LOS | A | | | A | D | |

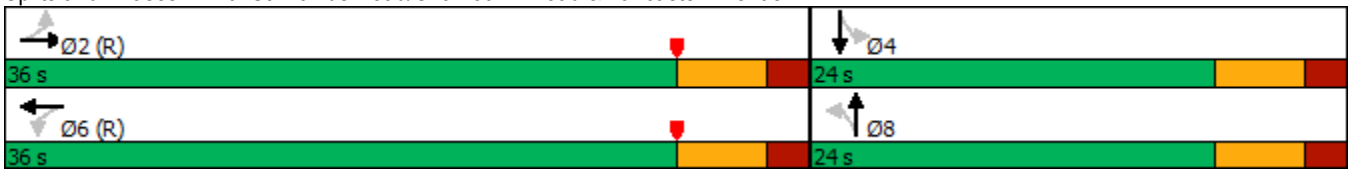
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.0 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 70.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 855 | 9 | 13 | 1113 | 285 | 19 | 67 | 70 | 92 | 38 | 38 |
| Future Volume (vph) | 14 | 855 | 9 | 13 | 1113 | 285 | 19 | 67 | 70 | 92 | 38 | 38 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1639 | | | 1078 | | | 276 | | | 428 | |
| Travel Time (s) | | 31.9 | | | 21.0 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 6 | | | | | 6 | 4 | | 5 | 5 | | 4 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 4% | 1% | 0% | 0% | 4% | 1% | 5% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 36.0 | 36.0 | | 36.0 | 36.0 | | 24.0 | 24.0 | | 24.0 | 24.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 20 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Coordinated | |

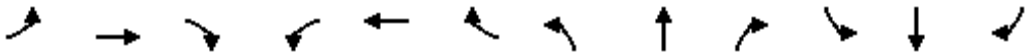
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 14 | 855 | 9 | 13 | 1113 | 285 | 19 | 67 | 70 | 92 | 38 | 38 |
| Future Volume (veh/h) | 14 | 855 | 9 | 13 | 1113 | 285 | 19 | 67 | 70 | 92 | 38 | 38 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1731 | 1782 | 1845 | 1785 | 1845 | 1891 | 1857 | 1891 | 1881 | 1838 | 1881 |
| Adj Flow Rate, veh/h | 15 | 940 | 9 | 14 | 1223 | 292 | 21 | 74 | 74 | 101 | 42 | 42 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 0 | 0 | 5 | 5 | 5 |
| Cap, veh/h | 72 | 2113 | 20 | 67 | 1753 | 410 | 89 | 146 | 130 | 223 | 75 | 60 |
| Arrive On Green | 0.65 | 0.66 | 0.65 | 0.65 | 0.66 | 0.65 | 0.15 | 0.17 | 0.15 | 0.15 | 0.17 | 0.15 |
| Sat Flow, veh/h | 15 | 3192 | 30 | 9 | 2649 | 620 | 125 | 850 | 759 | 761 | 436 | 351 |
| Grp Volume(v), veh/h | 497 | 0 | 467 | 817 | 0 | 712 | 169 | 0 | 0 | 185 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1668 | 0 | 1570 | 1766 | 0 | 1512 | 1734 | 0 | 0 | 1548 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.6 | 0.0 | 0.0 | 18.3 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.3 | 0.0 | 8.6 | 17.5 | 0.0 | 18.3 | 5.4 | 0.0 | 0.0 | 6.6 | 0.0 | 0.0 |
| Prop In Lane | 0.03 | | 0.02 | 0.02 | | 0.41 | 0.12 | | 0.44 | 0.55 | | 0.23 |
| Lane Grp Cap(c), veh/h | 1138 | 0 | 1039 | 1201 | 0 | 1001 | 336 | 0 | 0 | 332 | 0 | 0 |
| V/C Ratio(X) | 0.44 | 0.00 | 0.45 | 0.68 | 0.00 | 0.71 | 0.50 | 0.00 | 0.00 | 0.56 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1138 | 0 | 1039 | 1201 | 0 | 1001 | 575 | 0 | 0 | 540 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 4.8 | 0.0 | 4.9 | 6.4 | 0.0 | 6.6 | 23.1 | 0.0 | 0.0 | 23.6 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.2 | 0.0 | 1.4 | 3.1 | 0.0 | 4.3 | 1.7 | 0.0 | 0.0 | 2.1 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.9 | 0.0 | 7.3 | 14.9 | 0.0 | 13.4 | 5.1 | 0.0 | 0.0 | 5.7 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 6.1 | 0.0 | 6.3 | 9.5 | 0.0 | 10.9 | 24.8 | 0.0 | 0.0 | 25.7 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | B | C | | | C | | |
| Approach Vol, veh/h | | 964 | | | 1529 | | | 169 | | | 185 | |
| Approach Delay, s/veh | | 6.2 | | | 10.2 | | | 24.8 | | | 25.7 | |
| Approach LOS | | A | | | B | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 44.7 | | 15.3 | | 44.7 | | 15.3 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 30.0 | | 18.0 | | 30.0 | | 18.0 |
| Max Q Clear Time (g_c+I1), s | | 10.6 | | 8.6 | | 20.3 | | 7.4 |
| Green Ext Time (p_c), s | | 3.9 | | 0.7 | | 5.0 | | 0.6 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 10.7 |
| HCM 2010 LOS | B |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 17 | 6 | 5 | 92 | 12 | 28 | 172 | 11 | 3 | 61 | 19 |
| Future Volume (vph) | 5 | 17 | 6 | 5 | 92 | 12 | 28 | 172 | 11 | 3 | 61 | 19 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 7 | | 3 | 3 | | 7 | 10 | | | | | 10 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles (%) | 20% | 0% | 17% | 0% | 2% | 0% | 18% | 6% | 0% | 0% | 2% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.9 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 17 | 6 | 5 | 92 | 12 | 28 | 172 | 11 | 3 | 61 | 19 |
| Future Vol, veh/h | 5 | 17 | 6 | 5 | 92 | 12 | 28 | 172 | 11 | 3 | 61 | 19 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles, % | 20 | 0 | 17 | 0 | 2 | 0 | 18 | 6 | 0 | 0 | 2 | 5 |
| Mvmt Flow | 7 | 24 | 8 | 7 | 130 | 17 | 39 | 242 | 15 | 4 | 86 | 27 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.8 | 9.2 | 11 | 8.5 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 13% | 18% | 5% | 4% |
| Vol Thru, % | 82% | 61% | 84% | 73% |
| Vol Right, % | 5% | 21% | 11% | 23% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 211 | 28 | 109 | 83 |
| LT Vol | 28 | 5 | 5 | 3 |
| Through Vol | 172 | 17 | 92 | 61 |
| RT Vol | 11 | 6 | 12 | 19 |
| Lane Flow Rate | 297 | 39 | 154 | 117 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.398 | 0.059 | 0.209 | 0.15 |
| Departure Headway (Hd) | 4.82 | 5.355 | 4.892 | 4.615 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 746 | 665 | 731 | 773 |
| Service Time | 2.864 | 3.419 | 2.942 | 2.668 |
| HCM Lane V/C Ratio | 0.398 | 0.059 | 0.211 | 0.151 |
| HCM Control Delay | 11 | 8.8 | 9.2 | 8.5 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 1.9 | 0.2 | 0.8 | 0.5 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 5 | 29 | 88 | 31 | 17 | 42 |
| Future Volume (vph) | 5 | 29 | 88 | 31 | 17 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | | 14 | | 7 | 7 | |
| Peak Hour Factor | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 32% | 23% | 9% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

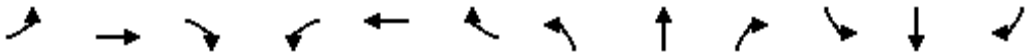
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 29 | 88 | 31 | 17 | 42 |
| Future Vol, veh/h | 5 | 29 | 88 | 31 | 17 | 42 |
| Conflicting Peds, #/hr | 0 | 14 | 0 | 7 | 7 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 54 | 54 | 54 | 54 | 54 | 54 |
| Heavy Vehicles, % | 0 | 3 | 0 | 32 | 23 | 9 |
| Mvmt Flow | 9 | 54 | 163 | 57 | 31 | 78 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 339 | 213 | 0 | 0 | 227 | 0 |
| Stage 1 | 199 | - | - | - | - | - |
| Stage 2 | 140 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.23 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 754 | 879 | - | - | 1004 | - |
| Stage 1 | 966 | - | - | - | - | - |
| Stage 2 | 1031 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 725 | 861 | - | - | 997 | - |
| Mov Cap-2 Maneuver | 725 | - | - | - | - | - |
| Stage 1 | 959 | - | - | - | - | - |
| Stage 2 | 998 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.6 | 0 | 2.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 838 | 997 | - |
| HCM Lane V/C Ratio | - | - | 0.075 | 0.032 | - |
| HCM Control Delay (s) | - | - | 9.6 | 8.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |

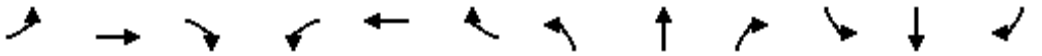


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 844 | 30 | 10 | 955 | 59 | 39 | 63 | 26 | 117 | 112 | 67 |
| Future Volume (vph) | 33 | 844 | 30 | 10 | 955 | 59 | 39 | 63 | 26 | 117 | 112 | 67 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1121 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 30.6 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 935 | 0 | 0 | 1056 | 0 | 0 | 132 | 0 | 0 | 305 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 37.0 | 37.0 | | 37.0 | 37.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (%) | 61.7% | 61.7% | | 61.7% | 61.7% | | 38.3% | 38.3% | | 38.3% | 38.3% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.66 | | | 0.71 | | | 0.33 | | | 0.72 | |
| Control Delay | | 10.5 | | | 12.9 | | | 18.9 | | | 29.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 10.5 | | | 12.9 | | | 18.9 | | | 29.6 | |
| Queue Length 50th (ft) | | 228 | | | 156 | | | 37 | | | 96 | |
| Queue Length 95th (ft) | | 301 | | | 256 | | | 73 | | | 166 | |
| Internal Link Dist (ft) | | 1041 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1427 | | | 1480 | | | 464 | | | 491 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.66 | | | 0.71 | | | 0.28 | | | 0.62 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |

Actuated Cycle Length: 60
Offset: 38 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 844 | 30 | 10 | 955 | 59 | 39 | 63 | 26 | 117 | 112 | 67 |
| Future Volume (vph) | 33 | 844 | 30 | 10 | 955 | 59 | 39 | 63 | 26 | 117 | 112 | 67 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.83 | | | *0.80 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 1.00 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2735 | | | 2643 | | | 1701 | | | 1832 | |
| Flt Permitted | | 0.88 | | | 0.94 | | | 0.85 | | | 0.83 | |
| Satd. Flow (perm) | | 2405 | | | 2496 | | | 1468 | | | 1554 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 34 | 870 | 31 | 10 | 985 | 61 | 40 | 65 | 27 | 121 | 115 | 69 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 935 | 0 | 0 | 1056 | 0 | 0 | 132 | 0 | 0 | 305 | 0 |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 34.6 | | | 34.6 | | | 15.4 | | | 15.4 | |
| Effective Green, g (s) | | 35.6 | | | 35.6 | | | 16.4 | | | 16.4 | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | | | 0.27 | | | 0.27 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1426 | | | 1480 | | | 401 | | | 424 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.39 | | | c0.42 | | | 0.09 | | | c0.20 | |
| v/c Ratio | | 0.66 | | | 0.71 | | | 0.33 | | | 0.72 | |
| Uniform Delay, d1 | | 8.1 | | | 8.6 | | | 17.4 | | | 19.7 | |
| Progression Factor | | 0.94 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 2.2 | | | 3.0 | | | 0.5 | | | 5.8 | |
| Delay (s) | | 9.8 | | | 11.6 | | | 17.9 | | | 25.5 | |
| Level of Service | | A | | | B | | | B | | | C | |
| Approach Delay (s) | | 9.8 | | | 11.6 | | | 17.9 | | | 25.5 | |
| Approach LOS | | A | | | B | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 969 | 18 | 2 | 1024 | 0 | 3 |
| Future Volume (vph) | 969 | 18 | 2 | 1024 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 969 | 18 | 2 | 1024 | 0 | 3 |
| Future Vol, veh/h | 969 | 18 | 2 | 1024 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 999 | 19 | 2 | 1056 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1018 | 0 | 1544 | 512 |
| Stage 1 | - | - | - | - | 1009 | - |
| Stage 2 | - | - | - | - | 535 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 882 | - | *81 | *905 |
| Stage 1 | - | - | - | - | *626 | - |
| Stage 2 | - | - | - | - | *801 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 882 | - | *80 | *903 |
| Mov Cap-2 Maneuver | - | - | - | - | *80 | - |
| Stage 1 | - | - | - | - | *626 | - |
| Stage 2 | - | - | - | - | *795 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 903 | - | - | 882 | - |
| HCM Lane V/C Ratio | 0.003 | - | - | 0.002 | - |
| HCM Control Delay (s) | 9 | - | - | 9.1 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 948 | 24 | 3 | 1024 | 2 | 21 |
| Future Volume (vph) | 948 | 24 | 3 | 1024 | 2 | 21 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 948 | 24 | 3 | 1024 | 2 | 21 |
| Future Vol, veh/h | 948 | 24 | 3 | 1024 | 2 | 21 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 977 | 25 | 3 | 1056 | 2 | 22 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1002 | 0 | 1527 | 504 |
| Stage 1 | - | - | - | - | 990 | - |
| Stage 2 | - | - | - | - | 537 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *84 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *801 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *83 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *83 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *793 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 13.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 460 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.052 | - | - | 0.003 | - |
| HCM Control Delay (s) | 13.3 | - | - | 8.7 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 933 | 36 | 5 | 1027 | 0 | 3 |
| Future Volume (vph) | 933 | 36 | 5 | 1027 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 933 | 36 | 5 | 1027 | 0 | 3 |
| Future Vol, veh/h | 933 | 36 | 5 | 1027 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 962 | 37 | 5 | 1059 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 999 | 0 | 1524 | 503 |
| Stage 1 | - | - | - | - | 981 | - |
| Stage 2 | - | - | - | - | 543 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *84 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *801 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *83 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *83 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *789 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 9.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 812 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.004 | - | - | 0.005 | - |
| HCM Control Delay (s) | 9.5 | - | - | 8.7 | 0.1 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 935 | 1 | 4 | 1025 | 7 | 28 |
| Future Volume (vph) | 935 | 1 | 4 | 1025 | 7 | 28 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1653 | 89 | |
| Travel Time (s) | 1.7 | | | 32.2 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 935 | 1 | 4 | 1025 | 7 | 28 |
| Future Vol, veh/h | 935 | 1 | 4 | 1025 | 7 | 28 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 964 | 1 | 4 | 1057 | 7 | 29 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 965 | 0 | 1505 | 486 |
| Stage 1 | - | - | - | - | 965 | - |
| Stage 2 | - | - | - | - | 540 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *87 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *801 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *86 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *86 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *791 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 18.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 302 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.119 | - | - | 0.004 | - |
| HCM Control Delay (s) | 18.5 | - | - | 8.7 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 8 | 4 | 124 | 12 | 2 | 150 |
| Future Volume (vph) | 8 | 4 | 124 | 12 | 2 | 150 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 6 | 6 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 8 | 4 | 124 | 12 | 2 | 150 |
| Future Vol, veh/h | 8 | 4 | 124 | 12 | 2 | 150 |
| Conflicting Peds, #/hr | 6 | 6 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 0 | 2 | 2 | 3 |
| Mvmt Flow | 8 | 4 | 128 | 12 | 2 | 155 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 299 | 140 | 0 | 0 | 140 | 0 |
| Stage 1 | 134 | - | - | - | - | - |
| Stage 2 | 165 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *874 | 968 | - | - | 1076 | - |
| Stage 1 | *1037 | - | - | - | - | - |
| Stage 2 | *1060 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *867 | 962 | - | - | 1076 | - |
| Mov Cap-2 Maneuver | *867 | - | - | - | - | - |
| Stage 1 | *1037 | - | - | - | - | - |
| Stage 2 | *1051 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.1 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 897 | 1076 | - |
| HCM Lane V/C Ratio | - | - | 0.014 | 0.002 | - |
| HCM Control Delay (s) | - | - | 9.1 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 5 | 131 | 7 | 5 | 153 |
| Future Volume (vph) | 2 | 5 | 131 | 7 | 5 | 153 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 279 | | | 69 |
| Travel Time (s) | 2.0 | | 7.6 | | | 1.9 |
| Confl. Peds. (#/hr) | 6 | 6 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

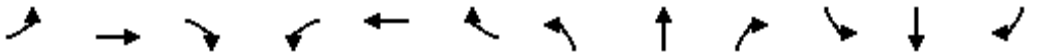
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 5 | 131 | 7 | 5 | 153 |
| Future Vol, veh/h | 2 | 5 | 131 | 7 | 5 | 153 |
| Conflicting Peds, #/hr | 6 | 6 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 0 | 2 | 2 | 3 |
| Mvmt Flow | 2 | 5 | 135 | 7 | 5 | 158 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 313 | 145 | 0 | 0 | 142 | 0 |
| Stage 1 | 139 | - | - | - | - | - |
| Stage 2 | 174 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *855 | 962 | - | - | 1074 | - |
| Stage 1 | *1031 | - | - | - | - | - |
| Stage 2 | *1060 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *845 | 957 | - | - | 1074 | - |
| Mov Cap-2 Maneuver | *845 | - | - | - | - | - |
| Stage 1 | *1031 | - | - | - | - | - |
| Stage 2 | *1048 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 0.3 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 922 | 1074 | - |
| HCM Lane V/C Ratio | - | - | 0.008 | 0.005 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 739 | 53 | 32 | 670 | 91 | 22 | 88 | 39 | 106 | 144 | 46 |
| Future Volume (vph) | 40 | 739 | 53 | 32 | 670 | 91 | 22 | 88 | 39 | 106 | 144 | 46 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 533 | | | 714 | | | 348 | | | 368 | |
| Travel Time (s) | | 14.5 | | | 19.5 | | | 9.5 | | | 10.0 | |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 849 | 0 | 0 | 717 | 93 | 22 | 130 | 0 | 108 | 194 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 64.0 | | 34.0 | 34.0 | 34.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 25.0% | 53.3% | | 28.3% | 28.3% | 28.3% | 25.0% | 25.0% | | 25.0% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.42 | | | 0.35 | 0.09 | 0.20 | 0.50 | | 0.69 | 0.72 | |
| Control Delay | | 6.6 | | | 3.1 | 3.2 | 45.7 | 51.1 | | 68.2 | 62.1 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 6.6 | | | 3.1 | 3.2 | 45.7 | 51.1 | | 68.2 | 62.1 | |
| Queue Length 50th (ft) | | 111 | | | 38 | 9 | 15 | 92 | | 79 | 143 | |
| Queue Length 95th (ft) | | 167 | | | 67 | 26 | 39 | 150 | | 139 | 216 | |
| Internal Link Dist (ft) | | 453 | | | 634 | | | 268 | | | 288 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2039 | | | 2077 | 986 | 136 | 328 | | 197 | 336 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.42 | | | 0.35 | 0.09 | 0.16 | 0.40 | | 0.55 | 0.58 | |

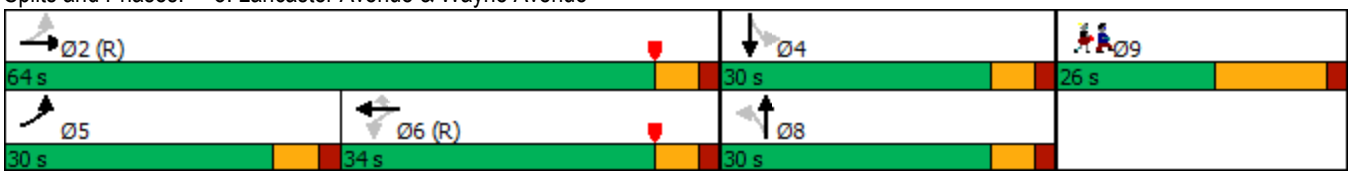
Intersection Summary

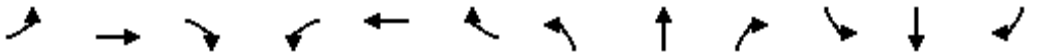
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 19 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 739 | 53 | 32 | 670 | 91 | 22 | 88 | 39 | 106 | 144 | 46 |
| Future Volume (vph) | 40 | 739 | 53 | 32 | 670 | 91 | 22 | 88 | 39 | 106 | 144 | 46 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.96 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.96 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3086 | | | 3150 | 1378 | 1507 | 1570 | | 1541 | 1612 | |
| Flt Permitted | | 0.88 | | | 0.88 | 1.00 | 0.41 | 1.00 | | 0.58 | 1.00 | |
| Satd. Flow (perm) | | 2722 | | | 2771 | 1378 | 652 | 1570 | | 941 | 1612 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 41 | 754 | 54 | 33 | 684 | 93 | 22 | 90 | 40 | 108 | 147 | 47 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 849 | 0 | 0 | 717 | 93 | 22 | 130 | 0 | 108 | 194 | 0 |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 89.0 | | | 89.0 | 89.0 | 19.0 | 19.0 | | 19.0 | 19.0 | |
| Effective Green, g (s) | | 90.0 | | | 90.0 | 89.0 | 20.0 | 20.0 | | 20.0 | 20.0 | |
| Actuated g/C Ratio | | 0.75 | | | 0.75 | 0.74 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2041 | | | 2078 | 1022 | 108 | 261 | | 156 | 268 | |
| v/s Ratio Prot | | | | | | | | 0.08 | | | c0.12 | |
| v/s Ratio Perm | | c0.31 | | | 0.26 | 0.07 | 0.03 | | | 0.11 | | |
| v/c Ratio | | 0.42 | | | 0.35 | 0.09 | 0.20 | 0.50 | | 0.69 | 0.72 | |
| Uniform Delay, d1 | | 5.5 | | | 5.1 | 4.3 | 43.1 | 45.4 | | 47.1 | 47.4 | |
| Progression Factor | | 1.00 | | | 0.48 | 0.59 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.4 | 0.2 | 0.9 | 1.5 | | 12.5 | 9.3 | |
| Delay (s) | | 5.6 | | | 2.8 | 2.7 | 44.1 | 46.9 | | 59.6 | 56.7 | |
| Level of Service | | A | | | A | A | D | D | | E | E | |
| Approach Delay (s) | | 5.6 | | | 2.8 | | | 46.5 | | | 57.7 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 76.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

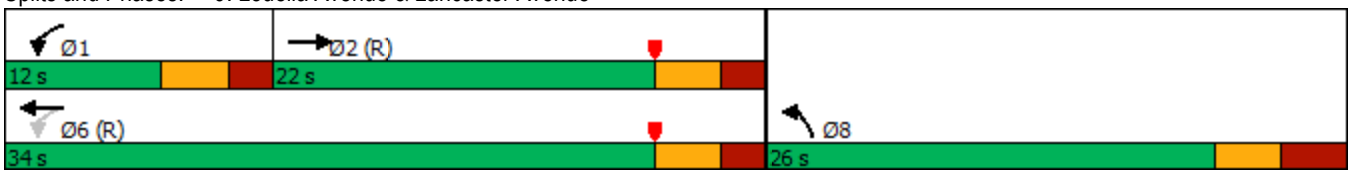
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 890 | 32 | 53 | 840 | 15 | 30 |
| Future Volume (vph) | 890 | 32 | 53 | 840 | 15 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 714 | | | 1121 | 430 | |
| Travel Time (s) | 19.5 | | | 30.6 | 11.7 | |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 960 | 0 | 0 | 930 | 47 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 22.0 | | 12.0 | 34.0 | 26.0 | |
| Total Split (%) | 36.7% | | 20.0% | 56.7% | 43.3% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.43 | | | 0.49 | 0.21 | |
| Control Delay | 6.1 | | | 2.2 | 24.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 6.1 | | | 2.2 | 24.6 | |
| Queue Length 50th (ft) | 146 | | | 21 | 15 | |
| Queue Length 95th (ft) | 194 | | | 35 | 39 | |
| Internal Link Dist (ft) | 634 | | | 1041 | 350 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2228 | | | 1909 | 575 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.43 | | | 0.49 | 0.08 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |

Offset: 6 (10%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 890 | 32 | 53 | 840 | 15 | 30 |
| Future Volume (vph) | 890 | 32 | 53 | 840 | 15 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.98 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3128 | | | 3130 | 1634 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3128 | | | 2681 | 1634 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 927 | 33 | 55 | 875 | 16 | 31 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 960 | 0 | 0 | 930 | 47 | 0 |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 41.7 | | | 41.7 | 7.3 | |
| Effective Green, g (s) | 42.7 | | | 42.7 | 8.3 | |
| Actuated g/C Ratio | 0.71 | | | 0.71 | 0.14 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2226 | | | 1907 | 226 | |
| v/s Ratio Prot | 0.31 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.35 | | |
| v/c Ratio | 0.43 | | | 0.49 | 0.21 | |
| Uniform Delay, d1 | 3.6 | | | 3.8 | 22.9 | |
| Progression Factor | 1.45 | | | 0.37 | 1.00 | |
| Incremental Delay, d2 | 0.6 | | | 0.1 | 0.5 | |
| Delay (s) | 5.8 | | | 1.6 | 23.4 | |
| Level of Service | A | | | A | C | |
| Approach Delay (s) | 5.8 | | | 1.6 | 23.4 | |
| Approach LOS | A | | | A | C | |

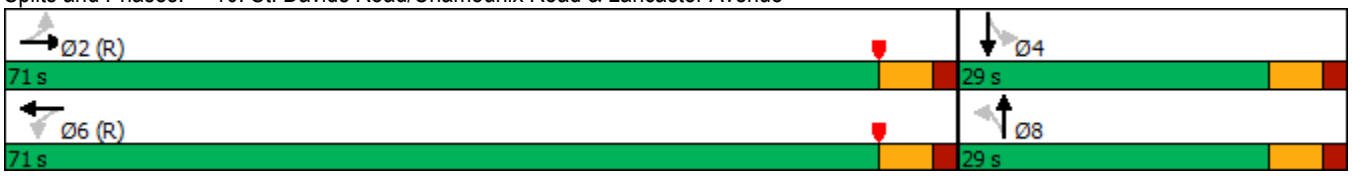
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 67.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 954 | 17 | 39 | 1005 | 141 | 4 | 25 | 32 | 74 | 22 | 42 |
| Future Volume (vph) | 35 | 954 | 17 | 39 | 1005 | 141 | 4 | 25 | 32 | 74 | 22 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1653 | | | 896 | | | 295 | | | 258 | |
| Travel Time (s) | | 32.2 | | | 17.5 | | | 8.0 | | | 7.0 | |
| Confl. Peds. (#/hr) | 5 | | 3 | 3 | | 5 | | | 8 | 8 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 25% | 0% | 3% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 71.0 | 71.0 | | 71.0 | 71.0 | | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Total Split (%) | 71.0% | 71.0% | | 71.0% | 71.0% | | 29.0% | 29.0% | | 29.0% | 29.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 100 | |
| Actuated Cycle Length: 100 | |
| Offset: 66 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 45 | |
| Control Type: Actuated-Coordinated | |

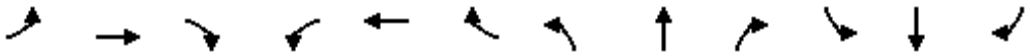
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 35 | 954 | 17 | 39 | 1005 | 141 | 4 | 25 | 32 | 74 | 22 | 42 |
| Future Volume (veh/h) | 35 | 954 | 17 | 39 | 1005 | 141 | 4 | 25 | 32 | 74 | 22 | 42 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.98 | 0.98 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1827 | 1845 | 1891 | 1834 | 1891 | 1881 | 1870 | 1881 |
| Adj Flow Rate, veh/h | 37 | 1015 | 17 | 41 | 1069 | 144 | 4 | 27 | 34 | 79 | 23 | 45 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 92 | 2350 | 39 | 89 | 2187 | 291 | 43 | 95 | 110 | 152 | 39 | 60 |
| Arrive On Green | 0.76 | 0.77 | 0.76 | 0.76 | 0.77 | 0.76 | 0.12 | 0.13 | 0.12 | 0.12 | 0.13 | 0.12 |
| Sat Flow, veh/h | 69 | 3033 | 50 | 65 | 2823 | 376 | 39 | 761 | 876 | 772 | 311 | 478 |
| Grp Volume(v), veh/h | 528 | 0 | 541 | 643 | 0 | 611 | 65 | 0 | 0 | 147 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1555 | 0 | 1597 | 1669 | 0 | 1595 | 1676 | 0 | 0 | 1560 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 11.5 | 0.0 | 0.0 | 14.1 | 0.0 | 0.0 | 0.0 | 5.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 9.7 | 0.0 | 11.5 | 12.3 | 0.0 | 14.1 | 3.6 | 0.0 | 0.0 | 9.0 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.06 | | 0.24 | 0.06 | | 0.52 | 0.54 | | 0.31 |
| Lane Grp Cap(c), veh/h | 1228 | 0 | 1237 | 1315 | 0 | 1236 | 231 | 0 | 0 | 235 | 0 | 0 |
| V/C Ratio(X) | 0.43 | 0.00 | 0.44 | 0.49 | 0.00 | 0.49 | 0.28 | 0.00 | 0.00 | 0.62 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1228 | 0 | 1237 | 1315 | 0 | 1236 | 417 | 0 | 0 | 402 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 3.6 | 0.0 | 3.8 | 3.9 | 0.0 | 4.2 | 40.1 | 0.0 | 0.0 | 42.4 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.1 | 0.0 | 1.1 | 1.3 | 0.0 | 1.4 | 0.9 | 0.0 | 0.0 | 3.8 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 9.0 | 0.0 | 9.1 | 11.0 | 0.0 | 10.9 | 3.1 | 0.0 | 0.0 | 7.6 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 4.7 | 0.0 | 5.0 | 5.2 | 0.0 | 5.6 | 41.0 | 0.0 | 0.0 | 46.2 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 1069 | | | 1254 | | | 65 | | | 147 | |
| Approach Delay, s/veh | | 4.9 | | | 5.4 | | | 41.0 | | | 46.2 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 82.5 | | 17.5 | | 82.5 | | 17.5 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 65.0 | | 23.0 | | 65.0 | | 23.0 |
| Max Q Clear Time (g_c+I1), s | | 13.5 | | 11.0 | | 16.1 | | 5.6 |
| Green Ext Time (p_c), s | | 5.2 | | 0.6 | | 6.6 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 8.5 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 15 | 9 | 5 | 7 | 70 | 11 | 9 | 119 | 6 | 6 | 99 | 14 |
| Future Volume (vph) | 15 | 9 | 5 | 7 | 70 | 11 | 9 | 119 | 6 | 6 | 99 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1097 | | | 652 | | | 218 | | | 279 | |
| Travel Time (s) | | 29.9 | | | 17.8 | | | 5.9 | | | 7.6 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 7 | | 5 | 5 | | 7 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles (%) | 7% | 0% | 40% | 0% | 1% | 0% | 11% | 11% | 0% | 0% | 3% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 15 | 9 | 5 | 7 | 70 | 11 | 9 | 119 | 6 | 6 | 99 | 14 |
| Future Vol, veh/h | 15 | 9 | 5 | 7 | 70 | 11 | 9 | 119 | 6 | 6 | 99 | 14 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles, % | 7 | 0 | 40 | 0 | 1 | 0 | 11 | 11 | 0 | 0 | 3 | 0 |
| Mvmt Flow | 19 | 11 | 6 | 9 | 88 | 14 | 11 | 149 | 8 | 8 | 124 | 18 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.2 | 8.4 | 8.9 | 8.4 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 7% | 52% | 8% | 5% |
| Vol Thru, % | 89% | 31% | 80% | 83% |
| Vol Right, % | 4% | 17% | 12% | 12% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 134 | 29 | 88 | 119 |
| LT Vol | 9 | 15 | 7 | 6 |
| Through Vol | 119 | 9 | 70 | 99 |
| RT Vol | 6 | 5 | 11 | 14 |
| Lane Flow Rate | 168 | 36 | 110 | 149 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.213 | 0.049 | 0.141 | 0.181 |
| Departure Headway (Hd) | 4.587 | 4.883 | 4.613 | 4.382 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 784 | 733 | 778 | 820 |
| Service Time | 2.609 | 2.912 | 2.637 | 2.403 |
| HCM Lane V/C Ratio | 0.214 | 0.049 | 0.141 | 0.182 |
| HCM Control Delay | 8.9 | 8.2 | 8.4 | 8.4 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.8 | 0.2 | 0.5 | 0.7 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 44 | 85 | 11 | 16 | 60 |
| Future Volume (vph) | 9 | 44 | 85 | 11 | 16 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1097 | | 261 | | | 430 |
| Travel Time (s) | 29.9 | | 7.1 | | | 11.7 |
| Confl. Peds. (#/hr) | 1 | 24 | | 10 | 10 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 0% | 19% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

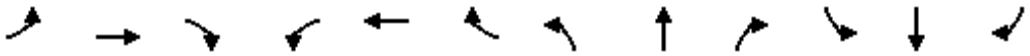
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 44 | 85 | 11 | 16 | 60 |
| Future Vol, veh/h | 9 | 44 | 85 | 11 | 16 | 60 |
| Conflicting Peds, #/hr | 1 | 24 | 0 | 10 | 10 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 87 | 87 | 87 | 87 | 87 | 87 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 19 | 2 |
| Mvmt Flow | 10 | 51 | 98 | 13 | 18 | 69 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 221 | 139 | 0 | 0 | 121 | 0 |
| Stage 1 | 115 | - | - | - | - | - |
| Stage 2 | 106 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.22 | - | - | 4.5 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3.2 | - |
| Pot Cap-1 Maneuver | 887 | 969 | - | - | 1020 | - |
| Stage 1 | 1059 | - | - | - | - | - |
| Stage 2 | 1069 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 860 | 938 | - | - | 1010 | - |
| Mov Cap-2 Maneuver | 860 | - | - | - | - | - |
| Stage 1 | 1048 | - | - | - | - | - |
| Stage 2 | 1048 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 1.8 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 924 | 1010 | - |
| HCM Lane V/C Ratio | - | - | 0.066 | 0.018 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |

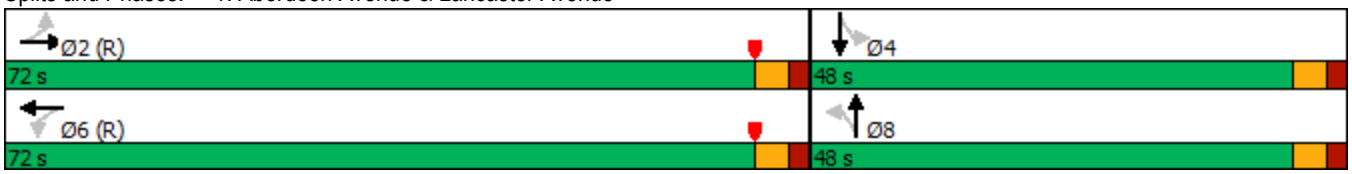


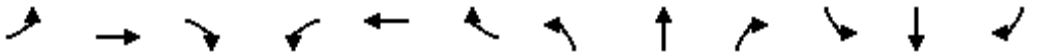
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 688 | 42 | 14 | 850 | 50 | 39 | 93 | 36 | 116 | 70 | 64 |
| Future Volume (vph) | 39 | 688 | 42 | 14 | 850 | 50 | 39 | 93 | 36 | 116 | 70 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 792 | 0 | 0 | 942 | 0 | 0 | 173 | 0 | 0 | 258 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.44 | | | 0.50 | | | 0.49 | | | 0.87 | |
| Control Delay | | 12.2 | | | 10.9 | | | 42.5 | | | 69.5 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 12.2 | | | 10.9 | | | 42.5 | | | 69.5 | |
| Queue Length 50th (ft) | | 115 | | | 177 | | | 116 | | | 192 | |
| Queue Length 95th (ft) | | 264 | | | 295 | | | 168 | | | 269 | |
| Internal Link Dist (ft) | | 1062 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1794 | | | 1869 | | | 540 | | | 455 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.44 | | | 0.50 | | | 0.32 | | | 0.57 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |

Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 688 | 42 | 14 | 850 | 50 | 39 | 93 | 36 | 116 | 70 | 64 |
| Future Volume (vph) | 39 | 688 | 42 | 14 | 850 | 50 | 39 | 93 | 36 | 116 | 70 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.94 | | | *0.88 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 3057 | | | 2872 | | | 1686 | | | 1805 | |
| Flt Permitted | | 0.85 | | | 0.94 | | | 0.86 | | | 0.67 | |
| Satd. Flow (perm) | | 2591 | | | 2698 | | | 1475 | | | 1245 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 40 | 709 | 43 | 14 | 876 | 52 | 40 | 96 | 37 | 120 | 72 | 66 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 792 | 0 | 0 | 942 | 0 | 0 | 173 | 0 | 0 | 258 | 0 |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 82.1 | | | 82.1 | | | 27.9 | | | 27.9 | |
| Effective Green, g (s) | | 83.1 | | | 83.1 | | | 28.9 | | | 28.9 | |
| Actuated g/C Ratio | | 0.69 | | | 0.69 | | | 0.24 | | | 0.24 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1794 | | | 1868 | | | 355 | | | 299 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.31 | | | c0.35 | | | 0.12 | | | c0.21 | |
| v/c Ratio | | 0.44 | | | 0.50 | | | 0.49 | | | 0.86 | |
| Uniform Delay, d1 | | 8.2 | | | 8.7 | | | 39.2 | | | 43.7 | |
| Progression Factor | | 1.23 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.8 | | | 1.0 | | | 1.1 | | | 21.7 | |
| Delay (s) | | 10.8 | | | 9.7 | | | 40.2 | | | 65.4 | |
| Level of Service | | B | | | A | | | D | | | E | |
| Approach Delay (s) | | 10.8 | | | 9.7 | | | 40.2 | | | 65.4 | |
| Approach LOS | | B | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 87.0% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 823 | 17 | 0 | 914 | 0 | 2 |
| Future Volume (vph) | 823 | 17 | 0 | 914 | 0 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 823 | 17 | 0 | 914 | 0 | 2 |
| Future Vol, veh/h | 823 | 17 | 0 | 914 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 848 | 18 | 0 | 942 | 0 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 866 | 0 | 1335 | 440 |
| Stage 1 | - | - | - | - | 857 | - |
| Stage 2 | - | - | - | - | 478 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 994 | - | *119 | *935 |
| Stage 1 | - | - | - | - | *765 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 994 | - | *118 | *930 |
| Mov Cap-2 Maneuver | - | - | - | - | *118 | - |
| Stage 1 | - | - | - | - | *765 | - |
| Stage 2 | - | - | - | - | *839 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 930 | - | - | 994 | - |
| HCM Lane V/C Ratio | 0.002 | - | - | - | - |
| HCM Control Delay (s) | 8.9 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 824 | 1 | 0 | 913 | 1 | 22 |
| Future Volume (vph) | 824 | 1 | 0 | 913 | 1 | 22 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 824 | 1 | 0 | 913 | 1 | 22 |
| Future Vol, veh/h | 824 | 1 | 0 | 913 | 1 | 22 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 849 | 1 | 0 | 941 | 1 | 23 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 850 | 0 | 1328 | 432 |
| Stage 1 | - | - | - | - | 850 | - |
| Stage 2 | - | - | - | - | 478 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *120 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1029 | - | *119 | *846 |
| Mov Cap-2 Maneuver | - | - | - | - | *119 | - |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *839 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 10.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 668 | - | - | * 1029 | - |
| HCM Lane V/C Ratio | 0.035 | - | - | - | - |
| HCM Control Delay (s) | 10.6 | - | - | 0 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 799 | 47 | 8 | 911 | 2 | 4 |
| Future Volume (vph) | 799 | 47 | 8 | 911 | 2 | 4 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 799 | 47 | 8 | 911 | 2 | 4 |
| Future Vol, veh/h | 799 | 47 | 8 | 911 | 2 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 824 | 48 | 8 | 939 | 2 | 4 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 872 | 0 | 1341 | 443 |
| Stage 1 | - | - | - | - | 848 | - |
| Stage 2 | - | - | - | - | 493 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1063 | - | *118 | *880 |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 1063 | - | *115 | *875 |
| Mov Cap-2 Maneuver | - | - | - | - | *115 | - |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *827 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 18.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 273 | - | - | 1063 | - |
| HCM Lane V/C Ratio | 0.023 | - | - | 0.008 | - |
| HCM Control Delay (s) | 18.5 | - | - | 8.4 | 0.1 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 799 | 4 | 4 | 916 | 3 | 54 |
| Future Volume (vph) | 799 | 4 | 4 | 916 | 3 | 54 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1647 | 89 | |
| Travel Time (s) | 1.7 | | | 32.1 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 799 | 4 | 4 | 916 | 3 | 54 |
| Future Vol, veh/h | 799 | 4 | 4 | 916 | 3 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 824 | 4 | 4 | 944 | 3 | 56 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 828 | 0 | 1313 | 421 |
| Stage 1 | - | - | - | - | 826 | - |
| Stage 2 | - | - | - | - | 487 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1064 | - | *124 | *880 |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1064 | - | *122 | *875 |
| Mov Cap-2 Maneuver | - | - | - | - | *122 | - |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *833 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 11 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 660 | - | - | * 1064 | - |
| HCM Lane V/C Ratio | 0.089 | - | - | 0.004 | - |
| HCM Control Delay (s) | 11 | - | - | 8.4 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 6 | 10 | 158 | 10 | 2 | 124 |
| Future Volume (vph) | 6 | 10 | 158 | 10 | 2 | 124 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 9 | 9 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 10 | 158 | 10 | 2 | 124 |
| Future Vol, veh/h | 6 | 10 | 158 | 10 | 2 | 124 |
| Conflicting Peds, #/hr | 9 | 9 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 1 |
| Mvmt Flow | 6 | 10 | 163 | 10 | 2 | 128 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 309 | 177 | 0 | 0 | 173 | 0 |
| Stage 1 | 168 | - | - | - | - | - |
| Stage 2 | 141 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 835 | 922 | - | - | 1048 | - |
| Stage 1 | 999 | - | - | - | - | - |
| Stage 2 | 1079 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 825 | 914 | - | - | 1048 | - |
| Mov Cap-2 Maneuver | 825 | - | - | - | - | - |
| Stage 1 | 999 | - | - | - | - | - |
| Stage 2 | 1067 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 878 | 1048 | - |
| HCM Lane V/C Ratio | - | - | 0.019 | 0.002 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 2 | 166 | 8 | 0 | 130 |
| Future Volume (vph) | 2 | 2 | 166 | 8 | 0 | 130 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 69 |
| Travel Time (s) | 2.0 | | 8.1 | | | 1.9 |
| Confl. Peds. (#/hr) | 9 | 9 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

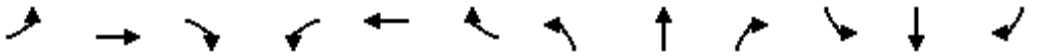
| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 2 | 166 | 8 | 0 | 130 |
| Future Vol, veh/h | 2 | 2 | 166 | 8 | 0 | 130 |
| Conflicting Peds, #/hr | 9 | 9 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 1 |
| Mvmt Flow | 2 | 2 | 171 | 8 | 0 | 134 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 318 | 184 | 0 | 0 | 179 | 0 |
| Stage 1 | 175 | - | - | - | - | - |
| Stage 2 | 143 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 824 | 914 | - | - | 1043 | - |
| Stage 1 | 991 | - | - | - | - | - |
| Stage 2 | 1077 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 816 | 906 | - | - | 1043 | - |
| Mov Cap-2 Maneuver | 816 | - | - | - | - | - |
| Stage 1 | 991 | - | - | - | - | - |
| Stage 2 | 1067 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 859 | 1043 | - |
| HCM Lane V/C Ratio | - | - | 0.005 | - | - |
| HCM Control Delay (s) | - | - | 9.2 | 0 | - |
| HCM Lane LOS | - | - | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

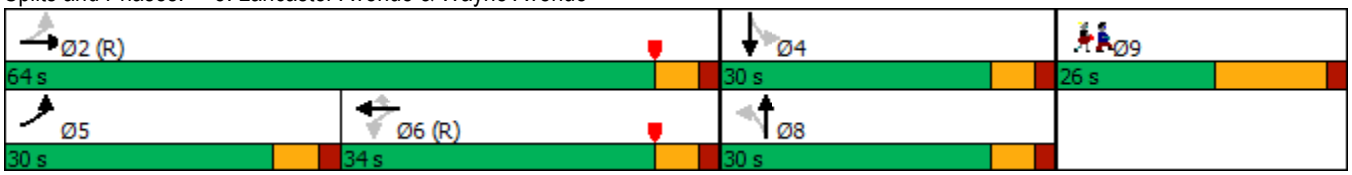


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 689 | 38 | 44 | 769 | 86 | 60 | 80 | 70 | 67 | 79 | 60 |
| Future Volume (vph) | 38 | 689 | 38 | 44 | 769 | 86 | 60 | 80 | 70 | 67 | 79 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 788 | 0 | 0 | 838 | 89 | 62 | 154 | 0 | 69 | 143 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 64.0 | | 34.0 | 34.0 | 34.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 25.0% | 53.3% | | 28.3% | 28.3% | 28.3% | 25.0% | 25.0% | | 25.0% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.38 | | | 0.40 | 0.09 | 0.51 | 0.65 | | 0.57 | 0.62 | |
| Control Delay | | 5.6 | | | 3.5 | 3.2 | 60.2 | 60.4 | | 65.4 | 59.0 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 5.6 | | | 3.5 | 3.2 | 60.2 | 60.4 | | 65.4 | 59.0 | |
| Queue Length 50th (ft) | | 88 | | | 52 | 10 | 45 | 114 | | 50 | 105 | |
| Queue Length 95th (ft) | | 147 | | | 66 | 19 | 88 | 176 | | 97 | 165 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2086 | | | 2087 | 1010 | 173 | 333 | | 168 | 325 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.38 | | | 0.40 | 0.09 | 0.36 | 0.46 | | 0.41 | 0.44 | |

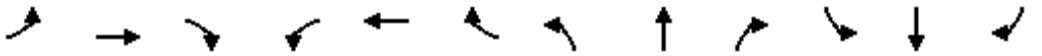
Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 689 | 38 | 44 | 769 | 86 | 60 | 80 | 70 | 67 | 79 | 60 |
| Future Volume (vph) | 38 | 689 | 38 | 44 | 769 | 86 | 60 | 80 | 70 | 67 | 79 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.97 | | 1.00 | 0.97 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.93 | | 1.00 | 0.93 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3124 | | | 3149 | 1378 | 1490 | 1590 | | 1557 | 1548 | |
| Flt Permitted | | 0.87 | | | 0.86 | 1.00 | 0.52 | 1.00 | | 0.49 | 1.00 | |
| Satd. Flow (perm) | | 2716 | | | 2718 | 1378 | 820 | 1590 | | 804 | 1548 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 39 | 710 | 39 | 45 | 793 | 89 | 62 | 82 | 72 | 69 | 81 | 62 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 788 | 0 | 0 | 838 | 89 | 62 | 154 | 0 | 69 | 143 | 0 |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 91.2 | | | 91.2 | 91.2 | 16.8 | 16.8 | | 16.8 | 16.8 | |
| Effective Green, g (s) | | 92.2 | | | 92.2 | 91.2 | 17.8 | 17.8 | | 17.8 | 17.8 | |
| Actuated g/C Ratio | | 0.77 | | | 0.77 | 0.76 | 0.15 | 0.15 | | 0.15 | 0.15 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2086 | | | 2088 | 1047 | 121 | 235 | | 119 | 229 | |
| v/s Ratio Prot | | | | | | | | c0.10 | | | 0.09 | |
| v/s Ratio Perm | | 0.29 | | | c0.31 | 0.06 | 0.08 | | | 0.09 | | |
| v/c Ratio | | 0.38 | | | 0.40 | 0.09 | 0.51 | 0.66 | | 0.58 | 0.62 | |
| Uniform Delay, d1 | | 4.5 | | | 4.7 | 3.7 | 47.1 | 48.2 | | 47.6 | 48.0 | |
| Progression Factor | | 1.00 | | | 0.57 | 0.69 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.5 | 0.1 | 3.6 | 6.4 | | 6.7 | 5.2 | |
| Delay (s) | | 4.7 | | | 3.2 | 2.7 | 50.7 | 54.6 | | 54.3 | 53.2 | |
| Level of Service | | A | | | A | A | D | D | | D | D | |
| Approach Delay (s) | | 4.7 | | | 3.1 | | | 53.5 | | | 53.6 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 77.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 782 | 57 | 48 | 910 | 41 | 65 |
| Future Volume (vph) | 782 | 57 | 48 | 910 | 41 | 65 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 874 | 0 | 0 | 998 | 111 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.35 | | | 0.46 | 0.55 | |
| Control Delay | 3.0 | | | 2.0 | 59.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 3.0 | | | 2.0 | 59.6 | |
| Queue Length 50th (ft) | 62 | | | 34 | 82 | |
| Queue Length 95th (ft) | 91 | | | 41 | 136 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2532 | | | 2159 | 482 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.35 | | | 0.46 | 0.23 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 782 | 57 | 48 | 910 | 41 | 65 |
| Future Volume (vph) | 782 | 57 | 48 | 910 | 41 | 65 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.97 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3140 | | | 3135 | 1678 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3140 | | | 2678 | 1678 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 815 | 59 | 50 | 948 | 43 | 68 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 874 | 0 | 0 | 998 | 111 | 0 |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 95.8 | | | 95.8 | 13.2 | |
| Effective Green, g (s) | 96.8 | | | 96.8 | 14.2 | |
| Actuated g/C Ratio | 0.81 | | | 0.81 | 0.12 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2532 | | | 2160 | 198 | |
| v/s Ratio Prot | 0.28 | | | | c0.07 | |
| v/s Ratio Perm | | | | c0.37 | | |
| v/c Ratio | 0.35 | | | 0.46 | 0.56 | |
| Uniform Delay, d1 | 3.1 | | | 3.6 | 50.0 | |
| Progression Factor | 0.78 | | | 0.34 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.1 | 3.6 | |
| Delay (s) | 2.8 | | | 1.4 | 53.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.8 | | | 1.4 | 53.6 | |
| Approach LOS | A | | | A | D | |

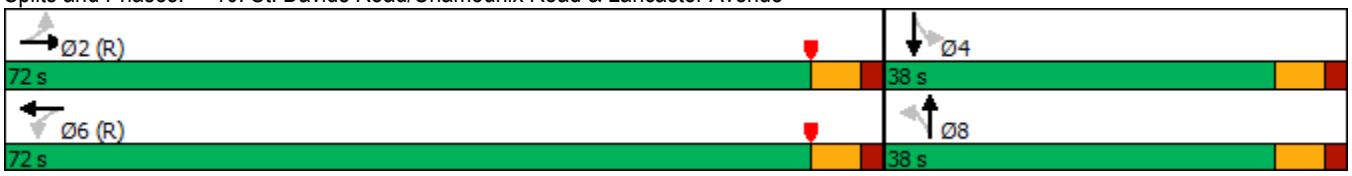
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 71.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 880 | 18 | 36 | 984 | 63 | 13 | 17 | 41 | 55 | 17 | 38 |
| Future Volume (vph) | 30 | 880 | 18 | 36 | 984 | 63 | 13 | 17 | 41 | 55 | 17 | 38 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1647 | | | 744 | | | 642 | | | 402 | |
| Travel Time (s) | | 32.1 | | | 14.5 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | 5 | | 2 | 2 | | 5 | | | 4 | 4 | | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 8% | 0% | 0% | 2% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

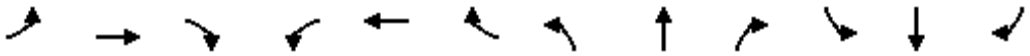
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 30 | 880 | 18 | 36 | 984 | 63 | 13 | 17 | 41 | 55 | 17 | 38 |
| Future Volume (veh/h) | 30 | 880 | 18 | 36 | 984 | 63 | 13 | 17 | 41 | 55 | 17 | 38 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1864 | 1891 | 1881 | 1863 | 1881 |
| Adj Flow Rate, veh/h | 31 | 898 | 17 | 37 | 1004 | 61 | 13 | 17 | 42 | 56 | 17 | 34 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 91 | 2495 | 47 | 95 | 2485 | 149 | 56 | 49 | 93 | 122 | 32 | 48 |
| Arrive On Green | 0.81 | 0.82 | 0.81 | 0.81 | 0.82 | 0.81 | 0.08 | 0.09 | 0.08 | 0.08 | 0.09 | 0.08 |
| Sat Flow, veh/h | 69 | 3060 | 57 | 74 | 3048 | 183 | 186 | 524 | 994 | 770 | 336 | 515 |
| Grp Volume(v), veh/h | 473 | 0 | 473 | 559 | 0 | 543 | 72 | 0 | 0 | 107 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1591 | 0 | 1596 | 1675 | 0 | 1631 | 1704 | 0 | 0 | 1622 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.6 | 0.0 | 0.0 | 10.2 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.5 | 0.0 | 8.6 | 9.0 | 0.0 | 10.2 | 4.4 | 0.0 | 0.0 | 6.8 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.04 | 0.07 | | 0.11 | 0.18 | | 0.58 | 0.52 | | 0.32 |
| Lane Grp Cap(c), veh/h | 1317 | 0 | 1301 | 1385 | 0 | 1329 | 183 | 0 | 0 | 187 | 0 | 0 |
| V/C Ratio(X) | 0.36 | 0.00 | 0.36 | 0.40 | 0.00 | 0.41 | 0.39 | 0.00 | 0.00 | 0.57 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1317 | 0 | 1301 | 1385 | 0 | 1329 | 508 | 0 | 0 | 489 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.6 | 0.0 | 2.7 | 2.7 | 0.0 | 2.8 | 47.6 | 0.0 | 0.0 | 48.5 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.8 | 0.0 | 0.8 | 0.9 | 0.0 | 0.9 | 1.9 | 0.0 | 0.0 | 3.9 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.2 | 0.0 | 7.1 | 8.7 | 0.0 | 8.5 | 4.0 | 0.0 | 0.0 | 6.1 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.3 | 0.0 | 3.5 | 3.6 | 0.0 | 3.8 | 49.5 | 0.0 | 0.0 | 52.4 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 946 | | | 1102 | | | 72 | | | 107 | |
| Approach Delay, s/veh | | 3.4 | | | 3.7 | | | 49.5 | | | 52.4 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 94.7 | | 15.3 | | 94.7 | | 15.3 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 10.6 | | 8.8 | | 12.2 | | 6.4 |
| Green Ext Time (p_c), s | | 4.3 | | 0.5 | | 5.3 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.4 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 7 | 14 | 3 | 4 | 27 | 18 | 3 | 110 | 11 | 6 | 101 | 18 |
| Future Volume (vph) | 7 | 14 | 3 | 4 | 27 | 18 | 3 | 110 | 11 | 6 | 101 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 6 | | 6 | 6 | | 6 | 2 | | 4 | 4 | | 2 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% | 0% | 1% | 11% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

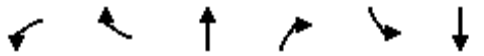
| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.1 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 7 | 14 | 3 | 4 | 27 | 18 | 3 | 110 | 11 | 6 | 101 | 18 |
| Future Vol, veh/h | 7 | 14 | 3 | 4 | 27 | 18 | 3 | 110 | 11 | 6 | 101 | 18 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 11 |
| Mvmt Flow | 9 | 18 | 4 | 5 | 34 | 23 | 4 | 139 | 14 | 8 | 128 | 23 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.8 | 7.8 | 8.2 | 8.2 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 29% | 8% | 5% |
| Vol Thru, % | 89% | 58% | 55% | 81% |
| Vol Right, % | 9% | 12% | 37% | 14% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 124 | 24 | 49 | 125 |
| LT Vol | 3 | 7 | 4 | 6 |
| Through Vol | 110 | 14 | 27 | 101 |
| RT Vol | 11 | 3 | 18 | 18 |
| Lane Flow Rate | 157 | 30 | 62 | 158 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.18 | 0.039 | 0.076 | 0.185 |
| Departure Headway (Hd) | 4.239 | 4.641 | 4.417 | 4.206 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 852 | 774 | 814 | 858 |
| Service Time | 2.239 | 2.653 | 2.427 | 2.206 |
| HCM Lane V/C Ratio | 0.184 | 0.039 | 0.076 | 0.184 |
| HCM Control Delay | 8.2 | 7.8 | 7.8 | 8.2 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.7 | 0.1 | 0.2 | 0.7 |



| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 50 | 74 | 8 | 18 | 36 |
| Future Volume (vph) | 9 | 50 | 74 | 8 | 18 | 36 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | 1 | 13 | | 5 | 5 | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Heavy Vehicles (%) | 11% | 0% | 0% | 0% | 6% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

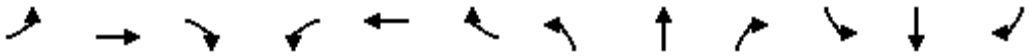
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 50 | 74 | 8 | 18 | 36 |
| Future Vol, veh/h | 9 | 50 | 74 | 8 | 18 | 36 |
| Conflicting Peds, #/hr | 1 | 13 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 72 | 72 | 72 | 72 | 72 | 72 |
| Heavy Vehicles, % | 11 | 0 | 0 | 0 | 6 | 0 |
| Mvmt Flow | 13 | 69 | 103 | 11 | 25 | 50 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 215 | 127 | 0 | 0 | 119 | 0 |
| Stage 1 | 114 | - | - | - | - | - |
| Stage 2 | 101 | - | - | - | - | - |
| Critical Hdwy | 6.51 | 6.2 | - | - | 4.4 | - |
| Critical Hdwy Stg 1 | 5.51 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.51 | - | - | - | - | - |
| Follow-up Hdwy | 3.1 | 3.1 | - | - | 3.1 | - |
| Pot Cap-1 Maneuver | 862 | 985 | - | - | 1056 | - |
| Stage 1 | 1024 | - | - | - | - | - |
| Stage 2 | 1039 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 836 | 968 | - | - | 1051 | - |
| Mov Cap-2 Maneuver | 836 | - | - | - | - | - |
| Stage 1 | 1019 | - | - | - | - | - |
| Stage 2 | 1013 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 2.8 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 945 | 1051 | - |
| HCM Lane V/C Ratio | - | - | 0.087 | 0.024 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.5 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

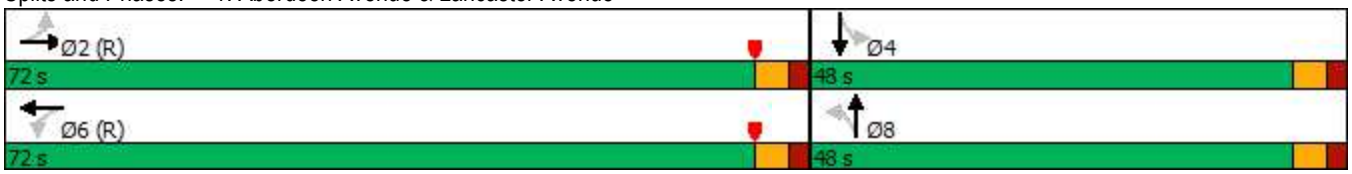


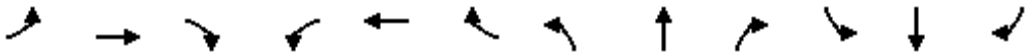
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 542 | 26 | 13 | 579 | 32 | 29 | 47 | 23 | 61 | 48 | 37 |
| Future Volume (vph) | 28 | 542 | 26 | 13 | 579 | 32 | 29 | 47 | 23 | 61 | 48 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 609 | 0 | 0 | 637 | 0 | 0 | 101 | 0 | 0 | 149 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.29 | | | 0.28 | | | 0.48 | | | 0.71 | |
| Control Delay | | 4.9 | | | 4.4 | | | 53.1 | | | 65.7 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 4.9 | | | 4.4 | | | 53.1 | | | 65.7 | |
| Queue Length 50th (ft) | | 44 | | | 61 | | | 73 | | | 111 | |
| Queue Length 95th (ft) | | 133 | | | 107 | | | 122 | | | 173 | |
| Internal Link Dist (ft) | | 1062 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2101 | | | 2240 | | | 525 | | | 522 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.29 | | | 0.28 | | | 0.19 | | | 0.29 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 542 | 26 | 13 | 579 | 32 | 29 | 47 | 23 | 61 | 48 | 37 |
| Future Volume (vph) | 28 | 542 | 26 | 13 | 579 | 32 | 29 | 47 | 23 | 61 | 48 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.90 | | | *0.92 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2970 | | | 3038 | | | 1680 | | | 1820 | |
| Flt Permitted | | 0.90 | | | 0.94 | | | 0.84 | | | 0.77 | |
| Satd. Flow (perm) | | 2678 | | | 2855 | | | 1433 | | | 1425 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 29 | 553 | 27 | 13 | 591 | 33 | 30 | 48 | 23 | 62 | 49 | 38 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 609 | 0 | 0 | 637 | 0 | 0 | 101 | 0 | 0 | 149 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 93.2 | | | 93.2 | | | 16.8 | | | 16.8 | |
| Effective Green, g (s) | | 94.2 | | | 94.2 | | | 17.8 | | | 17.8 | |
| Actuated g/C Ratio | | 0.79 | | | 0.79 | | | 0.15 | | | 0.15 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 2102 | | | 2241 | | | 212 | | | 211 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.23 | | | 0.22 | | | 0.07 | | | c0.10 | |
| v/c Ratio | | 0.29 | | | 0.28 | | | 0.48 | | | 0.71 | |
| Uniform Delay, d1 | | 3.6 | | | 3.6 | | | 46.8 | | | 48.6 | |
| Progression Factor | | 1.13 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.3 | | | 0.3 | | | 1.7 | | | 10.3 | |
| Delay (s) | | 4.4 | | | 3.9 | | | 48.5 | | | 58.9 | |
| Level of Service | | A | | | A | | | D | | | E | |
| Approach Delay (s) | | 4.4 | | | 3.9 | | | 48.5 | | | 58.9 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.36 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 59.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 617 | 9 | 1 | 624 | 0 | 2 |
| Future Volume (vph) | 617 | 9 | 1 | 624 | 0 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 617 | 9 | 1 | 624 | 0 | 2 |
| Future Vol, veh/h | 617 | 9 | 1 | 624 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 630 | 9 | 1 | 637 | 0 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 639 | 0 | 956 | 320 |
| Stage 1 | - | - | - | - | 635 | - |
| Stage 2 | - | - | - | - | 321 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1110 | - | *236 | *1026 |
| Stage 1 | - | - | - | - | *860 | - |
| Stage 2 | - | - | - | - | *1010 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 1110 | - | *236 | *1026 |
| Mov Cap-2 Maneuver | - | - | - | - | *236 | - |
| Stage 1 | - | - | - | - | *860 | - |
| Stage 2 | - | - | - | - | *1009 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1026 | - | - | 1110 | - |
| HCM Lane V/C Ratio | 0.002 | - | - | 0.001 | - |
| HCM Control Delay (s) | 8.5 | - | - | 8.2 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 616 | 3 | 2 | 621 | 4 | 14 |
| Future Volume (vph) | 616 | 3 | 2 | 621 | 4 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 616 | 3 | 2 | 621 | 4 | 14 |
| Future Vol, veh/h | 616 | 3 | 2 | 621 | 4 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 629 | 3 | 2 | 634 | 4 | 14 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 632 | 0 | 952 | 316 |
| Stage 1 | - | - | - | - | 631 | - |
| Stage 2 | - | - | - | - | 321 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1171 | - | *238 | *968 |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1010 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1171 | - | *237 | *968 |
| Mov Cap-2 Maneuver | - | - | - | - | *237 | - |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1007 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 11.5 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 574 | - | - | * 1171 | - |
| HCM Lane V/C Ratio | 0.032 | - | - | 0.002 | - |
| HCM Control Delay (s) | 11.5 | - | - | 8.1 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 609 | 21 | 3 | 622 | 1 | 2 |
| Future Volume (vph) | 609 | 21 | 3 | 622 | 1 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 609 | 21 | 3 | 622 | 1 | 2 |
| Future Vol, veh/h | 609 | 21 | 3 | 622 | 1 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 621 | 21 | 3 | 635 | 1 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 642 | 0 | 956 | 321 |
| Stage 1 | - | - | - | - | 632 | - |
| Stage 2 | - | - | - | - | 324 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1171 | - | *236 | *968 |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1010 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1171 | - | *235 | *968 |
| Mov Cap-2 Maneuver | - | - | - | - | *235 | - |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1006 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 12.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 475 | - | - | * 1171 | - |
| HCM Lane V/C Ratio | 0.006 | - | - | 0.003 | - |
| HCM Control Delay (s) | 12.6 | - | - | 8.1 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 611 | 0 | 6 | 617 | 8 | 14 |
| Future Volume (vph) | 611 | 0 | 6 | 617 | 8 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1647 | 89 | |
| Travel Time (s) | 1.7 | | | 32.1 | 2.4 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 611 | 0 | 6 | 617 | 8 | 14 |
| Future Vol, veh/h | 611 | 0 | 6 | 617 | 8 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 623 | 0 | 6 | 630 | 8 | 14 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 623 | 0 | 950 | 312 |
| Stage 1 | - | - | - | - | 623 | - |
| Stage 2 | - | - | - | - | 327 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1171 | - | *238 | *968 |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1010 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1171 | - | *236 | *968 |
| Mov Cap-2 Maneuver | - | - | - | - | *236 | - |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1002 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 13.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 455 | - | - | * 1171 | - |
| HCM Lane V/C Ratio | 0.049 | - | - | 0.005 | - |
| HCM Control Delay (s) | 13.3 | - | - | 8.1 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 5 | 94 | 4 | 5 | 82 |
| Future Volume (vph) | 4 | 5 | 94 | 4 | 5 | 82 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | | | | 6 | 6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 5 | 94 | 4 | 5 | 82 |
| Future Vol, veh/h | 4 | 5 | 94 | 4 | 5 | 82 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 6 | 6 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 4 | 5 | 96 | 4 | 5 | 84 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 198 | 104 | 0 | 0 | 106 | 0 |
| Stage 1 | 104 | - | - | - | - | - |
| Stage 2 | 94 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 963 | 1015 | - | - | 1105 | - |
| Stage 1 | 1072 | - | - | - | - | - |
| Stage 2 | 1121 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 952 | 1009 | - | - | 1099 | - |
| Mov Cap-2 Maneuver | 952 | - | - | - | - | - |
| Stage 1 | 1066 | - | - | - | - | - |
| Stage 2 | 1115 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.7 | 0 | 0.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 983 | 1099 | - |
| HCM Lane V/C Ratio | - | - | 0.009 | 0.005 | - |
| HCM Control Delay (s) | - | - | 8.7 | 8.3 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 5 | 93 | 5 | 2 | 84 |
| Future Volume (vph) | 4 | 5 | 93 | 5 | 2 | 84 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 69 |
| Travel Time (s) | 2.0 | | 8.1 | | | 1.9 |
| Confl. Peds. (#/hr) | | | | 6 | 6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

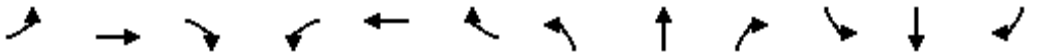
| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 5 | 93 | 5 | 2 | 84 |
| Future Vol, veh/h | 4 | 5 | 93 | 5 | 2 | 84 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 6 | 6 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 4 | 5 | 95 | 5 | 2 | 86 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 194 | 104 | 0 | 0 | 106 | 0 |
| Stage 1 | 104 | - | - | - | - | - |
| Stage 2 | 90 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 968 | 1015 | - | - | 1105 | - |
| Stage 1 | 1072 | - | - | - | - | - |
| Stage 2 | 1127 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 961 | 1009 | - | - | 1099 | - |
| Mov Cap-2 Maneuver | 961 | - | - | - | - | - |
| Stage 1 | 1066 | - | - | - | - | - |
| Stage 2 | 1124 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.7 | 0 | 0.2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 987 | 1099 | - |
| HCM Lane V/C Ratio | - | - | 0.009 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.7 | 8.3 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 57 | 486 | 27 | 40 | 482 | 95 | 29 | 52 | 58 | 71 | 66 | 53 |
| Future Volume (vph) | 57 | 486 | 27 | 40 | 482 | 95 | 29 | 52 | 58 | 71 | 66 | 53 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 600 | 0 | 0 | 549 | 100 | 31 | 116 | 0 | 75 | 125 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 64.0 | | 34.0 | 34.0 | 34.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 25.0% | 53.3% | | 28.3% | 28.3% | 28.3% | 25.0% | 25.0% | | 25.0% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.29 | | | 0.26 | 0.09 | 0.26 | 0.55 | | 0.58 | 0.60 | |
| Control Delay | | 4.4 | | | 3.0 | 3.0 | 50.6 | 57.9 | | 65.5 | 60.6 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 4.4 | | | 3.0 | 3.0 | 50.6 | 57.9 | | 65.5 | 60.6 | |
| Queue Length 50th (ft) | | 56 | | | 36 | 11 | 22 | 85 | | 55 | 93 | |
| Queue Length 95th (ft) | | 96 | | | 46 | 22 | 51 | 140 | | 103 | 149 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2054 | | | 2144 | 1070 | 187 | 333 | | 206 | 329 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.29 | | | 0.26 | 0.09 | 0.17 | 0.35 | | 0.36 | 0.38 | |

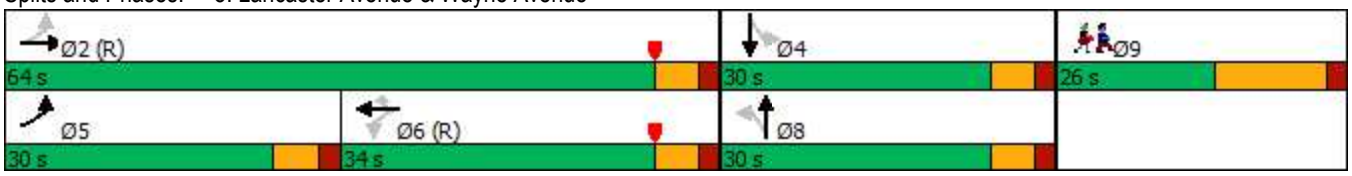
Intersection Summary

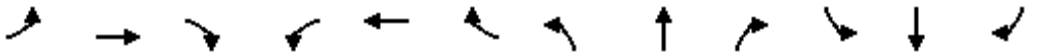
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 57 | 486 | 27 | 40 | 482 | 95 | 29 | 52 | 58 | 71 | 66 | 53 |
| Future Volume (vph) | 57 | 486 | 27 | 40 | 482 | 95 | 29 | 52 | 58 | 71 | 66 | 53 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.98 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.97 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.92 | | 1.00 | 0.93 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3123 | | | 3150 | 1393 | 1520 | 1596 | | 1590 | 1572 | |
| Flt Permitted | | 0.83 | | | 0.86 | 1.00 | 0.56 | 1.00 | | 0.59 | 1.00 | |
| Satd. Flow (perm) | | 2619 | | | 2732 | 1393 | 893 | 1596 | | 985 | 1572 | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 60 | 512 | 28 | 42 | 507 | 100 | 31 | 55 | 61 | 75 | 69 | 56 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 600 | 0 | 0 | 549 | 100 | 31 | 116 | 0 | 75 | 125 | 0 |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 93.2 | | | 93.2 | 93.2 | 14.8 | 14.8 | | 14.8 | 14.8 | |
| Effective Green, g (s) | | 94.2 | | | 94.2 | 93.2 | 15.8 | 15.8 | | 15.8 | 15.8 | |
| Actuated g/C Ratio | | 0.79 | | | 0.79 | 0.78 | 0.13 | 0.13 | | 0.13 | 0.13 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2055 | | | 2144 | 1081 | 117 | 210 | | 129 | 206 | |
| v/s Ratio Prot | | | | | | | | 0.07 | | | c0.08 | |
| v/s Ratio Perm | | c0.23 | | | 0.20 | 0.07 | 0.03 | | | 0.08 | | |
| v/c Ratio | | 0.29 | | | 0.26 | 0.09 | 0.26 | 0.55 | | 0.58 | 0.61 | |
| Uniform Delay, d1 | | 3.6 | | | 3.5 | 3.2 | 46.9 | 48.8 | | 49.0 | 49.2 | |
| Progression Factor | | 1.00 | | | 0.71 | 0.75 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.3 | 0.2 | 1.2 | 3.1 | | 6.5 | 5.0 | |
| Delay (s) | | 3.7 | | | 2.7 | 2.6 | 48.1 | 51.9 | | 55.5 | 54.2 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 3.7 | | | 2.7 | | | 51.1 | | | 54.7 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.40 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 55.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

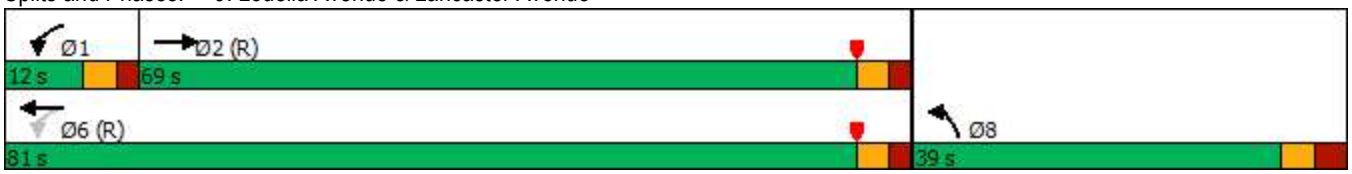
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 574 | 63 | 22 | 606 | 26 | 16 |
| Future Volume (vph) | 574 | 63 | 22 | 606 | 26 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 708 | 0 | 0 | 697 | 47 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.27 | | | 0.29 | 0.34 | |
| Control Delay | 1.8 | | | 1.8 | 57.9 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 1.8 | | | 1.8 | 57.9 | |
| Queue Length 50th (ft) | 27 | | | 17 | 35 | |
| Queue Length 95th (ft) | 42 | | | 28 | 73 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2639 | | | 2427 | 491 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.27 | | | 0.29 | 0.10 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 574 | 63 | 22 | 606 | 26 | 16 |
| Future Volume (vph) | 574 | 63 | 22 | 606 | 26 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.95 | |
| Flt Protected | 1.00 | | | 1.00 | 0.97 | |
| Satd. Flow (prot) | 3125 | | | 3140 | 1727 | |
| Flt Permitted | 1.00 | | | 0.91 | 0.97 | |
| Satd. Flow (perm) | 3125 | | | 2876 | 1727 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 638 | 70 | 24 | 673 | 29 | 18 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 708 | 0 | 0 | 697 | 47 | 0 |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 100.3 | | | 100.3 | 8.7 | |
| Effective Green, g (s) | 101.3 | | | 101.3 | 9.7 | |
| Actuated g/C Ratio | 0.84 | | | 0.84 | 0.08 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2638 | | | 2427 | 139 | |
| v/s Ratio Prot | 0.23 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.24 | | |
| v/c Ratio | 0.27 | | | 0.29 | 0.34 | |
| Uniform Delay, d1 | 1.9 | | | 1.9 | 52.1 | |
| Progression Factor | 0.77 | | | 0.74 | 1.00 | |
| Incremental Delay, d2 | 0.2 | | | 0.1 | 1.4 | |
| Delay (s) | 1.7 | | | 1.5 | 53.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.7 | | | 1.5 | 53.6 | |
| Approach LOS | A | | | A | D | |

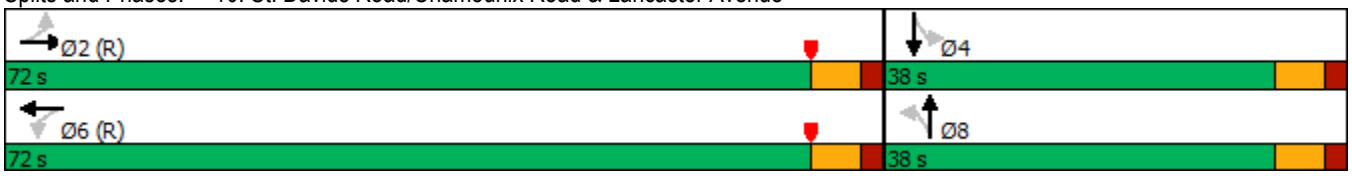
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.3 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.31 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 45.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 22 | 604 | 7 | 30 | 634 | 33 | 11 | 6 | 42 | 37 | 13 | 23 |
| Future Volume (vph) | 22 | 604 | 7 | 30 | 634 | 33 | 11 | 6 | 42 | 37 | 13 | 23 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1647 | | | 744 | | | 642 | | | 402 | |
| Travel Time (s) | | 32.1 | | | 14.5 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | | | | | | | | | 1 | 1 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 2% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

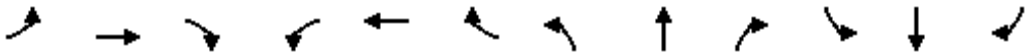
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 22 | 604 | 7 | 30 | 634 | 33 | 11 | 6 | 42 | 37 | 13 | 23 |
| Future Volume (veh/h) | 22 | 604 | 7 | 30 | 634 | 33 | 11 | 6 | 42 | 37 | 13 | 23 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1864 | 1891 | 1881 | 1881 | 1881 |
| Adj Flow Rate, veh/h | 23 | 643 | 6 | 32 | 674 | 33 | 12 | 6 | 45 | 39 | 14 | 18 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 99 | 2645 | 25 | 126 | 2575 | 125 | 54 | 18 | 82 | 109 | 28 | 29 |
| Arrive On Green | 0.83 | 0.84 | 0.83 | 0.83 | 0.84 | 0.83 | 0.06 | 0.07 | 0.06 | 0.06 | 0.07 | 0.06 |
| Sat Flow, veh/h | 76 | 3145 | 29 | 107 | 3061 | 149 | 219 | 262 | 1202 | 857 | 406 | 429 |
| Grp Volume(v), veh/h | 342 | 0 | 330 | 375 | 0 | 364 | 63 | 0 | 0 | 71 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1649 | 0 | 1601 | 1679 | 0 | 1638 | 1682 | 0 | 0 | 1693 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 4.5 | 0.0 | 0.0 | 5.0 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.2 | 0.0 | 4.5 | 4.5 | 0.0 | 5.0 | 3.9 | 0.0 | 0.0 | 4.3 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.02 | 0.09 | | 0.09 | 0.19 | | 0.71 | 0.55 | | 0.25 |
| Lane Grp Cap(c), veh/h | 1407 | 0 | 1347 | 1433 | 0 | 1378 | 138 | 0 | 0 | 150 | 0 | 0 |
| V/C Ratio(X) | 0.24 | 0.00 | 0.24 | 0.26 | 0.00 | 0.26 | 0.46 | 0.00 | 0.00 | 0.47 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1407 | 0 | 1347 | 1433 | 0 | 1378 | 499 | 0 | 0 | 497 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 1.7 | 0.0 | 1.7 | 1.8 | 0.0 | 1.8 | 50.1 | 0.0 | 0.0 | 50.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 0.4 | 0.4 | 0.0 | 0.5 | 3.3 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 4.1 | 0.0 | 3.8 | 4.7 | 0.0 | 4.3 | 3.6 | 0.0 | 0.0 | 4.1 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 2.1 | 0.0 | 2.2 | 2.2 | 0.0 | 2.3 | 53.4 | 0.0 | 0.0 | 53.4 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 672 | | | 739 | | | 63 | | | 71 | |
| Approach Delay, s/veh | | 2.2 | | | 2.2 | | | 53.4 | | | 53.4 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 97.5 | | 12.5 | | 97.5 | | 12.5 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 6.5 | | 6.3 | | 7.0 | | 5.9 |
| Green Ext Time (p_c), s | | 2.6 | | 0.3 | | 3.0 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 6.6 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 2 | 2 | 3 | 10 | 9 | 5 | 72 | 2 | 6 | 43 | 12 |
| Future Volume (vph) | 24 | 2 | 2 | 3 | 10 | 9 | 5 | 72 | 2 | 6 | 43 | 12 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 1 | | 2 | 2 | | 1 | 6 | | 3 | 3 | | 6 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 8% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 24 | 2 | 2 | 3 | 10 | 9 | 5 | 72 | 2 | 6 | 43 | 12 |
| Future Vol, veh/h | 24 | 2 | 2 | 3 | 10 | 9 | 5 | 72 | 2 | 6 | 43 | 12 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 33 | 3 | 3 | 4 | 14 | 12 | 7 | 99 | 3 | 8 | 59 | 16 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.7 | 7.3 | 7.7 | 7.5 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 6% | 86% | 14% | 10% |
| Vol Thru, % | 91% | 7% | 45% | 70% |
| Vol Right, % | 3% | 7% | 41% | 20% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 79 | 28 | 22 | 61 |
| LT Vol | 5 | 24 | 3 | 6 |
| Through Vol | 72 | 2 | 10 | 43 |
| RT Vol | 2 | 2 | 9 | 12 |
| Lane Flow Rate | 108 | 38 | 30 | 84 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.123 | 0.047 | 0.034 | 0.093 |
| Departure Headway (Hd) | 4.08 | 4.382 | 4.04 | 4.003 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 872 | 805 | 870 | 887 |
| Service Time | 2.136 | 2.476 | 2.14 | 2.066 |
| HCM Lane V/C Ratio | 0.124 | 0.047 | 0.034 | 0.095 |
| HCM Control Delay | 7.7 | 7.7 | 7.3 | 7.5 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.1 | 0.1 | 0.3 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 36 | 20 | 3 | 10 | 29 |
| Future Volume (vph) | 4 | 36 | 20 | 3 | 10 | 29 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | | 5 | | 4 | 4 | |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

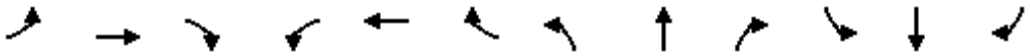
| Intersection | |
|---|---|
| Int Delay, s/veh | 4.1 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 36 | 20 | 3 | 10 | 29 |
| Future Vol, veh/h | 4 | 36 | 20 | 3 | 10 | 29 |
| Conflicting Peds, #/hr | 0 | 5 | 0 | 4 | 4 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 73 | 73 | 73 | 73 | 73 | 73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 5 | 49 | 27 | 4 | 14 | 40 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 101 | 38 | 0 | 0 | 35 | 0 |
| Stage 1 | 33 | - | - | - | - | - |
| Stage 2 | 68 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1046 | 1106 | - | - | 1168 | - |
| Stage 1 | 1158 | - | - | - | - | - |
| Stage 2 | 1115 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 1029 | 1097 | - | - | 1164 | - |
| Mov Cap-2 Maneuver | 1029 | - | - | - | - | - |
| Stage 1 | 1153 | - | - | - | - | - |
| Stage 2 | 1102 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.5 | 0 | 2.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1090 | 1164 | - |
| HCM Lane V/C Ratio | - | - | 0.05 | 0.012 | - |
| HCM Control Delay (s) | - | - | 8.5 | 8.1 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

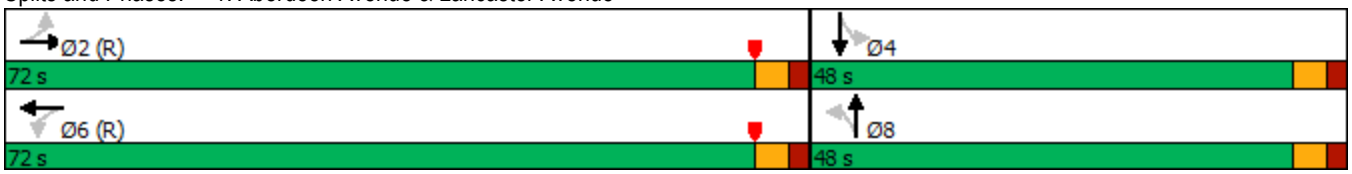


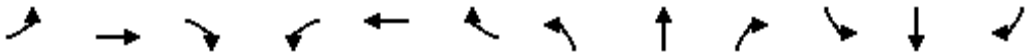
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 694 | 37 | 15 | 805 | 72 | 41 | 63 | 34 | 113 | 61 | 81 |
| Future Volume (vph) | 38 | 694 | 37 | 15 | 805 | 72 | 41 | 63 | 34 | 113 | 61 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 802 | 0 | 0 | 930 | 0 | 0 | 144 | 0 | 0 | 266 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.58 | | | 0.52 | | | 0.44 | | | 0.83 | |
| Control Delay | | 17.6 | | | 11.1 | | | 41.4 | | | 64.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 17.6 | | | 11.1 | | | 41.4 | | | 64.2 | |
| Queue Length 50th (ft) | | 242 | | | 180 | | | 95 | | | 196 | |
| Queue Length 95th (ft) | | 355 | | | 304 | | | 143 | | | 272 | |
| Internal Link Dist (ft) | | 1072 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1389 | | | 1782 | | | 510 | | | 492 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.58 | | | 0.52 | | | 0.28 | | | 0.54 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 694 | 37 | 15 | 805 | 72 | 41 | 63 | 34 | 113 | 61 | 81 |
| Future Volume (vph) | 38 | 694 | 37 | 15 | 805 | 72 | 41 | 63 | 34 | 113 | 61 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.75 | | | *0.86 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2359 | | | 2760 | | | 1673 | | | 1795 | |
| Flt Permitted | | 0.85 | | | 0.93 | | | 0.82 | | | 0.73 | |
| Satd. Flow (perm) | | 1998 | | | 2563 | | | 1393 | | | 1342 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 40 | 723 | 39 | 16 | 839 | 75 | 43 | 66 | 35 | 118 | 64 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 802 | 0 | 0 | 930 | 0 | 0 | 144 | 0 | 0 | 266 | 0 |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 82.4 | | | 82.4 | | | 27.6 | | | 27.6 | |
| Effective Green, g (s) | | 83.4 | | | 83.4 | | | 28.6 | | | 28.6 | |
| Actuated g/C Ratio | | 0.70 | | | 0.70 | | | 0.24 | | | 0.24 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1388 | | | 1781 | | | 331 | | | 319 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.40 | | | 0.36 | | | 0.10 | | | c0.20 | |
| v/c Ratio | | 0.58 | | | 0.52 | | | 0.44 | | | 0.83 | |
| Uniform Delay, d1 | | 9.3 | | | 8.8 | | | 38.8 | | | 43.4 | |
| Progression Factor | | 1.46 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 1.7 | | | 1.1 | | | 0.9 | | | 16.8 | |
| Delay (s) | | 15.3 | | | 9.9 | | | 39.8 | | | 60.3 | |
| Level of Service | | B | | | A | | | D | | | E | |
| Approach Delay (s) | | 15.3 | | | 9.9 | | | 39.8 | | | 60.3 | |
| Approach LOS | | B | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 20.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 80.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 829 | 12 | 0 | 892 | 0 | 3 |
| Future Volume (vph) | 829 | 12 | 0 | 892 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | 2 | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 3% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 829 | 12 | 0 | 892 | 0 | 3 |
| Future Vol, veh/h | 829 | 12 | 0 | 892 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 2 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 3 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 873 | 13 | 0 | 939 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 888 | 0 | 1354 | 445 |
| Stage 1 | - | - | - | - | 882 | - |
| Stage 2 | - | - | - | - | 472 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 972 | - | *115 | *935 |
| Stage 1 | - | - | - | - | *729 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 970 | - | *115 | *933 |
| Mov Cap-2 Maneuver | - | - | - | - | *115 | - |
| Stage 1 | - | - | - | - | *728 | - |
| Stage 2 | - | - | - | - | *843 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 933 | - | - | 970 | - |
| HCM Lane V/C Ratio | 0.003 | - | - | - | - |
| HCM Control Delay (s) | 8.9 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 830 | 2 | 3 | 891 | 1 | 20 |
| Future Volume (vph) | 830 | 2 | 3 | 891 | 1 | 20 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | 2 | 1 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 830 | 2 | 3 | 891 | 1 | 20 |
| Future Vol, veh/h | 830 | 2 | 3 | 891 | 1 | 20 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 2 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 3 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 865 | 2 | 3 | 928 | 1 | 21 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 869 | 0 | 1340 | 437 |
| Stage 1 | - | - | - | - | 868 | - |
| Stage 2 | - | - | - | - | 472 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *118 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1027 | - | *117 | *848 |
| Mov Cap-2 Maneuver | - | - | - | - | *117 | - |
| Stage 1 | - | - | - | - | *879 | - |
| Stage 2 | - | - | - | - | *838 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 10.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 654 | - | - | * 1027 | - |
| HCM Lane V/C Ratio | 0.033 | - | - | 0.003 | - |
| HCM Control Delay (s) | 10.7 | - | - | 8.5 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 832 | 18 | 6 | 893 | 1 | 3 |
| Future Volume (vph) | 832 | 18 | 6 | 893 | 1 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 832 | 18 | 6 | 893 | 1 | 3 |
| Future Vol, veh/h | 832 | 18 | 6 | 893 | 1 | 3 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 4 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 867 | 19 | 6 | 930 | 1 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 888 | 0 | 1356 | 445 |
| Stage 1 | - | - | - | - | 879 | - |
| Stage 2 | - | - | - | - | 477 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *114 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1027 | - | *112 | *849 |
| Mov Cap-2 Maneuver | - | - | - | - | *112 | - |
| Stage 1 | - | - | - | - | *879 | - |
| Stage 2 | - | - | - | - | *834 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 16.4 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 321 | - | - | * 1027 | - |
| HCM Lane V/C Ratio | 0.013 | - | - | 0.006 | - |
| HCM Control Delay (s) | 16.4 | - | - | 8.5 | 0.1 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 832 | 3 | 15 | 896 | 3 | 35 |
| Future Volume (vph) | 832 | 3 | 15 | 896 | 3 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1639 | 89 | |
| Travel Time (s) | 1.7 | | | 31.9 | 2.4 | |
| Confl. Peds. (#/hr) | | 1 | 1 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 33% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 832 | 3 | 15 | 896 | 3 | 35 |
| Future Vol, veh/h | 832 | 3 | 15 | 896 | 3 | 35 |
| Conflicting Peds, #/hr | 0 | 1 | 1 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 4 | 33 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 867 | 3 | 16 | 933 | 3 | 36 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 871 | 0 | 1369 | 436 |
| Stage 1 | - | - | - | - | 870 | - |
| Stage 2 | - | - | - | - | 499 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *112 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1028 | - | *108 | *849 |
| Mov Cap-2 Maneuver | - | - | - | - | *108 | - |
| Stage 1 | - | - | - | - | *880 | - |
| Stage 2 | - | - | - | - | *818 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 12 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 551 | - | - | * 1028 | - |
| HCM Lane V/C Ratio | 0.072 | - | - | 0.015 | - |
| HCM Control Delay (s) | 12 | - | - | 8.6 | 0.1 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 4 | 134 | 9 | 2 | 111 |
| Future Volume (vph) | 2 | 4 | 134 | 9 | 2 | 111 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | | | | 1 | 1 | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 0% | 0% | 4% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 4 | 134 | 9 | 2 | 111 |
| Future Vol, veh/h | 2 | 4 | 134 | 9 | 2 | 111 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 0 | 0 | 2 | 0 | 0 | 4 |
| Mvmt Flow | 2 | 4 | 141 | 9 | 2 | 117 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 268 | 147 | 0 | 0 | 151 | 0 |
| Stage 1 | 147 | - | - | - | - | - |
| Stage 2 | 121 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *889 | 960 | - | - | 1066 | - |
| Stage 1 | *1023 | - | - | - | - | - |
| Stage 2 | *1100 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *886 | 959 | - | - | 1065 | - |
| Mov Cap-2 Maneuver | *886 | - | - | - | - | - |
| Stage 1 | *1022 | - | - | - | - | - |
| Stage 2 | *1097 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 933 | 1065 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 4 | 130 | 9 | 2 | 111 |
| Future Volume (vph) | 2 | 4 | 130 | 9 | 2 | 111 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 69 |
| Travel Time (s) | 2.0 | | 8.5 | | | 1.9 |
| Confl. Peds. (#/hr) | | | | 1 | 1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 0% | 0% | 5% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

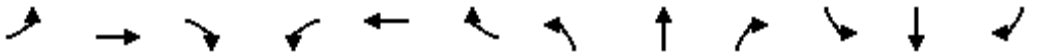
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 4 | 130 | 9 | 2 | 111 |
| Future Vol, veh/h | 2 | 4 | 130 | 9 | 2 | 111 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 0 | 0 | 2 | 0 | 0 | 5 |
| Mvmt Flow | 2 | 4 | 135 | 9 | 2 | 116 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 261 | 141 | 0 | 0 | 145 | 0 |
| Stage 1 | 141 | - | - | - | - | - |
| Stage 2 | 120 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *898 | 967 | - | - | 1071 | - |
| Stage 1 | *1029 | - | - | - | - | - |
| Stage 2 | *1100 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *895 | 966 | - | - | 1070 | - |
| Mov Cap-2 Maneuver | *895 | - | - | - | - | - |
| Stage 1 | *1028 | - | - | - | - | - |
| Stage 2 | *1097 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 941 | 1070 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 68 | 616 | 82 | 28 | 632 | 86 | 42 | 113 | 63 | 101 | 119 | 74 |
| Future Volume (vph) | 68 | 616 | 82 | 28 | 632 | 86 | 42 | 113 | 63 | 101 | 119 | 74 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 833 | 0 | 0 | 717 | 93 | 46 | 191 | 0 | 110 | 209 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 64.0 | | 34.0 | 34.0 | 34.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 25.0% | 53.3% | | 28.3% | 28.3% | 28.3% | 25.0% | 25.0% | | 25.0% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.47 | | | 0.35 | 0.10 | 0.40 | 0.67 | | 0.86 | 0.76 | |
| Control Delay | | 7.9 | | | 4.0 | 3.9 | 53.0 | 57.0 | | 95.7 | 64.4 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 7.9 | | | 4.0 | 3.9 | 53.0 | 57.0 | | 95.7 | 64.4 | |
| Queue Length 50th (ft) | | 131 | | | 52 | 12 | 31 | 136 | | 81 | 151 | |
| Queue Length 95th (ft) | | 177 | | | 56 | 20 | 70 | 214 | | #177 | 236 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1761 | | | 2026 | 910 | 132 | 331 | | 148 | 316 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.47 | | | 0.35 | 0.10 | 0.35 | 0.58 | | 0.74 | 0.66 | |

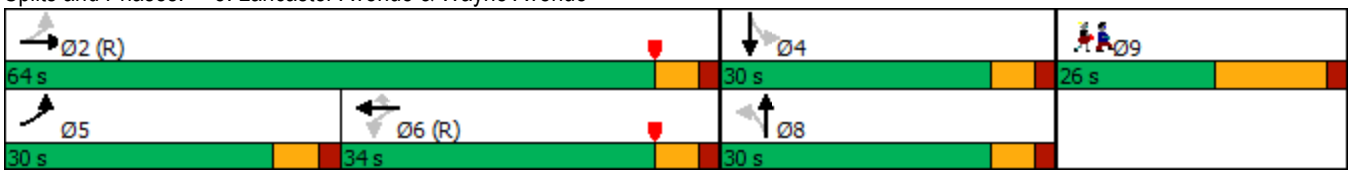
Intersection Summary

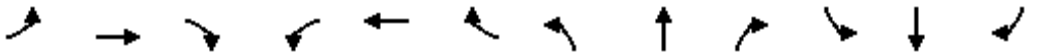
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 68 | 616 | 82 | 28 | 632 | 86 | 42 | 113 | 63 | 101 | 119 | 74 |
| Future Volume (vph) | 68 | 616 | 82 | 28 | 632 | 86 | 42 | 113 | 63 | 101 | 119 | 74 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.99 | 1.00 | | 0.97 | 1.00 | |
| Frt | | 0.98 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 2974 | | | 3096 | 1290 | 1519 | 1587 | | 1532 | 1518 | |
| Flt Permitted | | 0.80 | | | 0.89 | 1.00 | 0.40 | 1.00 | | 0.44 | 1.00 | |
| Satd. Flow (perm) | | 2395 | | | 2756 | 1290 | 637 | 1587 | | 712 | 1518 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 74 | 670 | 89 | 30 | 687 | 93 | 46 | 123 | 68 | 110 | 129 | 80 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 833 | 0 | 0 | 717 | 93 | 46 | 191 | 0 | 110 | 209 | 0 |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 87.3 | | | 87.3 | 87.3 | 20.7 | 20.7 | | 20.7 | 20.7 | |
| Effective Green, g (s) | | 88.3 | | | 88.3 | 87.3 | 21.7 | 21.7 | | 21.7 | 21.7 | |
| Actuated g/C Ratio | | 0.74 | | | 0.74 | 0.73 | 0.18 | 0.18 | | 0.18 | 0.18 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1762 | | | 2027 | 938 | 115 | 286 | | 128 | 274 | |
| v/s Ratio Prot | | | | | | | | 0.12 | | | 0.14 | |
| v/s Ratio Perm | | c0.35 | | | 0.26 | 0.07 | 0.07 | | | c0.15 | | |
| v/c Ratio | | 0.47 | | | 0.35 | 0.10 | 0.40 | 0.67 | | 0.86 | 0.76 | |
| Uniform Delay, d1 | | 6.4 | | | 5.7 | 4.8 | 43.4 | 45.8 | | 47.7 | 46.7 | |
| Progression Factor | | 1.00 | | | 0.58 | 0.66 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.2 | | | 0.4 | 0.2 | 2.3 | 5.8 | | 40.0 | 11.9 | |
| Delay (s) | | 6.6 | | | 3.7 | 3.4 | 45.7 | 51.6 | | 87.7 | 58.6 | |
| Level of Service | | A | | | A | A | D | D | | F | E | |
| Approach Delay (s) | | 6.6 | | | 3.7 | | | 50.4 | | | 68.6 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 76.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 748 | 62 | 73 | 823 | 19 | 40 |
| Future Volume (vph) | 748 | 62 | 73 | 823 | 19 | 40 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 862 | 0 | 0 | 954 | 63 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 71.0 | | 10.0 | 81.0 | 39.0 | |
| Total Split (%) | 59.2% | | 8.3% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.34 | | | 0.48 | 0.41 | |
| Control Delay | 2.0 | | | 2.0 | 58.9 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.0 | | | 2.0 | 58.9 | |
| Queue Length 50th (ft) | 31 | | | 38 | 47 | |
| Queue Length 95th (ft) | 60 | | | 43 | 91 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2546 | | | 1976 | 474 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.34 | | | 0.48 | 0.13 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 748 | 62 | 73 | 823 | 19 | 40 |
| Future Volume (vph) | 748 | 62 | 73 | 823 | 19 | 40 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.96 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3052 | | | 3014 | 1636 | |
| Flt Permitted | 1.00 | | | 0.78 | 0.98 | |
| Satd. Flow (perm) | 3052 | | | 2369 | 1636 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 796 | 66 | 78 | 876 | 20 | 43 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 862 | 0 | 0 | 954 | 63 | 0 |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 99.1 | | | 99.1 | 9.9 | |
| Effective Green, g (s) | 100.1 | | | 100.1 | 10.9 | |
| Actuated g/C Ratio | 0.83 | | | 0.83 | 0.09 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2545 | | | 1976 | 148 | |
| v/s Ratio Prot | 0.28 | | | | c0.04 | |
| v/s Ratio Perm | | | | c0.40 | | |
| v/c Ratio | 0.34 | | | 0.48 | 0.43 | |
| Uniform Delay, d1 | 2.3 | | | 2.8 | 51.6 | |
| Progression Factor | 0.66 | | | 0.42 | 1.00 | |
| Incremental Delay, d2 | 0.3 | | | 0.2 | 2.0 | |
| Delay (s) | 1.8 | | | 1.3 | 53.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.8 | | | 1.3 | 53.6 | |
| Approach LOS | A | | | A | D | |

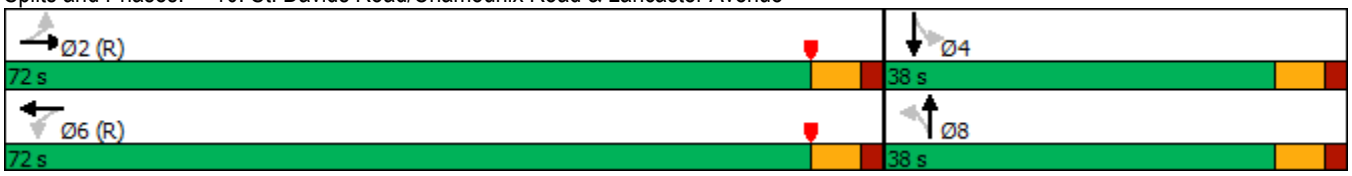
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.3 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 65.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 31 | 870 | 18 | 31 | 1079 | 77 | 10 | 9 | 41 | 58 | 19 | 40 |
| Future Volume (vph) | 31 | 870 | 18 | 31 | 1079 | 77 | 10 | 9 | 41 | 58 | 19 | 40 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1639 | | | 1078 | | | 276 | | | 428 | |
| Travel Time (s) | | 31.9 | | | 21.0 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 3 | | 1 | 1 | | 3 | 1 | | | | | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 4% | 11% | 10% | 3% | 0% | 0% | 0% | 2% | 0% | 0% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

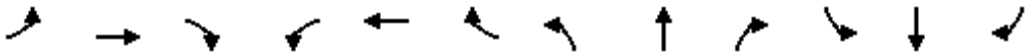
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 31 | 870 | 18 | 31 | 1079 | 77 | 10 | 9 | 41 | 58 | 19 | 40 |
| Future Volume (veh/h) | 31 | 870 | 18 | 31 | 1079 | 77 | 10 | 9 | 41 | 58 | 19 | 40 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1713 | 1782 | 1845 | 1791 | 1845 | 1891 | 1865 | 1891 | 1881 | 1849 | 1881 |
| Adj Flow Rate, veh/h | 32 | 888 | 16 | 32 | 1101 | 78 | 10 | 9 | 40 | 59 | 19 | 39 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 92 | 2382 | 42 | 76 | 2442 | 171 | 54 | 40 | 116 | 124 | 35 | 55 |
| Arrive On Green | 0.80 | 0.81 | 0.80 | 0.80 | 0.81 | 0.80 | 0.09 | 0.10 | 0.09 | 0.09 | 0.10 | 0.09 |
| Sat Flow, veh/h | 70 | 2949 | 53 | 52 | 3023 | 212 | 156 | 390 | 1150 | 736 | 342 | 539 |
| Grp Volume(v), veh/h | 464 | 0 | 472 | 625 | 0 | 586 | 59 | 0 | 0 | 117 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1522 | 0 | 1550 | 1694 | 0 | 1592 | 1696 | 0 | 0 | 1617 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 9.3 | 0.0 | 0.0 | 12.4 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.9 | 0.0 | 9.3 | 11.4 | 0.0 | 12.4 | 3.7 | 0.0 | 0.0 | 7.6 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.05 | | 0.13 | 0.17 | | 0.68 | 0.50 | | 0.33 |
| Lane Grp Cap(c), veh/h | 1251 | 0 | 1252 | 1388 | 0 | 1286 | 195 | 0 | 0 | 198 | 0 | 0 |
| V/C Ratio(X) | 0.37 | 0.00 | 0.38 | 0.45 | 0.00 | 0.46 | 0.30 | 0.00 | 0.00 | 0.59 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1251 | 0 | 1252 | 1388 | 0 | 1286 | 510 | 0 | 0 | 500 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.8 | 0.0 | 2.9 | 3.1 | 0.0 | 3.2 | 46.5 | 0.0 | 0.0 | 48.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.8 | 0.0 | 0.9 | 1.1 | 0.0 | 1.2 | 1.2 | 0.0 | 0.0 | 3.9 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.5 | 0.0 | 7.6 | 10.2 | 0.0 | 9.8 | 3.2 | 0.0 | 0.0 | 6.7 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.6 | 0.0 | 3.8 | 4.2 | 0.0 | 4.4 | 47.7 | 0.0 | 0.0 | 52.0 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 936 | | | 1211 | | | 59 | | | 117 | |
| Approach Delay, s/veh | | 3.7 | | | 4.3 | | | 47.7 | | | 52.0 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 93.9 | | 16.1 | | 93.9 | | 16.1 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 11.3 | | 9.6 | | 14.4 | | 5.7 |
| Green Ext Time (p_c), s | | 4.3 | | 0.6 | | 6.0 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.6 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 10 | 5 | 2 | 36 | 23 | 2 | 110 | 4 | 3 | 91 | 41 |
| Future Volume (vph) | 14 | 10 | 5 | 2 | 36 | 23 | 2 | 110 | 4 | 3 | 91 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 2 | | 2 | 2 | | 2 | | | 2 | 2 | | |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 4% | 100% | 2% | 0% | 0% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.7 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 14 | 10 | 5 | 2 | 36 | 23 | 2 | 110 | 4 | 3 | 91 | 41 |
| Future Vol, veh/h | 14 | 10 | 5 | 2 | 36 | 23 | 2 | 110 | 4 | 3 | 91 | 41 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 4 | 100 | 2 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 15 | 11 | 5 | 2 | 38 | 24 | 2 | 117 | 4 | 3 | 91 | 41 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.8 | 7.8 | 10.4 | 7.9 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 48% | 3% | 2% |
| Vol Thru, % | 95% | 34% | 59% | 67% |
| Vol Right, % | 3% | 17% | 38% | 30% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 116 | 29 | 61 | 135 |
| LT Vol | 2 | 14 | 2 | 3 |
| Through Vol | 110 | 10 | 36 | 91 |
| RT Vol | 4 | 5 | 23 | 41 |
| Lane Flow Rate | 123 | 31 | 65 | 135 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.201 | 0.04 | 0.079 | 0.155 |
| Departure Headway (Hd) | 5.857 | 4.636 | 4.385 | 4.119 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 606 | 775 | 820 | 873 |
| Service Time | 3.957 | 2.65 | 2.396 | 2.131 |
| HCM Lane V/C Ratio | 0.203 | 0.04 | 0.079 | 0.155 |
| HCM Control Delay | 10.4 | 7.8 | 7.8 | 7.9 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 0.7 | 0.1 | 0.3 | 0.5 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 3 | 43 | 33 | 11 | 12 | 30 |
| Future Volume (vph) | 3 | 43 | 33 | 11 | 12 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | 1 | 4 | | 2 | 2 | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Heavy Vehicles (%) | 0% | 0% | 3% | 0% | 0% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

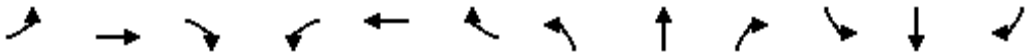
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 43 | 33 | 11 | 12 | 30 |
| Future Vol, veh/h | 3 | 43 | 33 | 11 | 12 | 30 |
| Conflicting Peds, #/hr | 1 | 4 | 0 | 2 | 2 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 3 | 0 | 0 | 3 |
| Mvmt Flow | 4 | 56 | 43 | 14 | 16 | 39 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 124 | 56 | 0 | 0 | 59 | 0 |
| Stage 1 | 52 | - | - | - | - | - |
| Stage 2 | 72 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1013 | 1080 | - | - | 1146 | - |
| Stage 1 | 1134 | - | - | - | - | - |
| Stage 2 | 1110 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 996 | 1074 | - | - | 1144 | - |
| Mov Cap-2 Maneuver | 996 | - | - | - | - | - |
| Stage 1 | 1132 | - | - | - | - | - |
| Stage 2 | 1093 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.6 | 0 | 2.3 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1069 | 1144 | - |
| HCM Lane V/C Ratio | - | - | 0.056 | 0.014 | - |
| HCM Control Delay (s) | - | - | 8.6 | 8.2 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

# *2020 BASE CONDITIONS*

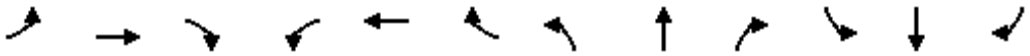


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 791 | 34 | 11 | 963 | 43 | 73 | 109 | 33 | 141 | 86 | 69 |
| Future Volume (vph) | 35 | 791 | 34 | 11 | 963 | 43 | 73 | 109 | 33 | 141 | 86 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 935 | 0 | 0 | 1106 | 0 | 0 | 233 | 0 | 0 | 321 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 62.0 | 62.0 | | 62.0 | 62.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Total Split (%) | 59.0% | 59.0% | | 59.0% | 59.0% | | 41.0% | 41.0% | | 41.0% | 41.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.71 | | | 0.65 | | | 0.61 | | | 0.85 | |
| Control Delay | | 25.1 | | | 16.1 | | | 37.9 | | | 55.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 25.1 | | | 16.1 | | | 37.9 | | | 55.0 | |
| Queue Length 50th (ft) | | 311 | | | 247 | | | 132 | | | 199 | |
| Queue Length 95th (ft) | | 456 | | | 384 | | | 195 | | | 287 | |
| Internal Link Dist (ft) | | 1072 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1312 | | | 1698 | | | 470 | | | 466 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.71 | | | 0.65 | | | 0.50 | | | 0.69 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 6 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 791 | 34 | 11 | 963 | 43 | 73 | 109 | 33 | 141 | 86 | 69 |
| Future Volume (vph) | 35 | 791 | 34 | 11 | 963 | 43 | 73 | 109 | 33 | 141 | 86 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.77 | | | *0.90 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.98 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2461 | | | 2898 | | | 1603 | | | 1812 | |
| Flt Permitted | | 0.85 | | | 0.94 | | | 0.78 | | | 0.68 | |
| Satd. Flow (perm) | | 2104 | | | 2720 | | | 1266 | | | 1257 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 38 | 860 | 37 | 12 | 1047 | 47 | 79 | 118 | 36 | 153 | 93 | 75 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 935 | 0 | 0 | 1106 | 0 | 0 | 233 | 0 | 0 | 321 | 0 |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 64.5 | | | 64.5 | | | 30.5 | | | 30.5 | |
| Effective Green, g (s) | | 65.5 | | | 65.5 | | | 31.5 | | | 31.5 | |
| Actuated g/C Ratio | | 0.62 | | | 0.62 | | | 0.30 | | | 0.30 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1312 | | | 1696 | | | 379 | | | 377 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.44 | | | 0.41 | | | 0.18 | | | c0.26 | |
| v/c Ratio | | 0.71 | | | 0.65 | | | 0.61 | | | 0.85 | |
| Uniform Delay, d1 | | 13.4 | | | 12.5 | | | 31.5 | | | 34.6 | |
| Progression Factor | | 1.41 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 3.2 | | | 2.0 | | | 3.0 | | | 16.7 | |
| Delay (s) | | 22.1 | | | 14.5 | | | 34.5 | | | 51.2 | |
| Level of Service | | C | | | B | | | C | | | D | |
| Approach Delay (s) | | 22.1 | | | 14.5 | | | 34.5 | | | 51.2 | |
| Approach LOS | | C | | | B | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 23.6 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.76 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 84.8% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 953 | 12 | 0 | 1018 | 0 | 0 |
| Future Volume (vph) | 953 | 12 | 0 | 1018 | 0 | 0 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 953 | 12 | 0 | 1018 | 0 | 0 |
| Future Vol, veh/h | 953 | 12 | 0 | 1018 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1036 | 13 | 0 | 1107 | 0 | 0 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1049 | 0 | 1601 | 529 |
| Stage 1 | - | - | - | - | 1043 | - |
| Stage 2 | - | - | - | - | 558 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 868 | - | *73 | *892 |
| Stage 1 | - | - | - | - | *611 | - |
| Stage 2 | - | - | - | - | *843 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 868 | - | *73 | *889 |
| Mov Cap-2 Maneuver | - | - | - | - | *73 | - |
| Stage 1 | - | - | - | - | *611 | - |
| Stage 2 | - | - | - | - | *841 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 868 | - |
| HCM Lane V/C Ratio | - | - | - | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 951 | 2 | 0 | 1013 | 5 | 15 |
| Future Volume (vph) | 951 | 2 | 0 | 1013 | 5 | 15 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 951 | 2 | 0 | 1013 | 5 | 15 |
| Future Vol, veh/h | 951 | 2 | 0 | 1013 | 5 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1034 | 2 | 0 | 1101 | 5 | 16 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1036 | 0 | 1590 | 522 |
| Stage 1 | - | - | - | - | 1035 | - |
| Stage 2 | - | - | - | - | 555 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *75 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *843 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *75 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *75 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *841 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 22 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 234 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.093 | - | - | - | - |
| HCM Control Delay (s) | 22 | - | - | 0 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 946 | 20 | 3 | 1013 | 0 | 6 |
| Future Volume (vph) | 946 | 20 | 3 | 1013 | 0 | 6 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 946 | 20 | 3 | 1013 | 0 | 6 |
| Future Vol, veh/h | 946 | 20 | 3 | 1013 | 0 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1028 | 22 | 3 | 1101 | 0 | 7 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1050 | 0 | 1600 | 529 |
| Stage 1 | - | - | - | - | 1039 | - |
| Stage 2 | - | - | - | - | 561 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *73 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *843 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *72 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *72 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *834 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 9.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 792 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.008 | - | - | 0.003 | - |
| HCM Control Delay (s) | 9.6 | - | - | 8.8 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 949 | 3 | 3 | 1014 | 2 | 16 |
| Future Volume (vph) | 949 | 3 | 3 | 1014 | 2 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1639 | 89 | |
| Travel Time (s) | 1.7 | | | 31.9 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 949 | 3 | 3 | 1014 | 2 | 16 |
| Future Vol, veh/h | 949 | 3 | 3 | 1014 | 2 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1032 | 3 | 3 | 1102 | 2 | 17 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1035 | 0 | 1595 | 522 |
| Stage 1 | - | - | - | - | 1034 | - |
| Stage 2 | - | - | - | - | 561 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *74 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *843 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *73 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *73 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *834 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 15 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 378 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.052 | - | - | 0.003 | - |
| HCM Control Delay (s) | 15 | - | - | 8.8 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 1 | 8 | 207 | 5 | 11 | 120 |
| Future Volume (vph) | 1 | 8 | 207 | 5 | 11 | 120 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 4 | 4 | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 8% | 2% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 1 | 8 | 207 | 5 | 11 | 120 |
| Future Vol, veh/h | 1 | 8 | 207 | 5 | 11 | 120 |
| Conflicting Peds, #/hr | 4 | 4 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 8 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 9 | 225 | 5 | 12 | 130 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 386 | 232 | 0 | 0 | 230 | 0 |
| Stage 1 | 228 | - | - | - | - | - |
| Stage 2 | 158 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 751 | 858 | - | - | 1002 | - |
| Stage 1 | 935 | - | - | - | - | - |
| Stage 2 | 1066 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 738 | 855 | - | - | 1002 | - |
| Mov Cap-2 Maneuver | 738 | - | - | - | - | - |
| Stage 1 | 935 | - | - | - | - | - |
| Stage 2 | 1047 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.3 | 0 | 0.7 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 840 | 1002 | - |
| HCM Lane V/C Ratio | - | - | 0.012 | 0.012 | - |
| HCM Control Delay (s) | - | - | 9.3 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 1 | 211 | 12 | 1 | 120 |
| Future Volume (vph) | 4 | 1 | 211 | 12 | 1 | 120 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 69 |
| Travel Time (s) | 2.0 | | 8.5 | | | 1.9 |
| Confl. Peds. (#/hr) | 4 | 4 | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 8% | 2% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

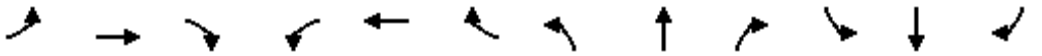
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 1 | 211 | 12 | 1 | 120 |
| Future Vol, veh/h | 4 | 1 | 211 | 12 | 1 | 120 |
| Conflicting Peds, #/hr | 4 | 4 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 8 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 1 | 229 | 13 | 1 | 130 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 372 | 240 | 0 | 0 | 242 | 0 |
| Stage 1 | 236 | - | - | - | - | - |
| Stage 2 | 136 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *766 | 849 | - | - | 992 | - |
| Stage 1 | *927 | - | - | - | - | - |
| Stage 2 | *1085 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *762 | 846 | - | - | 992 | - |
| Mov Cap-2 Maneuver | *762 | - | - | - | - | - |
| Stage 1 | *927 | - | - | - | - | - |
| Stage 2 | *1080 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.7 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 777 | 992 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.001 | - |
| HCM Control Delay (s) | - | - | 9.7 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 655 | 25 | 33 | 793 | 113 | 40 | 99 | 43 | 94 | 92 | 35 |
| Future Volume (vph) | 29 | 655 | 25 | 33 | 793 | 113 | 40 | 99 | 43 | 94 | 92 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 779 | 0 | 0 | 907 | 124 | 44 | 156 | 0 | 103 | 139 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 13.0 | 48.0 | | 35.0 | 35.0 | 35.0 | 31.0 | 31.0 | | 31.0 | 31.0 | |
| Total Split (%) | 12.4% | 45.7% | | 33.3% | 33.3% | 33.3% | 29.5% | 29.5% | | 29.5% | 29.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.39 | | | 0.45 | 0.13 | 0.30 | 0.56 | | 0.72 | 0.54 | |
| Control Delay | | 6.7 | | | 6.2 | 6.2 | 40.7 | 46.6 | | 66.6 | 46.0 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 6.7 | | | 6.2 | 6.2 | 40.7 | 46.6 | | 66.6 | 46.0 | |
| Queue Length 50th (ft) | | 87 | | | 67 | 17 | 26 | 97 | | 66 | 86 | |
| Queue Length 95th (ft) | | 157 | | | 154 | m52 | 55 | 149 | | 117 | 136 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1997 | | | 2024 | 953 | 213 | 398 | | 206 | 372 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.39 | | | 0.45 | 0.13 | 0.21 | 0.39 | | 0.50 | 0.37 | |

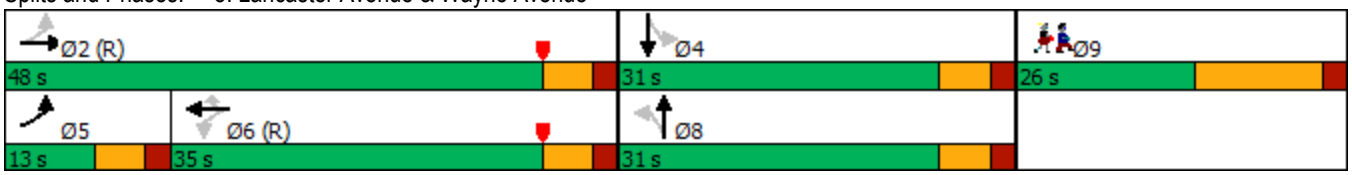
Intersection Summary

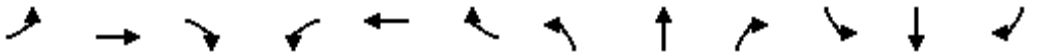
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 25% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 33 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 655 | 25 | 33 | 793 | 113 | 40 | 99 | 43 | 94 | 92 | 35 |
| Future Volume (vph) | 29 | 655 | 25 | 33 | 793 | 113 | 40 | 99 | 43 | 94 | 92 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.98 | 1.00 | | 0.97 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3077 | | | 3089 | 1335 | 1397 | 1601 | | 1455 | 1502 | |
| Flt Permitted | | 0.88 | | | 0.89 | 1.00 | 0.58 | 1.00 | | 0.54 | 1.00 | |
| Satd. Flow (perm) | | 2727 | | | 2765 | 1335 | 859 | 1601 | | 827 | 1502 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 32 | 720 | 27 | 36 | 871 | 124 | 44 | 109 | 47 | 103 | 101 | 38 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 779 | 0 | 0 | 907 | 124 | 44 | 156 | 0 | 103 | 139 | 0 |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 75.9 | | | 75.9 | 75.9 | 17.1 | 17.1 | | 17.1 | 17.1 | |
| Effective Green, g (s) | | 76.9 | | | 76.9 | 75.9 | 18.1 | 18.1 | | 18.1 | 18.1 | |
| Actuated g/C Ratio | | 0.73 | | | 0.73 | 0.72 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1997 | | | 2025 | 965 | 148 | 275 | | 142 | 258 | |
| v/s Ratio Prot | | | | | | | | 0.10 | | | 0.09 | |
| v/s Ratio Perm | | 0.29 | | | c0.33 | 0.09 | 0.05 | | | c0.12 | | |
| v/c Ratio | | 0.39 | | | 0.45 | 0.13 | 0.30 | 0.57 | | 0.73 | 0.54 | |
| Uniform Delay, d1 | | 5.3 | | | 5.6 | 4.4 | 37.9 | 39.9 | | 41.1 | 39.6 | |
| Progression Factor | | 1.00 | | | 0.88 | 1.08 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.6 | 0.2 | 1.1 | 2.7 | | 16.7 | 2.2 | |
| Delay (s) | | 5.4 | | | 5.5 | 5.0 | 39.0 | 42.5 | | 57.8 | 41.8 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 5.4 | | | 5.4 | | | 41.8 | | | 48.6 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.62 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 75.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 779 | 50 | 95 | 952 | 31 | 44 |
| Future Volume (vph) | 779 | 50 | 95 | 952 | 31 | 44 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 922 | 0 | 0 | 1164 | 83 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 61.0 | | 12.0 | 73.0 | 32.0 | |
| Total Split (%) | 58.1% | | 11.4% | 69.5% | 30.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.38 | | | 0.63 | 0.45 | |
| Control Delay | 2.6 | | | 3.4 | 50.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.6 | | | 3.4 | 50.6 | |
| Queue Length 50th (ft) | 66 | | | 36 | 53 | |
| Queue Length 95th (ft) | 70 | | | 43 | 98 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2449 | | | 1848 | 440 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.38 | | | 0.63 | 0.19 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 48 (46%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 779 | 50 | 95 | 952 | 31 | 44 |
| Future Volume (vph) | 779 | 50 | 95 | 952 | 31 | 44 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3041 | | | 3067 | 1712 | |
| Flt Permitted | 1.00 | | | 0.75 | 0.98 | |
| Satd. Flow (perm) | 3041 | | | 2296 | 1712 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 866 | 56 | 106 | 1058 | 34 | 49 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 922 | 0 | 0 | 1164 | 83 | 0 |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 83.6 | | | 83.6 | 10.4 | |
| Effective Green, g (s) | 84.6 | | | 84.6 | 11.4 | |
| Actuated g/C Ratio | 0.81 | | | 0.81 | 0.11 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2450 | | | 1849 | 185 | |
| v/s Ratio Prot | 0.30 | | | | c0.05 | |
| v/s Ratio Perm | | | | c0.51 | | |
| v/c Ratio | 0.38 | | | 0.63 | 0.45 | |
| Uniform Delay, d1 | 2.8 | | | 4.0 | 43.9 | |
| Progression Factor | 0.71 | | | 0.45 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.5 | 1.7 | |
| Delay (s) | 2.4 | | | 2.3 | 45.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.4 | | | 2.3 | 45.6 | |
| Approach LOS | A | | | A | D | |

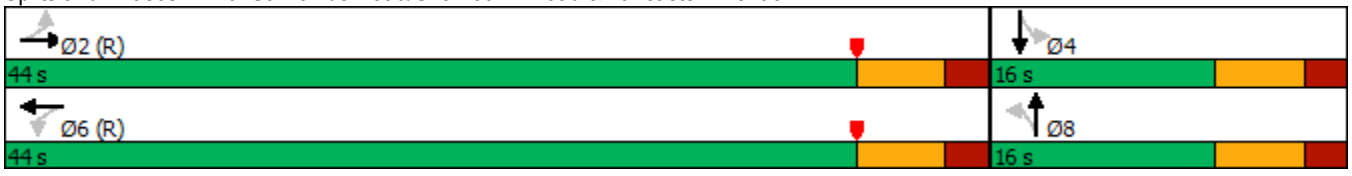
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.0 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.64 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 70.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 861 | 9 | 13 | 1121 | 287 | 19 | 68 | 71 | 93 | 38 | 38 |
| Future Volume (vph) | 14 | 861 | 9 | 13 | 1121 | 287 | 19 | 68 | 71 | 93 | 38 | 38 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1639 | | | 1078 | | | 276 | | | 428 | |
| Travel Time (s) | | 31.9 | | | 21.0 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 6 | | | | | 6 | 4 | | 5 | 5 | | 4 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 4% | 1% | 0% | 0% | 4% | 1% | 5% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 44.0 | 44.0 | | 44.0 | 44.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (%) | 73.3% | 73.3% | | 73.3% | 73.3% | | 26.7% | 26.7% | | 26.7% | 26.7% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 20 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Coordinated | |

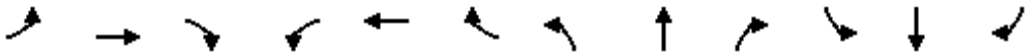
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 14 | 861 | 9 | 13 | 1121 | 287 | 19 | 68 | 71 | 93 | 38 | 38 |
| Future Volume (veh/h) | 14 | 861 | 9 | 13 | 1121 | 287 | 19 | 68 | 71 | 93 | 38 | 38 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1731 | 1782 | 1845 | 1785 | 1845 | 1891 | 1857 | 1891 | 1881 | 1838 | 1881 |
| Adj Flow Rate, veh/h | 15 | 946 | 9 | 14 | 1232 | 294 | 21 | 75 | 75 | 102 | 42 | 42 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 0 | 0 | 5 | 5 | 5 |
| Cap, veh/h | 72 | 2130 | 20 | 67 | 1767 | 413 | 88 | 142 | 127 | 220 | 70 | 57 |
| Arrive On Green | 0.65 | 0.67 | 0.65 | 0.65 | 0.67 | 0.65 | 0.15 | 0.17 | 0.15 | 0.15 | 0.17 | 0.15 |
| Sat Flow, veh/h | 15 | 3192 | 30 | 9 | 2649 | 619 | 126 | 854 | 765 | 764 | 421 | 346 |
| Grp Volume(v), veh/h | 500 | 0 | 470 | 822 | 0 | 718 | 171 | 0 | 0 | 186 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1668 | 0 | 1570 | 1766 | 0 | 1512 | 1745 | 0 | 0 | 1530 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.5 | 0.0 | 0.0 | 18.3 | 0.0 | 0.0 | 0.0 | 1.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.2 | 0.0 | 8.5 | 17.5 | 0.0 | 18.3 | 5.5 | 0.0 | 0.0 | 6.9 | 0.0 | 0.0 |
| Prop In Lane | 0.03 | | 0.02 | 0.02 | | 0.41 | 0.12 | | 0.44 | 0.55 | | 0.23 |
| Lane Grp Cap(c), veh/h | 1146 | 0 | 1047 | 1210 | 0 | 1008 | 328 | 0 | 0 | 322 | 0 | 0 |
| V/C Ratio(X) | 0.44 | 0.00 | 0.45 | 0.68 | 0.00 | 0.71 | 0.52 | 0.00 | 0.00 | 0.58 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1146 | 0 | 1047 | 1210 | 0 | 1008 | 357 | 0 | 0 | 346 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 4.7 | 0.0 | 4.8 | 6.2 | 0.0 | 6.5 | 23.4 | 0.0 | 0.0 | 24.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.2 | 0.0 | 1.4 | 3.1 | 0.0 | 4.3 | 1.8 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.9 | 0.0 | 7.3 | 15.0 | 0.0 | 13.4 | 5.2 | 0.0 | 0.0 | 5.9 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 5.9 | 0.0 | 6.1 | 9.3 | 0.0 | 10.8 | 25.3 | 0.0 | 0.0 | 26.7 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | B | C | | | C | | |
| Approach Vol, veh/h | | 970 | | | 1540 | | | 171 | | | 186 | |
| Approach Delay, s/veh | | 6.0 | | | 10.0 | | | 25.3 | | | 26.7 | |
| Approach LOS | | A | | | A | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 45.0 | | 15.0 | | 45.0 | | 15.0 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 38.0 | | 10.0 | | 38.0 | | 10.0 |
| Max Q Clear Time (g_c+I1), s | | 10.5 | | 8.9 | | 20.3 | | 7.5 |
| Green Ext Time (p_c), s | | 4.2 | | 0.1 | | 7.1 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 10.6 |
| HCM 2010 LOS | B |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 17 | 6 | 5 | 93 | 12 | 28 | 173 | 11 | 3 | 61 | 19 |
| Future Volume (vph) | 5 | 17 | 6 | 5 | 93 | 12 | 28 | 173 | 11 | 3 | 61 | 19 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 7 | | 3 | 3 | | 7 | 10 | | | | | 10 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles (%) | 20% | 0% | 17% | 0% | 2% | 0% | 18% | 6% | 0% | 0% | 2% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 17 | 6 | 5 | 93 | 12 | 28 | 173 | 11 | 3 | 61 | 19 |
| Future Vol, veh/h | 5 | 17 | 6 | 5 | 93 | 12 | 28 | 173 | 11 | 3 | 61 | 19 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles, % | 20 | 0 | 17 | 0 | 2 | 0 | 18 | 6 | 0 | 0 | 2 | 5 |
| Mvmt Flow | 7 | 24 | 8 | 7 | 131 | 17 | 39 | 244 | 15 | 4 | 86 | 27 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.8 | 9.3 | 11.1 | 8.5 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 13% | 18% | 5% | 4% |
| Vol Thru, % | 82% | 61% | 85% | 73% |
| Vol Right, % | 5% | 21% | 11% | 23% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 212 | 28 | 110 | 83 |
| LT Vol | 28 | 5 | 5 | 3 |
| Through Vol | 173 | 17 | 93 | 61 |
| RT Vol | 11 | 6 | 12 | 19 |
| Lane Flow Rate | 299 | 39 | 155 | 117 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.4 | 0.059 | 0.211 | 0.15 |
| Departure Headway (Hd) | 4.824 | 5.361 | 4.896 | 4.621 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 743 | 664 | 730 | 772 |
| Service Time | 2.868 | 3.425 | 2.946 | 2.674 |
| HCM Lane V/C Ratio | 0.402 | 0.059 | 0.212 | 0.152 |
| HCM Control Delay | 11.1 | 8.8 | 9.3 | 8.5 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 1.9 | 0.2 | 0.8 | 0.5 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 5 | 29 | 89 | 31 | 17 | 42 |
| Future Volume (vph) | 5 | 29 | 89 | 31 | 17 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | | 14 | | 7 | 7 | |
| Peak Hour Factor | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 32% | 23% | 9% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

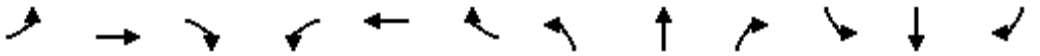
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 29 | 89 | 31 | 17 | 42 |
| Future Vol, veh/h | 5 | 29 | 89 | 31 | 17 | 42 |
| Conflicting Peds, #/hr | 0 | 14 | 0 | 7 | 7 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 54 | 54 | 54 | 54 | 54 | 54 |
| Heavy Vehicles, % | 0 | 3 | 0 | 32 | 23 | 9 |
| Mvmt Flow | 9 | 54 | 165 | 57 | 31 | 78 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 341 | 215 | 0 | 0 | 229 | 0 |
| Stage 1 | 201 | - | - | - | - | - |
| Stage 2 | 140 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.23 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 752 | 877 | - | - | 1003 | - |
| Stage 1 | 964 | - | - | - | - | - |
| Stage 2 | 1031 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 722 | 860 | - | - | 996 | - |
| Mov Cap-2 Maneuver | 722 | - | - | - | - | - |
| Stage 1 | 957 | - | - | - | - | - |
| Stage 2 | 997 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.7 | 0 | 2.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 836 | 996 | - |
| HCM Lane V/C Ratio | - | - | 0.075 | 0.032 | - |
| HCM Control Delay (s) | - | - | 9.7 | 8.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |

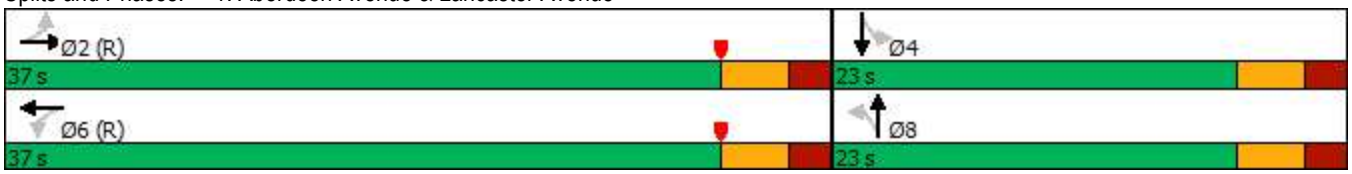


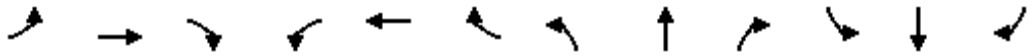
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 850 | 30 | 10 | 962 | 59 | 39 | 63 | 26 | 118 | 113 | 68 |
| Future Volume (vph) | 33 | 850 | 30 | 10 | 962 | 59 | 39 | 63 | 26 | 118 | 113 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1121 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 30.6 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 941 | 0 | 0 | 1063 | 0 | 0 | 132 | 0 | 0 | 308 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 37.0 | 37.0 | | 37.0 | 37.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (%) | 61.7% | 61.7% | | 61.7% | 61.7% | | 38.3% | 38.3% | | 38.3% | 38.3% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.66 | | | 0.72 | | | 0.33 | | | 0.72 | |
| Control Delay | | 10.8 | | | 13.1 | | | 18.9 | | | 29.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 10.8 | | | 13.1 | | | 18.9 | | | 29.8 | |
| Queue Length 50th (ft) | | 231 | | | 158 | | | 37 | | | 97 | |
| Queue Length 95th (ft) | | 307 | | | 260 | | | 73 | | | 169 | |
| Internal Link Dist (ft) | | 1041 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1423 | | | 1478 | | | 464 | | | 491 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.66 | | | 0.72 | | | 0.28 | | | 0.63 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |

Actuated Cycle Length: 60
Offset: 38 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 850 | 30 | 10 | 962 | 59 | 39 | 63 | 26 | 118 | 113 | 68 |
| Future Volume (vph) | 33 | 850 | 30 | 10 | 962 | 59 | 39 | 63 | 26 | 118 | 113 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.83 | | | *0.80 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 1.00 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2735 | | | 2643 | | | 1701 | | | 1831 | |
| Flt Permitted | | 0.88 | | | 0.94 | | | 0.85 | | | 0.83 | |
| Satd. Flow (perm) | | 2404 | | | 2496 | | | 1467 | | | 1554 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 34 | 876 | 31 | 10 | 992 | 61 | 40 | 65 | 27 | 122 | 116 | 70 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 941 | 0 | 0 | 1063 | 0 | 0 | 132 | 0 | 0 | 308 | 0 |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 34.5 | | | 34.5 | | | 15.5 | | | 15.5 | |
| Effective Green, g (s) | | 35.5 | | | 35.5 | | | 16.5 | | | 16.5 | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | | | 0.28 | | | 0.28 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1422 | | | 1476 | | | 403 | | | 427 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.39 | | | c0.43 | | | 0.09 | | | c0.20 | |
| v/c Ratio | | 0.66 | | | 0.72 | | | 0.33 | | | 0.72 | |
| Uniform Delay, d1 | | 8.2 | | | 8.7 | | | 17.3 | | | 19.7 | |
| Progression Factor | | 0.95 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 2.3 | | | 3.1 | | | 0.5 | | | 5.9 | |
| Delay (s) | | 10.1 | | | 11.8 | | | 17.8 | | | 25.6 | |
| Level of Service | | B | | | B | | | B | | | C | |
| Approach Delay (s) | | 10.1 | | | 11.8 | | | 17.8 | | | 25.6 | |
| Approach LOS | | B | | | B | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.72 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.3% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 976 | 18 | 2 | 1032 | 0 | 3 |
| Future Volume (vph) | 976 | 18 | 2 | 1032 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 976 | 18 | 2 | 1032 | 0 | 3 |
| Future Vol, veh/h | 976 | 18 | 2 | 1032 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 1006 | 19 | 2 | 1064 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1025 | 0 | 1555 | 516 |
| Stage 1 | - | - | - | - | 1016 | - |
| Stage 2 | - | - | - | - | 539 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 876 | - | *80 | *905 |
| Stage 1 | - | - | - | - | *617 | - |
| Stage 2 | - | - | - | - | *801 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 876 | - | *79 | *903 |
| Mov Cap-2 Maneuver | - | - | - | - | *79 | - |
| Stage 1 | - | - | - | - | *617 | - |
| Stage 2 | - | - | - | - | *794 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 903 | - | - | 876 | - |
| HCM Lane V/C Ratio | 0.003 | - | - | 0.002 | - |
| HCM Control Delay (s) | 9 | - | - | 9.1 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 955 | 24 | 3 | 1032 | 2 | 21 |
| Future Volume (vph) | 955 | 24 | 3 | 1032 | 2 | 21 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 955 | 24 | 3 | 1032 | 2 | 21 |
| Future Vol, veh/h | 955 | 24 | 3 | 1032 | 2 | 21 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 985 | 25 | 3 | 1064 | 2 | 22 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1010 | 0 | 1539 | 508 |
| Stage 1 | - | - | - | - | 998 | - |
| Stage 2 | - | - | - | - | 541 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *82 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *801 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *81 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *81 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *793 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 13.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 455 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.052 | - | - | 0.003 | - |
| HCM Control Delay (s) | 13.3 | - | - | 8.7 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 940 | 36 | 5 | 1035 | 0 | 3 |
| Future Volume (vph) | 940 | 36 | 5 | 1035 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 940 | 36 | 5 | 1035 | 0 | 3 |
| Future Vol, veh/h | 940 | 36 | 5 | 1035 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 969 | 37 | 5 | 1067 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1006 | 0 | 1535 | 506 |
| Stage 1 | - | - | - | - | 988 | - |
| Stage 2 | - | - | - | - | 547 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *83 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *801 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *82 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *82 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *789 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 9.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 812 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.004 | - | - | 0.005 | - |
| HCM Control Delay (s) | 9.5 | - | - | 8.7 | 0.1 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 942 | 1 | 4 | 1033 | 7 | 28 |
| Future Volume (vph) | 942 | 1 | 4 | 1033 | 7 | 28 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1653 | 89 | |
| Travel Time (s) | 1.7 | | | 32.2 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 942 | 1 | 4 | 1033 | 7 | 28 |
| Future Vol, veh/h | 942 | 1 | 4 | 1033 | 7 | 28 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 971 | 1 | 4 | 1065 | 7 | 29 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 972 | 0 | 1516 | 489 |
| Stage 1 | - | - | - | - | 972 | - |
| Stage 2 | - | - | - | - | 544 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *86 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *801 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *85 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *85 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *791 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 18.6 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 300 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.12 | - | - | 0.004 | - |
| HCM Control Delay (s) | 18.6 | - | - | 8.7 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 8 | 4 | 125 | 12 | 2 | 151 |
| Future Volume (vph) | 8 | 4 | 125 | 12 | 2 | 151 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 6 | 6 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 8 | 4 | 125 | 12 | 2 | 151 |
| Future Vol, veh/h | 8 | 4 | 125 | 12 | 2 | 151 |
| Conflicting Peds, #/hr | 6 | 6 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 0 | 2 | 2 | 3 |
| Mvmt Flow | 8 | 4 | 129 | 12 | 2 | 156 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 301 | 141 | 0 | 0 | 141 | 0 |
| Stage 1 | 135 | - | - | - | - | - |
| Stage 2 | 166 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *871 | 967 | - | - | 1075 | - |
| Stage 1 | *1035 | - | - | - | - | - |
| Stage 2 | *1060 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *864 | 961 | - | - | 1075 | - |
| Mov Cap-2 Maneuver | *864 | - | - | - | - | - |
| Stage 1 | *1035 | - | - | - | - | - |
| Stage 2 | *1051 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.1 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 894 | 1075 | - |
| HCM Lane V/C Ratio | - | - | 0.014 | 0.002 | - |
| HCM Control Delay (s) | - | - | 9.1 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 5 | 132 | 7 | 5 | 154 |
| Future Volume (vph) | 2 | 5 | 132 | 7 | 5 | 154 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 279 | | | 69 |
| Travel Time (s) | 2.0 | | 7.6 | | | 1.9 |
| Confl. Peds. (#/hr) | 6 | 6 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

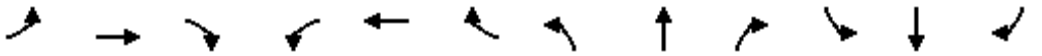
| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 5 | 132 | 7 | 5 | 154 |
| Future Vol, veh/h | 2 | 5 | 132 | 7 | 5 | 154 |
| Conflicting Peds, #/hr | 6 | 6 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 0 | 2 | 2 | 3 |
| Mvmt Flow | 2 | 5 | 136 | 7 | 5 | 159 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 315 | 146 | 0 | 0 | 143 | 0 |
| Stage 1 | 140 | - | - | - | - | - |
| Stage 2 | 175 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 852 | 960 | - | - | 1073 | - |
| Stage 1 | 1030 | - | - | - | - | - |
| Stage 2 | 1060 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 843 | 955 | - | - | 1073 | - |
| Mov Cap-2 Maneuver | 843 | - | - | - | - | - |
| Stage 1 | 1030 | - | - | - | - | - |
| Stage 2 | 1048 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 0.3 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 920 | 1073 | - |
| HCM Lane V/C Ratio | - | - | 0.008 | 0.005 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 745 | 53 | 32 | 675 | 92 | 22 | 89 | 39 | 107 | 145 | 46 |
| Future Volume (vph) | 40 | 745 | 53 | 32 | 675 | 92 | 22 | 89 | 39 | 107 | 145 | 46 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 533 | | | 714 | | | 348 | | | 368 | |
| Travel Time (s) | | 14.5 | | | 19.5 | | | 9.5 | | | 10.0 | |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 855 | 0 | 0 | 722 | 94 | 22 | 131 | 0 | 109 | 195 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 61.0 | | 31.0 | 31.0 | 31.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 25.0% | 50.8% | | 25.8% | 25.8% | 25.8% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.42 | | | 0.35 | 0.10 | 0.19 | 0.48 | | 0.66 | 0.70 | |
| Control Delay | | 7.0 | | | 3.4 | 3.4 | 44.1 | 49.8 | | 65.1 | 59.7 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 7.0 | | | 3.4 | 3.4 | 44.1 | 49.8 | | 65.1 | 59.7 | |
| Queue Length 50th (ft) | | 112 | | | 38 | 9 | 15 | 93 | | 80 | 144 | |
| Queue Length 95th (ft) | | 184 | | | 91 | 26 | 38 | 146 | | 136 | 211 | |
| Internal Link Dist (ft) | | 453 | | | 634 | | | 268 | | | 288 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2027 | | | 2063 | 973 | 155 | 368 | | 222 | 377 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.42 | | | 0.35 | 0.10 | 0.14 | 0.36 | | 0.49 | 0.52 | |

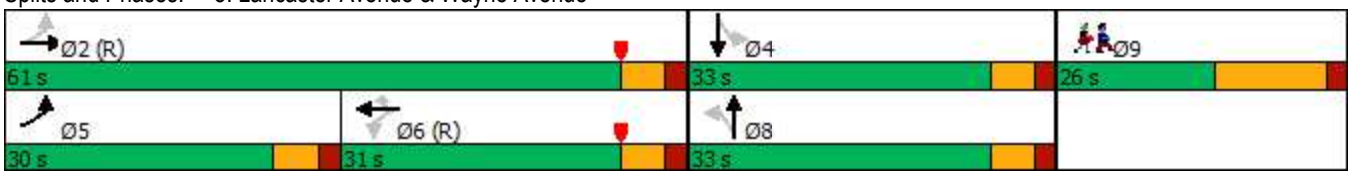
Intersection Summary

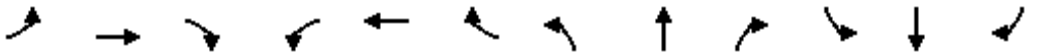
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 19 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 745 | 53 | 32 | 675 | 92 | 22 | 89 | 39 | 107 | 145 | 46 |
| Future Volume (vph) | 40 | 745 | 53 | 32 | 675 | 92 | 22 | 89 | 39 | 107 | 145 | 46 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.96 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.96 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3086 | | | 3150 | 1378 | 1509 | 1572 | | 1543 | 1613 | |
| Flt Permitted | | 0.88 | | | 0.88 | 1.00 | 0.42 | 1.00 | | 0.58 | 1.00 | |
| Satd. Flow (perm) | | 2721 | | | 2771 | 1378 | 662 | 1572 | | 945 | 1613 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 41 | 760 | 54 | 33 | 689 | 94 | 22 | 91 | 40 | 109 | 148 | 47 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 855 | 0 | 0 | 722 | 94 | 22 | 131 | 0 | 109 | 195 | 0 |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 88.4 | | | 88.4 | 88.4 | 19.6 | 19.6 | | 19.6 | 19.6 | |
| Effective Green, g (s) | | 89.4 | | | 89.4 | 88.4 | 20.6 | 20.6 | | 20.6 | 20.6 | |
| Actuated g/C Ratio | | 0.75 | | | 0.75 | 0.74 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2027 | | | 2064 | 1015 | 113 | 269 | | 162 | 276 | |
| v/s Ratio Prot | | | | | | | | 0.08 | | | c0.12 | |
| v/s Ratio Perm | | c0.31 | | | 0.26 | 0.07 | 0.03 | | | 0.12 | | |
| v/c Ratio | | 0.42 | | | 0.35 | 0.09 | 0.19 | 0.49 | | 0.67 | 0.71 | |
| Uniform Delay, d1 | | 5.7 | | | 5.3 | 4.5 | 42.6 | 44.9 | | 46.5 | 46.9 | |
| Progression Factor | | 1.00 | | | 0.50 | 0.60 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.4 | 0.2 | 0.8 | 1.4 | | 10.5 | 8.0 | |
| Delay (s) | | 5.8 | | | 3.1 | 2.8 | 43.4 | 46.3 | | 57.0 | 54.8 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 5.8 | | | 3.0 | | | 45.9 | | | 55.6 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 77.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

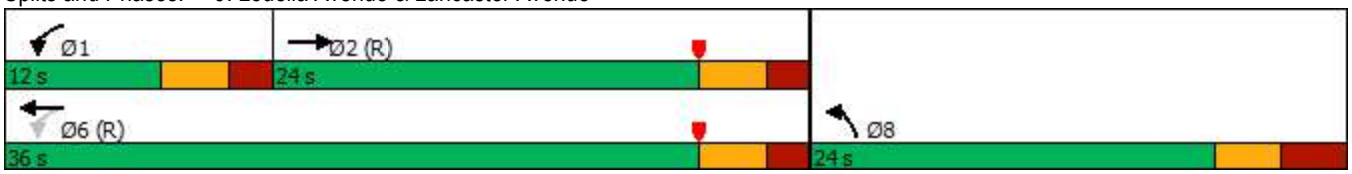
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 897 | 32 | 53 | 846 | 15 | 30 |
| Future Volume (vph) | 897 | 32 | 53 | 846 | 15 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 714 | | | 1121 | 430 | |
| Travel Time (s) | 19.5 | | | 30.6 | 11.7 | |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 967 | 0 | 0 | 936 | 47 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 24.0 | | 12.0 | 36.0 | 24.0 | |
| Total Split (%) | 40.0% | | 20.0% | 60.0% | 40.0% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.43 | | | 0.49 | 0.21 | |
| Control Delay | 5.9 | | | 2.2 | 24.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 5.9 | | | 2.2 | 24.6 | |
| Queue Length 50th (ft) | 147 | | | 21 | 15 | |
| Queue Length 95th (ft) | 138 | | | 35 | 39 | |
| Internal Link Dist (ft) | 634 | | | 1041 | 350 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2228 | | | 1909 | 520 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.43 | | | 0.49 | 0.09 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |

Offset: 6 (10%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 897 | 32 | 53 | 846 | 15 | 30 |
| Future Volume (vph) | 897 | 32 | 53 | 846 | 15 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.98 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3128 | | | 3130 | 1634 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3128 | | | 2680 | 1634 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 934 | 33 | 55 | 881 | 16 | 31 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 967 | 0 | 0 | 936 | 47 | 0 |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 41.7 | | | 41.7 | 7.3 | |
| Effective Green, g (s) | 42.7 | | | 42.7 | 8.3 | |
| Actuated g/C Ratio | 0.71 | | | 0.71 | 0.14 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2226 | | | 1907 | 226 | |
| v/s Ratio Prot | 0.31 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.35 | | |
| v/c Ratio | 0.43 | | | 0.49 | 0.21 | |
| Uniform Delay, d1 | 3.6 | | | 3.8 | 22.9 | |
| Progression Factor | 1.39 | | | 0.37 | 1.00 | |
| Incremental Delay, d2 | 0.6 | | | 0.1 | 0.5 | |
| Delay (s) | 5.6 | | | 1.6 | 23.4 | |
| Level of Service | A | | | A | C | |
| Approach Delay (s) | 5.6 | | | 1.6 | 23.4 | |
| Approach LOS | A | | | A | C | |

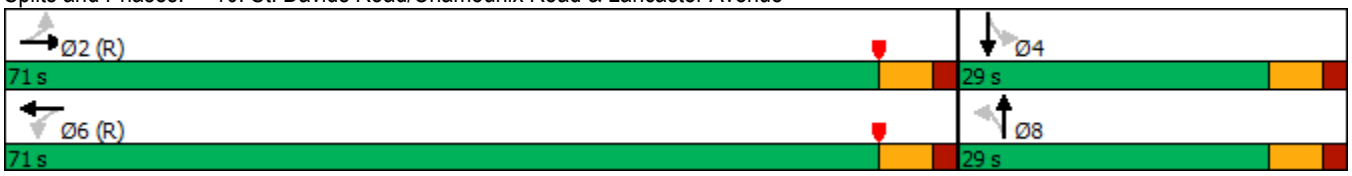
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.1 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 67.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 961 | 17 | 39 | 1013 | 142 | 4 | 25 | 32 | 75 | 22 | 42 |
| Future Volume (vph) | 35 | 961 | 17 | 39 | 1013 | 142 | 4 | 25 | 32 | 75 | 22 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1653 | | | 896 | | | 295 | | | 258 | |
| Travel Time (s) | | 32.2 | | | 17.5 | | | 8.0 | | | 7.0 | |
| Confl. Peds. (#/hr) | 5 | | 3 | 3 | | 5 | | | 8 | 8 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 25% | 0% | 3% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 71.0 | 71.0 | | 71.0 | 71.0 | | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Total Split (%) | 71.0% | 71.0% | | 71.0% | 71.0% | | 29.0% | 29.0% | | 29.0% | 29.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 100 | |
| Actuated Cycle Length: 100 | |
| Offset: 66 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 45 | |
| Control Type: Actuated-Coordinated | |

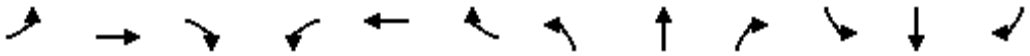
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 35 | 961 | 17 | 39 | 1013 | 142 | 4 | 25 | 32 | 75 | 22 | 42 |
| Future Volume (veh/h) | 35 | 961 | 17 | 39 | 1013 | 142 | 4 | 25 | 32 | 75 | 22 | 42 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.98 | 0.98 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1827 | 1845 | 1891 | 1834 | 1891 | 1881 | 1870 | 1881 |
| Adj Flow Rate, veh/h | 37 | 1022 | 17 | 41 | 1078 | 145 | 4 | 27 | 34 | 80 | 23 | 45 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 91 | 2348 | 39 | 88 | 2186 | 291 | 43 | 96 | 110 | 153 | 39 | 60 |
| Arrive On Green | 0.76 | 0.77 | 0.76 | 0.76 | 0.77 | 0.76 | 0.12 | 0.13 | 0.12 | 0.12 | 0.13 | 0.12 |
| Sat Flow, veh/h | 68 | 3034 | 50 | 65 | 2824 | 376 | 38 | 761 | 877 | 777 | 308 | 474 |
| Grp Volume(v), veh/h | 532 | 0 | 544 | 648 | 0 | 616 | 65 | 0 | 0 | 148 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1554 | 0 | 1597 | 1669 | 0 | 1595 | 1676 | 0 | 0 | 1559 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 11.7 | 0.0 | 0.0 | 14.3 | 0.0 | 0.0 | 0.0 | 5.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 9.8 | 0.0 | 11.7 | 12.5 | 0.0 | 14.3 | 3.6 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.06 | | 0.24 | 0.06 | | 0.52 | 0.54 | | 0.30 |
| Lane Grp Cap(c), veh/h | 1226 | 0 | 1236 | 1313 | 0 | 1235 | 233 | 0 | 0 | 236 | 0 | 0 |
| V/C Ratio(X) | 0.43 | 0.00 | 0.44 | 0.49 | 0.00 | 0.50 | 0.28 | 0.00 | 0.00 | 0.63 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1226 | 0 | 1236 | 1313 | 0 | 1235 | 417 | 0 | 0 | 402 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 3.7 | 0.0 | 3.9 | 4.0 | 0.0 | 4.2 | 40.0 | 0.0 | 0.0 | 42.3 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.1 | 0.0 | 1.1 | 1.3 | 0.0 | 1.4 | 0.9 | 0.0 | 0.0 | 3.8 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 9.1 | 0.0 | 9.2 | 11.3 | 0.0 | 10.9 | 3.1 | 0.0 | 0.0 | 7.7 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 4.8 | 0.0 | 5.0 | 5.3 | 0.0 | 5.7 | 40.9 | 0.0 | 0.0 | 46.2 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 1076 | | | 1264 | | | 65 | | | 148 | |
| Approach Delay, s/veh | | 4.9 | | | 5.5 | | | 40.9 | | | 46.2 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 82.4 | | 17.6 | | 82.4 | | 17.6 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 65.0 | | 23.0 | | 65.0 | | 23.0 |
| Max Q Clear Time (g_c+I1), s | | 13.7 | | 11.1 | | 16.3 | | 5.6 |
| Green Ext Time (p_c), s | | 5.2 | | 0.6 | | 6.7 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 8.5 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 15 | 9 | 5 | 7 | 71 | 11 | 9 | 120 | 6 | 6 | 100 | 14 |
| Future Volume (vph) | 15 | 9 | 5 | 7 | 71 | 11 | 9 | 120 | 6 | 6 | 100 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1097 | | | 652 | | | 218 | | | 279 | |
| Travel Time (s) | | 29.9 | | | 17.8 | | | 5.9 | | | 7.6 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 7 | | 5 | 5 | | 7 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles (%) | 7% | 0% | 40% | 0% | 1% | 0% | 11% | 11% | 0% | 0% | 3% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 15 | 9 | 5 | 7 | 71 | 11 | 9 | 120 | 6 | 6 | 100 | 14 |
| Future Vol, veh/h | 15 | 9 | 5 | 7 | 71 | 11 | 9 | 120 | 6 | 6 | 100 | 14 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles, % | 7 | 0 | 40 | 0 | 1 | 0 | 11 | 11 | 0 | 0 | 3 | 0 |
| Mvmt Flow | 19 | 11 | 6 | 9 | 89 | 14 | 11 | 150 | 8 | 8 | 125 | 18 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.2 | 8.4 | 8.9 | 8.4 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 7% | 52% | 8% | 5% |
| Vol Thru, % | 89% | 31% | 80% | 83% |
| Vol Right, % | 4% | 17% | 12% | 12% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 135 | 29 | 89 | 120 |
| LT Vol | 9 | 15 | 7 | 6 |
| Through Vol | 120 | 9 | 71 | 100 |
| RT Vol | 6 | 5 | 11 | 14 |
| Lane Flow Rate | 169 | 36 | 111 | 150 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.215 | 0.049 | 0.143 | 0.183 |
| Departure Headway (Hd) | 4.59 | 4.89 | 4.619 | 4.386 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 783 | 732 | 777 | 819 |
| Service Time | 2.615 | 2.922 | 2.645 | 2.41 |
| HCM Lane V/C Ratio | 0.216 | 0.049 | 0.143 | 0.183 |
| HCM Control Delay | 8.9 | 8.2 | 8.4 | 8.4 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.8 | 0.2 | 0.5 | 0.7 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 44 | 86 | 11 | 16 | 60 |
| Future Volume (vph) | 9 | 44 | 86 | 11 | 16 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1097 | | 261 | | | 430 |
| Travel Time (s) | 29.9 | | 7.1 | | | 11.7 |
| Confl. Peds. (#/hr) | 1 | 24 | | 10 | 10 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 0% | 19% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

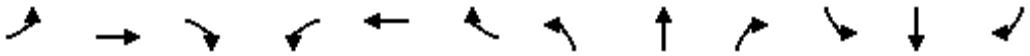
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 44 | 86 | 11 | 16 | 60 |
| Future Vol, veh/h | 9 | 44 | 86 | 11 | 16 | 60 |
| Conflicting Peds, #/hr | 1 | 24 | 0 | 10 | 10 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 87 | 87 | 87 | 87 | 87 | 87 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 19 | 2 |
| Mvmt Flow | 10 | 51 | 99 | 13 | 18 | 69 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 222 | 140 | 0 | 0 | 122 | 0 |
| Stage 1 | 116 | - | - | - | - | - |
| Stage 2 | 106 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.22 | - | - | 4.5 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3.2 | - |
| Pot Cap-1 Maneuver | 886 | 968 | - | - | 1019 | - |
| Stage 1 | 1058 | - | - | - | - | - |
| Stage 2 | 1069 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 859 | 937 | - | - | 1009 | - |
| Mov Cap-2 Maneuver | 859 | - | - | - | - | - |
| Stage 1 | 1047 | - | - | - | - | - |
| Stage 2 | 1048 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 1.8 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 923 | 1009 | - |
| HCM Lane V/C Ratio | - | - | 0.066 | 0.018 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |

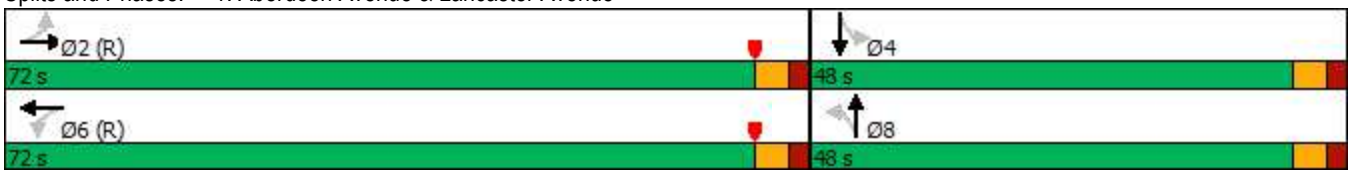


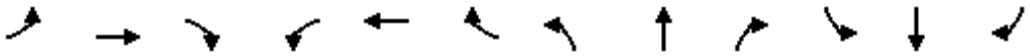
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 693 | 42 | 14 | 856 | 50 | 39 | 94 | 36 | 117 | 71 | 64 |
| Future Volume (vph) | 39 | 693 | 42 | 14 | 856 | 50 | 39 | 94 | 36 | 117 | 71 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 797 | 0 | 0 | 948 | 0 | 0 | 174 | 0 | 0 | 260 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.45 | | | 0.51 | | | 0.49 | | | 0.87 | |
| Control Delay | | 12.5 | | | 11.1 | | | 42.4 | | | 69.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 12.5 | | | 11.1 | | | 42.4 | | | 69.4 | |
| Queue Length 50th (ft) | | 119 | | | 180 | | | 116 | | | 194 | |
| Queue Length 95th (ft) | | 270 | | | 299 | | | 168 | | | 270 | |
| Internal Link Dist (ft) | | 1062 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1790 | | | 1866 | | | 540 | | | 455 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.45 | | | 0.51 | | | 0.32 | | | 0.57 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |

Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 693 | 42 | 14 | 856 | 50 | 39 | 94 | 36 | 117 | 71 | 64 |
| Future Volume (vph) | 39 | 693 | 42 | 14 | 856 | 50 | 39 | 94 | 36 | 117 | 71 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.94 | | | *0.88 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 3057 | | | 2872 | | | 1687 | | | 1805 | |
| Flt Permitted | | 0.84 | | | 0.94 | | | 0.87 | | | 0.67 | |
| Satd. Flow (perm) | | 2590 | | | 2698 | | | 1477 | | | 1244 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 40 | 714 | 43 | 14 | 882 | 52 | 40 | 97 | 37 | 121 | 73 | 66 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 797 | 0 | 0 | 948 | 0 | 0 | 174 | 0 | 0 | 260 | 0 |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 81.9 | | | 81.9 | | | 28.1 | | | 28.1 | |
| Effective Green, g (s) | | 82.9 | | | 82.9 | | | 29.1 | | | 29.1 | |
| Actuated g/C Ratio | | 0.69 | | | 0.69 | | | 0.24 | | | 0.24 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1789 | | | 1863 | | | 358 | | | 301 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.31 | | | c0.35 | | | 0.12 | | | c0.21 | |
| v/c Ratio | | 0.45 | | | 0.51 | | | 0.49 | | | 0.86 | |
| Uniform Delay, d1 | | 8.3 | | | 8.8 | | | 39.0 | | | 43.6 | |
| Progression Factor | | 1.24 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.8 | | | 1.0 | | | 1.0 | | | 21.7 | |
| Delay (s) | | 11.1 | | | 9.8 | | | 40.1 | | | 65.3 | |
| Level of Service | | B | | | A | | | D | | | E | |
| Approach Delay (s) | | 11.1 | | | 9.8 | | | 40.1 | | | 65.3 | |
| Approach LOS | | B | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 87.4% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 829 | 17 | 0 | 921 | 0 | 2 |
| Future Volume (vph) | 829 | 17 | 0 | 921 | 0 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 829 | 17 | 0 | 921 | 0 | 2 |
| Future Vol, veh/h | 829 | 17 | 0 | 921 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 855 | 18 | 0 | 949 | 0 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 873 | 0 | 1346 | 444 |
| Stage 1 | - | - | - | - | 864 | - |
| Stage 2 | - | - | - | - | 482 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 987 | - | *117 | *935 |
| Stage 1 | - | - | - | - | *755 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 987 | - | *116 | *930 |
| Mov Cap-2 Maneuver | - | - | - | - | *116 | - |
| Stage 1 | - | - | - | - | *755 | - |
| Stage 2 | - | - | - | - | *839 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 930 | - | - | 987 | - |
| HCM Lane V/C Ratio | 0.002 | - | - | - | - |
| HCM Control Delay (s) | 8.9 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 830 | 1 | 0 | 920 | 1 | 22 |
| Future Volume (vph) | 830 | 1 | 0 | 920 | 1 | 22 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 830 | 1 | 0 | 920 | 1 | 22 |
| Future Vol, veh/h | 830 | 1 | 0 | 920 | 1 | 22 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 856 | 1 | 0 | 948 | 1 | 23 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 857 | 0 | 1338 | 436 |
| Stage 1 | - | - | - | - | 857 | - |
| Stage 2 | - | - | - | - | 481 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *118 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1029 | - | *117 | *846 |
| Mov Cap-2 Maneuver | - | - | - | - | *117 | - |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *839 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 10.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 666 | - | - | * 1029 | - |
| HCM Lane V/C Ratio | 0.036 | - | - | - | - |
| HCM Control Delay (s) | 10.6 | - | - | 0 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 805 | 47 | 8 | 918 | 2 | 4 |
| Future Volume (vph) | 805 | 47 | 8 | 918 | 2 | 4 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 805 | 47 | 8 | 918 | 2 | 4 |
| Future Vol, veh/h | 805 | 47 | 8 | 918 | 2 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 830 | 48 | 8 | 946 | 2 | 4 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 878 | 0 | 1350 | 446 |
| Stage 1 | - | - | - | - | 854 | - |
| Stage 2 | - | - | - | - | 496 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1056 | - | *116 | *880 |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 1056 | - | *113 | *875 |
| Mov Cap-2 Maneuver | - | - | - | - | *113 | - |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *827 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 18.7 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 269 | - | - | 1056 | - |
| HCM Lane V/C Ratio | 0.023 | - | - | 0.008 | - |
| HCM Control Delay (s) | 18.7 | - | - | 8.4 | 0.1 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 805 | 4 | 4 | 923 | 3 | 54 |
| Future Volume (vph) | 805 | 4 | 4 | 923 | 3 | 54 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1647 | 89 | |
| Travel Time (s) | 1.7 | | | 32.1 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 805 | 4 | 4 | 923 | 3 | 54 |
| Future Vol, veh/h | 805 | 4 | 4 | 923 | 3 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 830 | 4 | 4 | 952 | 3 | 56 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 834 | 0 | 1323 | 424 |
| Stage 1 | - | - | - | - | 832 | - |
| Stage 2 | - | - | - | - | 491 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1064 | - | *122 | *880 |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1064 | - | *120 | *875 |
| Mov Cap-2 Maneuver | - | - | - | - | *120 | - |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *833 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 11 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 657 | - | - | * 1064 | - |
| HCM Lane V/C Ratio | 0.089 | - | - | 0.004 | - |
| HCM Control Delay (s) | 11 | - | - | 8.4 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 6 | 10 | 159 | 10 | 2 | 125 |
| Future Volume (vph) | 6 | 10 | 159 | 10 | 2 | 125 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 9 | 9 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 10 | 159 | 10 | 2 | 125 |
| Future Vol, veh/h | 6 | 10 | 159 | 10 | 2 | 125 |
| Conflicting Peds, #/hr | 9 | 9 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 1 |
| Mvmt Flow | 6 | 10 | 164 | 10 | 2 | 129 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 311 | 178 | 0 | 0 | 174 | 0 |
| Stage 1 | 169 | - | - | - | - | - |
| Stage 2 | 142 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 832 | 921 | - | - | 1047 | - |
| Stage 1 | 997 | - | - | - | - | - |
| Stage 2 | 1078 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 823 | 913 | - | - | 1047 | - |
| Mov Cap-2 Maneuver | 823 | - | - | - | - | - |
| Stage 1 | 997 | - | - | - | - | - |
| Stage 2 | 1066 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 877 | 1047 | - |
| HCM Lane V/C Ratio | - | - | 0.019 | 0.002 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 2 | 167 | 8 | 0 | 131 |
| Future Volume (vph) | 2 | 2 | 167 | 8 | 0 | 131 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 69 |
| Travel Time (s) | 2.0 | | 8.1 | | | 1.9 |
| Confl. Peds. (#/hr) | 9 | 9 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

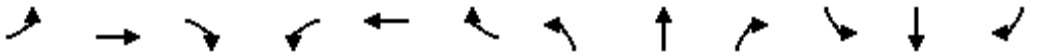
| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 2 | 167 | 8 | 0 | 131 |
| Future Vol, veh/h | 2 | 2 | 167 | 8 | 0 | 131 |
| Conflicting Peds, #/hr | 9 | 9 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 1 |
| Mvmt Flow | 2 | 2 | 172 | 8 | 0 | 135 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 320 | 185 | 0 | 0 | 180 | 0 |
| Stage 1 | 176 | - | - | - | - | - |
| Stage 2 | 144 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 821 | 913 | - | - | 1042 | - |
| Stage 1 | 990 | - | - | - | - | - |
| Stage 2 | 1075 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 813 | 905 | - | - | 1042 | - |
| Mov Cap-2 Maneuver | 813 | - | - | - | - | - |
| Stage 1 | 990 | - | - | - | - | - |
| Stage 2 | 1065 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 857 | 1042 | - |
| HCM Lane V/C Ratio | - | - | 0.005 | - | - |
| HCM Control Delay (s) | - | - | 9.2 | 0 | - |
| HCM Lane LOS | - | - | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

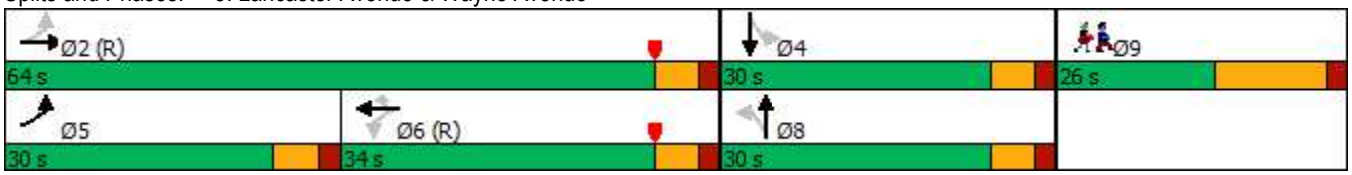


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 694 | 38 | 44 | 775 | 87 | 60 | 81 | 71 | 68 | 80 | 60 |
| Future Volume (vph) | 38 | 694 | 38 | 44 | 775 | 87 | 60 | 81 | 71 | 68 | 80 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 793 | 0 | 0 | 844 | 90 | 62 | 157 | 0 | 70 | 144 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 64.0 | | 34.0 | 34.0 | 34.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 25.0% | 53.3% | | 28.3% | 28.3% | 28.3% | 25.0% | 25.0% | | 25.0% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.38 | | | 0.41 | 0.09 | 0.50 | 0.65 | | 0.58 | 0.62 | |
| Control Delay | | 5.7 | | | 3.6 | 3.3 | 59.5 | 60.4 | | 65.9 | 58.5 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 5.7 | | | 3.6 | 3.3 | 59.5 | 60.4 | | 65.9 | 58.5 | |
| Queue Length 50th (ft) | | 90 | | | 52 | 10 | 45 | 116 | | 51 | 106 | |
| Queue Length 95th (ft) | | 149 | | | 67 | 19 | 87 | 178 | | 97 | 165 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2080 | | | 2081 | 1008 | 172 | 333 | | 167 | 325 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.38 | | | 0.41 | 0.09 | 0.36 | 0.47 | | 0.42 | 0.44 | |

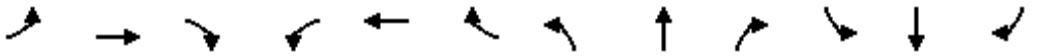
Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 694 | 38 | 44 | 775 | 87 | 60 | 81 | 71 | 68 | 80 | 60 |
| Future Volume (vph) | 38 | 694 | 38 | 44 | 775 | 87 | 60 | 81 | 71 | 68 | 80 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.97 | | 1.00 | 0.97 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.93 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3124 | | | 3149 | 1378 | 1491 | 1591 | | 1559 | 1549 | |
| Flt Permitted | | 0.87 | | | 0.86 | 1.00 | 0.52 | 1.00 | | 0.48 | 1.00 | |
| Satd. Flow (perm) | | 2715 | | | 2717 | 1378 | 820 | 1591 | | 794 | 1549 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 39 | 715 | 39 | 45 | 799 | 90 | 62 | 84 | 73 | 70 | 82 | 62 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 793 | 0 | 0 | 844 | 90 | 62 | 157 | 0 | 70 | 144 | 0 |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 91.0 | | | 91.0 | 91.0 | 17.0 | 17.0 | | 17.0 | 17.0 | |
| Effective Green, g (s) | | 92.0 | | | 92.0 | 91.0 | 18.0 | 18.0 | | 18.0 | 18.0 | |
| Actuated g/C Ratio | | 0.77 | | | 0.77 | 0.76 | 0.15 | 0.15 | | 0.15 | 0.15 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2081 | | | 2083 | 1044 | 123 | 238 | | 119 | 232 | |
| v/s Ratio Prot | | | | | | | | c0.10 | | | 0.09 | |
| v/s Ratio Perm | | 0.29 | | | c0.31 | 0.07 | 0.08 | | | 0.09 | | |
| v/c Ratio | | 0.38 | | | 0.41 | 0.09 | 0.50 | 0.66 | | 0.59 | 0.62 | |
| Uniform Delay, d1 | | 4.6 | | | 4.7 | 3.7 | 46.9 | 48.1 | | 47.5 | 47.8 | |
| Progression Factor | | 1.00 | | | 0.57 | 0.68 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.5 | 0.1 | 3.2 | 6.5 | | 7.2 | 5.1 | |
| Delay (s) | | 4.7 | | | 3.2 | 2.7 | 50.1 | 54.6 | | 54.8 | 52.9 | |
| Level of Service | | A | | | A | A | D | D | | D | D | |
| Approach Delay (s) | | 4.7 | | | 3.2 | | | 53.3 | | | 53.5 | |
| Approach LOS | | A | | | A | | | D | | | D | |

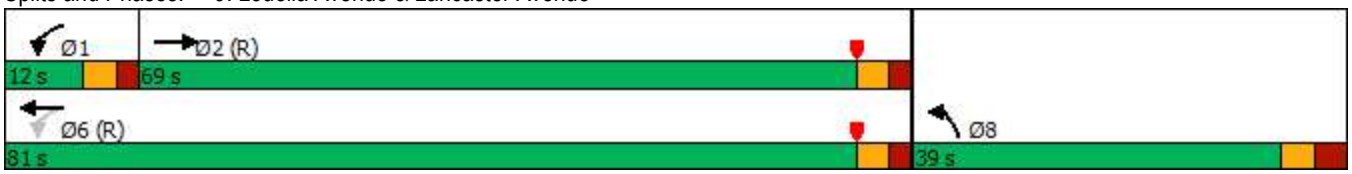
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 77.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 788 | 57 | 48 | 917 | 41 | 65 |
| Future Volume (vph) | 788 | 57 | 48 | 917 | 41 | 65 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 880 | 0 | 0 | 1005 | 111 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.35 | | | 0.47 | 0.55 | |
| Control Delay | 3.0 | | | 2.0 | 59.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 3.0 | | | 2.0 | 59.6 | |
| Queue Length 50th (ft) | 61 | | | 34 | 82 | |
| Queue Length 95th (ft) | 91 | | | 41 | 136 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2532 | | | 2159 | 482 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.35 | | | 0.47 | 0.23 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 788 | 57 | 48 | 917 | 41 | 65 |
| Future Volume (vph) | 788 | 57 | 48 | 917 | 41 | 65 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.97 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3140 | | | 3135 | 1678 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3140 | | | 2677 | 1678 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 821 | 59 | 50 | 955 | 43 | 68 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 880 | 0 | 0 | 1005 | 111 | 0 |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 95.8 | | | 95.8 | 13.2 | |
| Effective Green, g (s) | 96.8 | | | 96.8 | 14.2 | |
| Actuated g/C Ratio | 0.81 | | | 0.81 | 0.12 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2532 | | | 2159 | 198 | |
| v/s Ratio Prot | 0.28 | | | | c0.07 | |
| v/s Ratio Perm | | | | c0.38 | | |
| v/c Ratio | 0.35 | | | 0.47 | 0.56 | |
| Uniform Delay, d1 | 3.1 | | | 3.6 | 50.0 | |
| Progression Factor | 0.77 | | | 0.34 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.1 | 3.6 | |
| Delay (s) | 2.8 | | | 1.4 | 53.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.8 | | | 1.4 | 53.6 | |
| Approach LOS | A | | | A | D | |

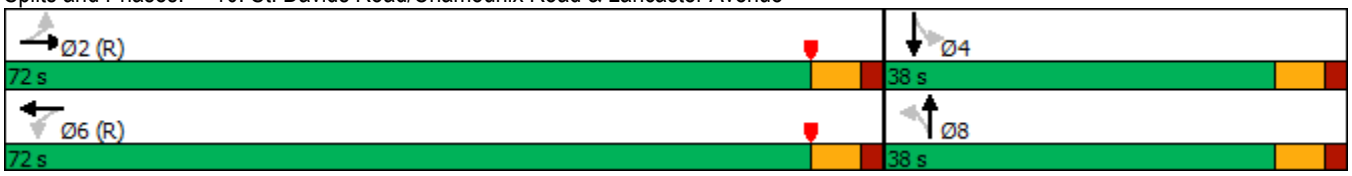
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 71.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 887 | 18 | 36 | 991 | 63 | 13 | 17 | 41 | 55 | 17 | 38 |
| Future Volume (vph) | 30 | 887 | 18 | 36 | 991 | 63 | 13 | 17 | 41 | 55 | 17 | 38 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1647 | | | 744 | | | 642 | | | 402 | |
| Travel Time (s) | | 32.1 | | | 14.5 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | 5 | | 2 | 2 | | 5 | | | 4 | 4 | | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 8% | 0% | 0% | 2% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

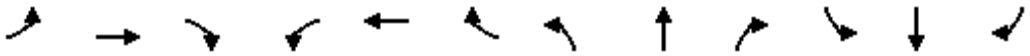
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 30 | 887 | 18 | 36 | 991 | 63 | 13 | 17 | 41 | 55 | 17 | 38 |
| Future Volume (veh/h) | 30 | 887 | 18 | 36 | 991 | 63 | 13 | 17 | 41 | 55 | 17 | 38 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1864 | 1891 | 1881 | 1863 | 1881 |
| Adj Flow Rate, veh/h | 31 | 905 | 17 | 37 | 1011 | 61 | 13 | 17 | 42 | 56 | 17 | 34 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 90 | 2496 | 46 | 95 | 2487 | 148 | 56 | 49 | 93 | 122 | 32 | 48 |
| Arrive On Green | 0.81 | 0.82 | 0.81 | 0.81 | 0.82 | 0.81 | 0.08 | 0.09 | 0.08 | 0.08 | 0.09 | 0.08 |
| Sat Flow, veh/h | 68 | 3062 | 57 | 74 | 3050 | 182 | 186 | 524 | 994 | 770 | 336 | 515 |
| Grp Volume(v), veh/h | 476 | 0 | 477 | 563 | 0 | 546 | 72 | 0 | 0 | 107 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1591 | 0 | 1596 | 1675 | 0 | 1631 | 1704 | 0 | 0 | 1622 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.7 | 0.0 | 0.0 | 10.3 | 0.0 | 0.0 | 0.0 | 2.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.6 | 0.0 | 8.7 | 9.1 | 0.0 | 10.3 | 4.4 | 0.0 | 0.0 | 6.8 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.04 | 0.07 | | 0.11 | 0.18 | | 0.58 | 0.52 | | 0.32 |
| Lane Grp Cap(c), veh/h | 1317 | 0 | 1301 | 1385 | 0 | 1330 | 183 | 0 | 0 | 187 | 0 | 0 |
| V/C Ratio(X) | 0.36 | 0.00 | 0.37 | 0.41 | 0.00 | 0.41 | 0.39 | 0.00 | 0.00 | 0.57 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1317 | 0 | 1301 | 1385 | 0 | 1330 | 508 | 0 | 0 | 489 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.6 | 0.0 | 2.7 | 2.7 | 0.0 | 2.8 | 47.6 | 0.0 | 0.0 | 48.5 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.8 | 0.0 | 0.8 | 0.9 | 0.0 | 0.9 | 1.9 | 0.0 | 0.0 | 3.9 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.2 | 0.0 | 7.2 | 8.7 | 0.0 | 8.6 | 4.0 | 0.0 | 0.0 | 6.1 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.4 | 0.0 | 3.5 | 3.6 | 0.0 | 3.8 | 49.5 | 0.0 | 0.0 | 52.4 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 953 | | | 1109 | | | 72 | | | 107 | |
| Approach Delay, s/veh | | 3.4 | | | 3.7 | | | 49.5 | | | 52.4 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 94.7 | | 15.3 | | 94.7 | | 15.3 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 10.7 | | 8.8 | | 12.3 | | 6.4 |
| Green Ext Time (p_c), s | | 4.3 | | 0.5 | | 5.3 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.4 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 7 | 14 | 3 | 4 | 27 | 18 | 3 | 111 | 11 | 6 | 102 | 18 |
| Future Volume (vph) | 7 | 14 | 3 | 4 | 27 | 18 | 3 | 111 | 11 | 6 | 102 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 6 | | 6 | 6 | | 6 | 2 | | 4 | 4 | | 2 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% | 0% | 1% | 11% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.1 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 7 | 14 | 3 | 4 | 27 | 18 | 3 | 111 | 11 | 6 | 102 | 18 |
| Future Vol, veh/h | 7 | 14 | 3 | 4 | 27 | 18 | 3 | 111 | 11 | 6 | 102 | 18 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 11 |
| Mvmt Flow | 9 | 18 | 4 | 5 | 34 | 23 | 4 | 141 | 14 | 8 | 129 | 23 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.9 | 7.8 | 8.2 | 8.2 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 29% | 8% | 5% |
| Vol Thru, % | 89% | 58% | 55% | 81% |
| Vol Right, % | 9% | 12% | 37% | 14% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 125 | 24 | 49 | 126 |
| LT Vol | 3 | 7 | 4 | 6 |
| Through Vol | 111 | 14 | 27 | 102 |
| RT Vol | 11 | 3 | 18 | 18 |
| Lane Flow Rate | 158 | 30 | 62 | 159 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.186 | 0.039 | 0.076 | 0.186 |
| Departure Headway (Hd) | 4.236 | 4.648 | 4.424 | 4.208 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 851 | 772 | 812 | 856 |
| Service Time | 2.24 | 2.667 | 2.44 | 2.212 |
| HCM Lane V/C Ratio | 0.186 | 0.039 | 0.076 | 0.186 |
| HCM Control Delay | 8.2 | 7.9 | 7.8 | 8.2 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.7 | 0.1 | 0.2 | 0.7 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 50 | 75 | 8 | 18 | 36 |
| Future Volume (vph) | 9 | 50 | 75 | 8 | 18 | 36 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | 1 | 13 | | 5 | 5 | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Heavy Vehicles (%) | 11% | 0% | 0% | 0% | 6% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

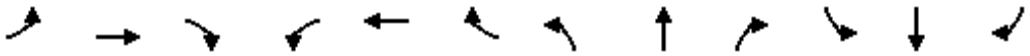
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 50 | 75 | 8 | 18 | 36 |
| Future Vol, veh/h | 9 | 50 | 75 | 8 | 18 | 36 |
| Conflicting Peds, #/hr | 1 | 13 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 72 | 72 | 72 | 72 | 72 | 72 |
| Heavy Vehicles, % | 11 | 0 | 0 | 0 | 6 | 0 |
| Mvmt Flow | 13 | 69 | 104 | 11 | 25 | 50 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 216 | 128 | 0 | 0 | 120 | 0 |
| Stage 1 | 115 | - | - | - | - | - |
| Stage 2 | 101 | - | - | - | - | - |
| Critical Hdwy | 6.51 | 6.2 | - | - | 4.4 | - |
| Critical Hdwy Stg 1 | 5.51 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.51 | - | - | - | - | - |
| Follow-up Hdwy | 3.1 | 3.1 | - | - | 3.1 | - |
| Pot Cap-1 Maneuver | 861 | 984 | - | - | 1056 | - |
| Stage 1 | 1023 | - | - | - | - | - |
| Stage 2 | 1039 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 835 | 967 | - | - | 1051 | - |
| Mov Cap-2 Maneuver | 835 | - | - | - | - | - |
| Stage 1 | 1018 | - | - | - | - | - |
| Stage 2 | 1013 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 2.8 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 944 | 1051 | - |
| HCM Lane V/C Ratio | - | - | 0.087 | 0.024 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.5 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

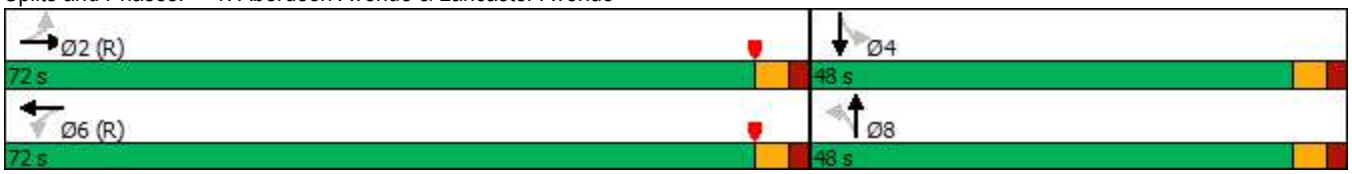


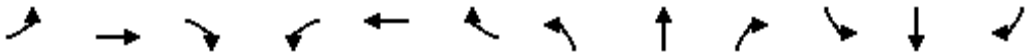
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 547 | 26 | 13 | 585 | 32 | 29 | 48 | 23 | 62 | 49 | 37 |
| Future Volume (vph) | 28 | 547 | 26 | 13 | 585 | 32 | 29 | 48 | 23 | 62 | 49 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 614 | 0 | 0 | 643 | 0 | 0 | 102 | 0 | 0 | 151 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.29 | | | 0.29 | | | 0.47 | | | 0.71 | |
| Control Delay | | 5.1 | | | 4.4 | | | 52.8 | | | 65.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 5.1 | | | 4.4 | | | 52.8 | | | 65.8 | |
| Queue Length 50th (ft) | | 45 | | | 62 | | | 73 | | | 113 | |
| Queue Length 95th (ft) | | 136 | | | 109 | | | 123 | | | 175 | |
| Internal Link Dist (ft) | | 1062 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2097 | | | 2236 | | | 526 | | | 521 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.29 | | | 0.29 | | | 0.19 | | | 0.29 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 547 | 26 | 13 | 585 | 32 | 29 | 48 | 23 | 62 | 49 | 37 |
| Future Volume (vph) | 28 | 547 | 26 | 13 | 585 | 32 | 29 | 48 | 23 | 62 | 49 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.90 | | | *0.92 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2970 | | | 3038 | | | 1681 | | | 1821 | |
| Flt Permitted | | 0.90 | | | 0.94 | | | 0.84 | | | 0.76 | |
| Satd. Flow (perm) | | 2678 | | | 2855 | | | 1437 | | | 1422 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 29 | 558 | 27 | 13 | 597 | 33 | 30 | 49 | 23 | 63 | 50 | 38 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 614 | 0 | 0 | 643 | 0 | 0 | 102 | 0 | 0 | 151 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 93.0 | | | 93.0 | | | 17.0 | | | 17.0 | |
| Effective Green, g (s) | | 94.0 | | | 94.0 | | | 18.0 | | | 18.0 | |
| Actuated g/C Ratio | | 0.78 | | | 0.78 | | | 0.15 | | | 0.15 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 2097 | | | 2236 | | | 215 | | | 213 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.23 | | | 0.23 | | | 0.07 | | | c0.11 | |
| v/c Ratio | | 0.29 | | | 0.29 | | | 0.47 | | | 0.71 | |
| Uniform Delay, d1 | | 3.7 | | | 3.6 | | | 46.7 | | | 48.5 | |
| Progression Factor | | 1.14 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.3 | | | 0.3 | | | 1.7 | | | 10.3 | |
| Delay (s) | | 4.5 | | | 4.0 | | | 48.3 | | | 58.8 | |
| Level of Service | | A | | | A | | | D | | | E | |
| Approach Delay (s) | | 4.5 | | | 4.0 | | | 48.3 | | | 58.8 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.36 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 60.0% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 623 | 9 | 1 | 631 | 0 | 2 |
| Future Volume (vph) | 623 | 9 | 1 | 631 | 0 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 623 | 9 | 1 | 631 | 0 | 2 |
| Future Vol, veh/h | 623 | 9 | 1 | 631 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 636 | 9 | 1 | 644 | 0 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 645 | 0 | 965 | 323 |
| Stage 1 | - | - | - | - | 641 | - |
| Stage 2 | - | - | - | - | 324 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1104 | - | *232 | *1026 |
| Stage 1 | - | - | - | - | *851 | - |
| Stage 2 | - | - | - | - | *977 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 1104 | - | *232 | *1026 |
| Mov Cap-2 Maneuver | - | - | - | - | *232 | - |
| Stage 1 | - | - | - | - | *851 | - |
| Stage 2 | - | - | - | - | *976 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1026 | - | - | 1104 | - |
| HCM Lane V/C Ratio | 0.002 | - | - | 0.001 | - |
| HCM Control Delay (s) | 8.5 | - | - | 8.3 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 622 | 3 | 2 | 628 | 4 | 14 |
| Future Volume (vph) | 622 | 3 | 2 | 628 | 4 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 622 | 3 | 2 | 628 | 4 | 14 |
| Future Vol, veh/h | 622 | 3 | 2 | 628 | 4 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 635 | 3 | 2 | 641 | 4 | 14 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 638 | 0 | 962 | 319 |
| Stage 1 | - | - | - | - | 637 | - |
| Stage 2 | - | - | - | - | 325 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1171 | - | *233 | *968 |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *977 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1171 | - | *232 | *968 |
| Mov Cap-2 Maneuver | - | - | - | - | *232 | - |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *974 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 11.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 568 | - | - | * 1171 | - |
| HCM Lane V/C Ratio | 0.032 | - | - | 0.002 | - |
| HCM Control Delay (s) | 11.6 | - | - | 8.1 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 615 | 21 | 3 | 629 | 1 | 2 |
| Future Volume (vph) | 615 | 21 | 3 | 629 | 1 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 615 | 21 | 3 | 629 | 1 | 2 |
| Future Vol, veh/h | 615 | 21 | 3 | 629 | 1 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 628 | 21 | 3 | 642 | 1 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 649 | 0 | 966 | 325 |
| Stage 1 | - | - | - | - | 639 | - |
| Stage 2 | - | - | - | - | 327 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1171 | - | *232 | *968 |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *977 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1171 | - | *231 | *968 |
| Mov Cap-2 Maneuver | - | - | - | - | *231 | - |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *973 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 12.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 469 | - | - | * 1171 | - |
| HCM Lane V/C Ratio | 0.007 | - | - | 0.003 | - |
| HCM Control Delay (s) | 12.7 | - | - | 8.1 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 617 | 0 | 6 | 624 | 8 | 14 |
| Future Volume (vph) | 617 | 0 | 6 | 624 | 8 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1647 | 89 | |
| Travel Time (s) | 1.7 | | | 32.1 | 2.4 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 617 | 0 | 6 | 624 | 8 | 14 |
| Future Vol, veh/h | 617 | 0 | 6 | 624 | 8 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 630 | 0 | 6 | 637 | 8 | 14 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 630 | 0 | 961 | 315 |
| Stage 1 | - | - | - | - | 630 | - |
| Stage 2 | - | - | - | - | 331 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1171 | - | *234 | *968 |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1010 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1171 | - | *232 | *968 |
| Mov Cap-2 Maneuver | - | - | - | - | *232 | - |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1002 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 13.4 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 449 | - | - | * 1171 | - |
| HCM Lane V/C Ratio | 0.05 | - | - | 0.005 | - |
| HCM Control Delay (s) | 13.4 | - | - | 8.1 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 5 | 95 | 4 | 5 | 83 |
| Future Volume (vph) | 4 | 5 | 95 | 4 | 5 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | | | | 6 | 6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 5 | 95 | 4 | 5 | 83 |
| Future Vol, veh/h | 4 | 5 | 95 | 4 | 5 | 83 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 6 | 6 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 4 | 5 | 97 | 4 | 5 | 85 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 200 | 105 | 0 | 0 | 107 | 0 |
| Stage 1 | 105 | - | - | - | - | - |
| Stage 2 | 95 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 960 | 1014 | - | - | 1104 | - |
| Stage 1 | 1071 | - | - | - | - | - |
| Stage 2 | 1120 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 949 | 1008 | - | - | 1098 | - |
| Mov Cap-2 Maneuver | 949 | - | - | - | - | - |
| Stage 1 | 1065 | - | - | - | - | - |
| Stage 2 | 1114 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.7 | 0 | 0.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 981 | 1098 | - |
| HCM Lane V/C Ratio | - | - | 0.009 | 0.005 | - |
| HCM Control Delay (s) | - | - | 8.7 | 8.3 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 5 | 94 | 5 | 2 | 85 |
| Future Volume (vph) | 4 | 5 | 94 | 5 | 2 | 85 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 69 |
| Travel Time (s) | 2.0 | | 8.1 | | | 1.9 |
| Confl. Peds. (#/hr) | | | | 6 | 6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

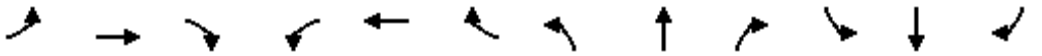
| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 5 | 94 | 5 | 2 | 85 |
| Future Vol, veh/h | 4 | 5 | 94 | 5 | 2 | 85 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 6 | 6 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 4 | 5 | 96 | 5 | 2 | 87 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 196 | 105 | 0 | 0 | 107 | 0 |
| Stage 1 | 105 | - | - | - | - | - |
| Stage 2 | 91 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 966 | 1014 | - | - | 1104 | - |
| Stage 1 | 1071 | - | - | - | - | - |
| Stage 2 | 1125 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 958 | 1008 | - | - | 1098 | - |
| Mov Cap-2 Maneuver | 958 | - | - | - | - | - |
| Stage 1 | 1065 | - | - | - | - | - |
| Stage 2 | 1122 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.7 | 0 | 0.2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 985 | 1098 | - |
| HCM Lane V/C Ratio | - | - | 0.009 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.7 | 8.3 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 57 | 491 | 27 | 40 | 488 | 96 | 29 | 53 | 59 | 72 | 67 | 53 |
| Future Volume (vph) | 57 | 491 | 27 | 40 | 488 | 96 | 29 | 53 | 59 | 72 | 67 | 53 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 605 | 0 | 0 | 556 | 101 | 31 | 118 | 0 | 76 | 127 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 61.0 | | 31.0 | 31.0 | 31.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 25.0% | 50.8% | | 25.8% | 25.8% | 25.8% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.29 | | | 0.26 | 0.09 | 0.26 | 0.56 | | 0.58 | 0.60 | |
| Control Delay | | 4.4 | | | 3.0 | 3.1 | 50.5 | 58.0 | | 66.0 | 60.5 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 4.4 | | | 3.0 | 3.1 | 50.5 | 58.0 | | 66.0 | 60.5 | |
| Queue Length 50th (ft) | | 57 | | | 36 | 11 | 22 | 87 | | 56 | 94 | |
| Queue Length 95th (ft) | | 97 | | | 47 | 22 | 51 | 141 | | 105 | 152 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2052 | | | 2140 | 1067 | 208 | 374 | | 229 | 370 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.29 | | | 0.26 | 0.09 | 0.15 | 0.32 | | 0.33 | 0.34 | |

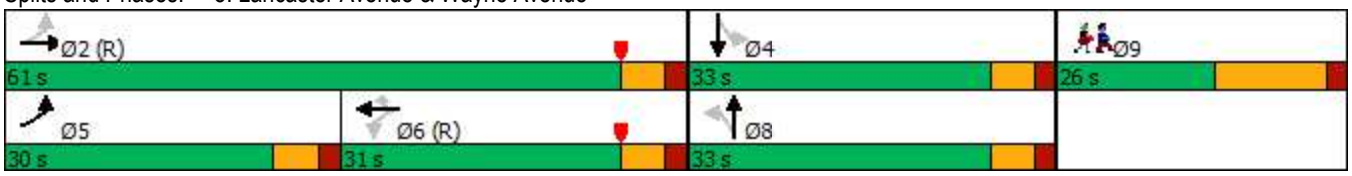
Intersection Summary

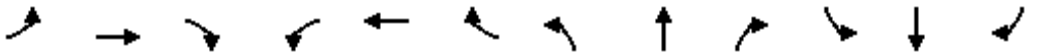
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 57 | 491 | 27 | 40 | 488 | 96 | 29 | 53 | 59 | 72 | 67 | 53 |
| Future Volume (vph) | 57 | 491 | 27 | 40 | 488 | 96 | 29 | 53 | 59 | 72 | 67 | 53 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.98 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.97 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.92 | | 1.00 | 0.93 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3123 | | | 3150 | 1393 | 1521 | 1596 | | 1591 | 1574 | |
| Flt Permitted | | 0.83 | | | 0.86 | 1.00 | 0.55 | 1.00 | | 0.58 | 1.00 | |
| Satd. Flow (perm) | | 2617 | | | 2732 | 1393 | 884 | 1596 | | 975 | 1574 | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 60 | 517 | 28 | 42 | 514 | 101 | 31 | 56 | 62 | 76 | 71 | 56 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 605 | 0 | 0 | 556 | 101 | 31 | 118 | 0 | 76 | 127 | 0 |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 93.1 | | | 93.1 | 93.1 | 14.9 | 14.9 | | 14.9 | 14.9 | |
| Effective Green, g (s) | | 94.1 | | | 94.1 | 93.1 | 15.9 | 15.9 | | 15.9 | 15.9 | |
| Actuated g/C Ratio | | 0.78 | | | 0.78 | 0.78 | 0.13 | 0.13 | | 0.13 | 0.13 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2052 | | | 2142 | 1080 | 117 | 211 | | 129 | 208 | |
| v/s Ratio Prot | | | | | | | | 0.07 | | | c0.08 | |
| v/s Ratio Perm | | c0.23 | | | 0.20 | 0.07 | 0.04 | | | 0.08 | | |
| v/c Ratio | | 0.29 | | | 0.26 | 0.09 | 0.26 | 0.56 | | 0.59 | 0.61 | |
| Uniform Delay, d1 | | 3.6 | | | 3.5 | 3.3 | 46.8 | 48.8 | | 49.0 | 49.1 | |
| Progression Factor | | 1.00 | | | 0.70 | 0.75 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.3 | 0.2 | 1.2 | 3.2 | | 6.7 | 5.2 | |
| Delay (s) | | 3.7 | | | 2.8 | 2.6 | 48.0 | 52.0 | | 55.7 | 54.3 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 3.7 | | | 2.7 | | | 51.1 | | | 54.9 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.41 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 55.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

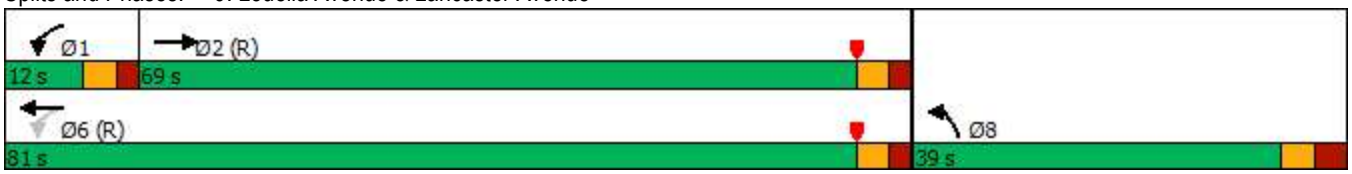
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 580 | 63 | 22 | 613 | 26 | 16 |
| Future Volume (vph) | 580 | 63 | 22 | 613 | 26 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 714 | 0 | 0 | 705 | 47 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.27 | | | 0.29 | 0.34 | |
| Control Delay | 1.8 | | | 1.8 | 57.9 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 1.8 | | | 1.8 | 57.9 | |
| Queue Length 50th (ft) | 27 | | | 17 | 35 | |
| Queue Length 95th (ft) | 42 | | | 28 | 73 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2639 | | | 2427 | 491 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.27 | | | 0.29 | 0.10 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 580 | 63 | 22 | 613 | 26 | 16 |
| Future Volume (vph) | 580 | 63 | 22 | 613 | 26 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.95 | |
| Flt Protected | 1.00 | | | 1.00 | 0.97 | |
| Satd. Flow (prot) | 3126 | | | 3140 | 1727 | |
| Flt Permitted | 1.00 | | | 0.91 | 0.97 | |
| Satd. Flow (perm) | 3126 | | | 2876 | 1727 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 644 | 70 | 24 | 681 | 29 | 18 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 714 | 0 | 0 | 705 | 47 | 0 |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 100.3 | | | 100.3 | 8.7 | |
| Effective Green, g (s) | 101.3 | | | 101.3 | 9.7 | |
| Actuated g/C Ratio | 0.84 | | | 0.84 | 0.08 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2638 | | | 2427 | 139 | |
| v/s Ratio Prot | 0.23 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.25 | | |
| v/c Ratio | 0.27 | | | 0.29 | 0.34 | |
| Uniform Delay, d1 | 1.9 | | | 1.9 | 52.1 | |
| Progression Factor | 0.77 | | | 0.73 | 1.00 | |
| Incremental Delay, d2 | 0.2 | | | 0.1 | 1.4 | |
| Delay (s) | 1.7 | | | 1.5 | 53.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.7 | | | 1.5 | 53.6 | |
| Approach LOS | A | | | A | D | |

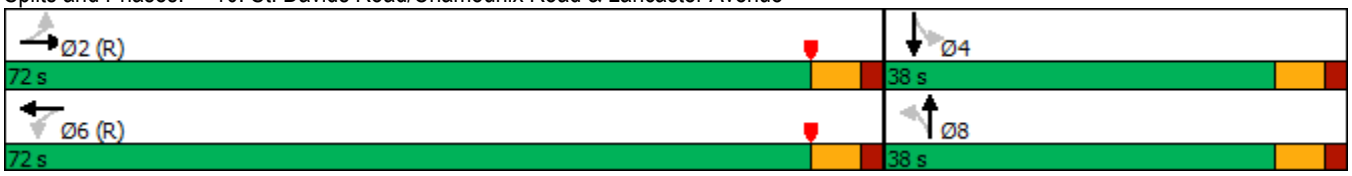
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.3 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.31 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 45.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 22 | 611 | 7 | 30 | 641 | 33 | 11 | 6 | 42 | 37 | 13 | 23 |
| Future Volume (vph) | 22 | 611 | 7 | 30 | 641 | 33 | 11 | 6 | 42 | 37 | 13 | 23 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1647 | | | 744 | | | 642 | | | 402 | |
| Travel Time (s) | | 32.1 | | | 14.5 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | | | | | | | | | 1 | 1 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 2% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

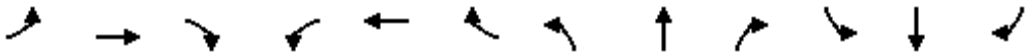
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 22 | 611 | 7 | 30 | 641 | 33 | 11 | 6 | 42 | 37 | 13 | 23 |
| Future Volume (veh/h) | 22 | 611 | 7 | 30 | 641 | 33 | 11 | 6 | 42 | 37 | 13 | 23 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 0.99 | 1.00 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1864 | 1891 | 1881 | 1881 | 1881 |
| Adj Flow Rate, veh/h | 23 | 650 | 6 | 32 | 682 | 33 | 12 | 6 | 45 | 39 | 14 | 18 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 98 | 2647 | 24 | 124 | 2578 | 124 | 54 | 18 | 82 | 109 | 28 | 29 |
| Arrive On Green | 0.83 | 0.84 | 0.83 | 0.83 | 0.84 | 0.83 | 0.06 | 0.07 | 0.06 | 0.06 | 0.07 | 0.06 |
| Sat Flow, veh/h | 75 | 3146 | 29 | 106 | 3065 | 147 | 219 | 262 | 1202 | 857 | 406 | 429 |
| Grp Volume(v), veh/h | 346 | 0 | 333 | 379 | 0 | 368 | 63 | 0 | 0 | 71 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1649 | 0 | 1601 | 1680 | 0 | 1638 | 1682 | 0 | 0 | 1693 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 4.6 | 0.0 | 0.0 | 5.1 | 0.0 | 0.0 | 0.0 | 0.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.3 | 0.0 | 4.6 | 4.6 | 0.0 | 5.1 | 3.9 | 0.0 | 0.0 | 4.3 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.02 | 0.08 | | 0.09 | 0.19 | | 0.71 | 0.55 | | 0.25 |
| Lane Grp Cap(c), veh/h | 1407 | 0 | 1347 | 1433 | 0 | 1378 | 138 | 0 | 0 | 150 | 0 | 0 |
| V/C Ratio(X) | 0.25 | 0.00 | 0.25 | 0.26 | 0.00 | 0.27 | 0.46 | 0.00 | 0.00 | 0.47 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1407 | 0 | 1347 | 1433 | 0 | 1378 | 499 | 0 | 0 | 497 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 1.7 | 0.0 | 1.8 | 1.8 | 0.0 | 1.8 | 50.1 | 0.0 | 0.0 | 50.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 0.4 | 0.5 | 0.0 | 0.5 | 3.3 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 4.1 | 0.0 | 3.8 | 4.7 | 0.0 | 4.4 | 3.6 | 0.0 | 0.0 | 4.1 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 2.1 | 0.0 | 2.2 | 2.2 | 0.0 | 2.3 | 53.4 | 0.0 | 0.0 | 53.4 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 679 | | | 747 | | | 63 | | | 71 | |
| Approach Delay, s/veh | | 2.2 | | | 2.2 | | | 53.4 | | | 53.4 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 97.5 | | 12.5 | | 97.5 | | 12.5 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 6.6 | | 6.3 | | 7.1 | | 5.9 |
| Green Ext Time (p_c), s | | 2.7 | | 0.3 | | 3.1 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 6.6 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 2 | 2 | 3 | 10 | 9 | 5 | 73 | 2 | 6 | 44 | 12 |
| Future Volume (vph) | 24 | 2 | 2 | 3 | 10 | 9 | 5 | 73 | 2 | 6 | 44 | 12 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 1 | | 2 | 2 | | 1 | 6 | | 3 | 3 | | 6 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 8% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 24 | 2 | 2 | 3 | 10 | 9 | 5 | 73 | 2 | 6 | 44 | 12 |
| Future Vol, veh/h | 24 | 2 | 2 | 3 | 10 | 9 | 5 | 73 | 2 | 6 | 44 | 12 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 33 | 3 | 3 | 4 | 14 | 12 | 7 | 100 | 3 | 8 | 60 | 16 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.7 | 7.3 | 7.7 | 7.5 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 6% | 86% | 14% | 10% |
| Vol Thru, % | 91% | 7% | 45% | 71% |
| Vol Right, % | 3% | 7% | 41% | 19% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 80 | 28 | 22 | 62 |
| LT Vol | 5 | 24 | 3 | 6 |
| Through Vol | 73 | 2 | 10 | 44 |
| RT Vol | 2 | 2 | 9 | 12 |
| Lane Flow Rate | 110 | 38 | 30 | 85 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.124 | 0.047 | 0.035 | 0.094 |
| Departure Headway (Hd) | 4.081 | 4.386 | 4.144 | 4.005 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 871 | 804 | 869 | 886 |
| Service Time | 2.139 | 2.481 | 2.144 | 2.07 |
| HCM Lane V/C Ratio | 0.126 | 0.047 | 0.035 | 0.096 |
| HCM Control Delay | 7.7 | 7.7 | 7.3 | 7.5 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.1 | 0.1 | 0.3 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 36 | 21 | 3 | 10 | 29 |
| Future Volume (vph) | 4 | 36 | 21 | 3 | 10 | 29 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | | 5 | | 4 | 4 | |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

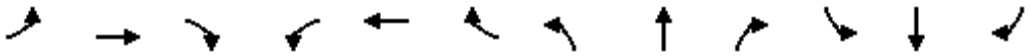
| Intersection | |
|---|---|
| Int Delay, s/veh | 4.1 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 36 | 21 | 3 | 10 | 29 |
| Future Vol, veh/h | 4 | 36 | 21 | 3 | 10 | 29 |
| Conflicting Peds, #/hr | 0 | 5 | 0 | 4 | 4 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 73 | 73 | 73 | 73 | 73 | 73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 5 | 49 | 29 | 4 | 14 | 40 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 103 | 40 | 0 | 0 | 37 | 0 |
| Stage 1 | 35 | - | - | - | - | - |
| Stage 2 | 68 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1043 | 1103 | - | - | 1166 | - |
| Stage 1 | 1155 | - | - | - | - | - |
| Stage 2 | 1115 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 1026 | 1094 | - | - | 1162 | - |
| Mov Cap-2 Maneuver | 1026 | - | - | - | - | - |
| Stage 1 | 1150 | - | - | - | - | - |
| Stage 2 | 1102 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.5 | 0 | 2.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1087 | 1162 | - |
| HCM Lane V/C Ratio | - | - | 0.05 | 0.012 | - |
| HCM Control Delay (s) | - | - | 8.5 | 8.1 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

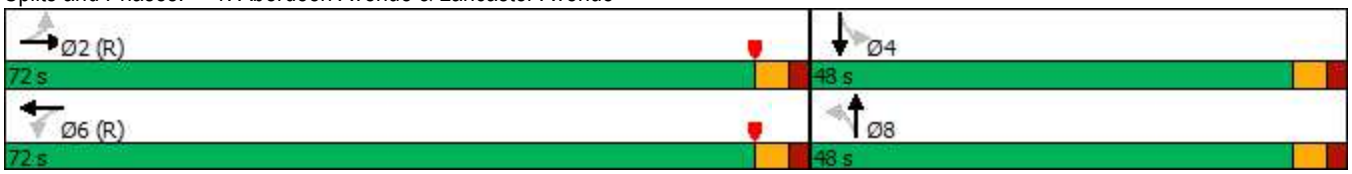


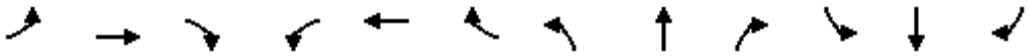
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 699 | 37 | 15 | 811 | 72 | 41 | 64 | 34 | 114 | 62 | 81 |
| Future Volume (vph) | 38 | 699 | 37 | 15 | 811 | 72 | 41 | 64 | 34 | 114 | 62 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 807 | 0 | 0 | 936 | 0 | 0 | 145 | 0 | 0 | 268 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.58 | | | 0.53 | | | 0.43 | | | 0.83 | |
| Control Delay | | 17.7 | | | 11.3 | | | 41.3 | | | 64.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 17.7 | | | 11.3 | | | 41.3 | | | 64.1 | |
| Queue Length 50th (ft) | | 230 | | | 184 | | | 96 | | | 198 | |
| Queue Length 95th (ft) | | 372 | | | 308 | | | 144 | | | 273 | |
| Internal Link Dist (ft) | | 1072 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1385 | | | 1777 | | | 511 | | | 492 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.58 | | | 0.53 | | | 0.28 | | | 0.54 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 699 | 37 | 15 | 811 | 72 | 41 | 64 | 34 | 114 | 62 | 81 |
| Future Volume (vph) | 38 | 699 | 37 | 15 | 811 | 72 | 41 | 64 | 34 | 114 | 62 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.75 | | | *0.86 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2359 | | | 2760 | | | 1674 | | | 1796 | |
| Flt Permitted | | 0.84 | | | 0.93 | | | 0.82 | | | 0.73 | |
| Satd. Flow (perm) | | 1998 | | | 2563 | | | 1395 | | | 1341 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 40 | 728 | 39 | 16 | 845 | 75 | 43 | 67 | 35 | 119 | 65 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 807 | 0 | 0 | 936 | 0 | 0 | 145 | 0 | 0 | 268 | 0 |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 82.2 | | | 82.2 | | | 27.8 | | | 27.8 | |
| Effective Green, g (s) | | 83.2 | | | 83.2 | | | 28.8 | | | 28.8 | |
| Actuated g/C Ratio | | 0.69 | | | 0.69 | | | 0.24 | | | 0.24 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1385 | | | 1777 | | | 334 | | | 321 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.40 | | | 0.37 | | | 0.10 | | | c0.20 | |
| v/c Ratio | | 0.58 | | | 0.53 | | | 0.43 | | | 0.83 | |
| Uniform Delay, d1 | | 9.5 | | | 8.9 | | | 38.7 | | | 43.3 | |
| Progression Factor | | 1.45 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 1.7 | | | 1.1 | | | 0.9 | | | 16.8 | |
| Delay (s) | | 15.4 | | | 10.0 | | | 39.6 | | | 60.2 | |
| Level of Service | | B | | | B | | | D | | | E | |
| Approach Delay (s) | | 15.4 | | | 10.0 | | | 39.6 | | | 60.2 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 20.3 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 80.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 835 | 12 | 0 | 899 | 0 | 3 |
| Future Volume (vph) | 835 | 12 | 0 | 899 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | 2 | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 3% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 835 | 12 | 0 | 899 | 0 | 3 |
| Future Vol, veh/h | 835 | 12 | 0 | 899 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 2 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 3 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 879 | 13 | 0 | 946 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 894 | 0 | 1363 | 448 |
| Stage 1 | - | - | - | - | 888 | - |
| Stage 2 | - | - | - | - | 475 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 967 | - | *113 | *935 |
| Stage 1 | - | - | - | - | *720 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 965 | - | *113 | *933 |
| Mov Cap-2 Maneuver | - | - | - | - | *113 | - |
| Stage 1 | - | - | - | - | *719 | - |
| Stage 2 | - | - | - | - | *843 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 933 | - | - | 965 | - |
| HCM Lane V/C Ratio | 0.003 | - | - | - | - |
| HCM Control Delay (s) | 8.9 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 836 | 2 | 3 | 898 | 1 | 20 |
| Future Volume (vph) | 836 | 2 | 3 | 898 | 1 | 20 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | 2 | 1 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 836 | 2 | 3 | 898 | 1 | 20 |
| Future Vol, veh/h | 836 | 2 | 3 | 898 | 1 | 20 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 2 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 3 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 871 | 2 | 3 | 935 | 1 | 21 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 875 | 0 | 1350 | 440 |
| Stage 1 | - | - | - | - | 874 | - |
| Stage 2 | - | - | - | - | 476 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *116 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1027 | - | *115 | *848 |
| Mov Cap-2 Maneuver | - | - | - | - | *115 | - |
| Stage 1 | - | - | - | - | *879 | - |
| Stage 2 | - | - | - | - | *838 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 10.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 651 | - | - | * 1027 | - |
| HCM Lane V/C Ratio | 0.034 | - | - | 0.003 | - |
| HCM Control Delay (s) | 10.7 | - | - | 8.5 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 838 | 18 | 6 | 900 | 1 | 3 |
| Future Volume (vph) | 838 | 18 | 6 | 900 | 1 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 838 | 18 | 6 | 900 | 1 | 3 |
| Future Vol, veh/h | 838 | 18 | 6 | 900 | 1 | 3 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 4 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 873 | 19 | 6 | 938 | 1 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 894 | 0 | 1366 | 448 |
| Stage 1 | - | - | - | - | 885 | - |
| Stage 2 | - | - | - | - | 481 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *112 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1027 | - | *110 | *849 |
| Mov Cap-2 Maneuver | - | - | - | - | *110 | - |
| Stage 1 | - | - | - | - | *879 | - |
| Stage 2 | - | - | - | - | *834 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 16.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 317 | - | - | * 1027 | - |
| HCM Lane V/C Ratio | 0.013 | - | - | 0.006 | - |
| HCM Control Delay (s) | 16.5 | - | - | 8.5 | 0.1 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 838 | 3 | 15 | 903 | 3 | 35 |
| Future Volume (vph) | 838 | 3 | 15 | 903 | 3 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1639 | 89 | |
| Travel Time (s) | 1.7 | | | 31.9 | 2.4 | |
| Confl. Peds. (#/hr) | | 1 | 1 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 33% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 838 | 3 | 15 | 903 | 3 | 35 |
| Future Vol, veh/h | 838 | 3 | 15 | 903 | 3 | 35 |
| Conflicting Peds, #/hr | 0 | 1 | 1 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 4 | 33 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 873 | 3 | 16 | 941 | 3 | 36 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 877 | 0 | 1379 | 439 |
| Stage 1 | - | - | - | - | 876 | - |
| Stage 2 | - | - | - | - | 503 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *110 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1028 | - | *106 | *849 |
| Mov Cap-2 Maneuver | - | - | - | - | *106 | - |
| Stage 1 | - | - | - | - | *880 | - |
| Stage 2 | - | - | - | - | *817 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 12.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 547 | - | - | * 1028 | - |
| HCM Lane V/C Ratio | 0.072 | - | - | 0.015 | - |
| HCM Control Delay (s) | 12.1 | - | - | 8.6 | 0.1 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 4 | 135 | 9 | 2 | 112 |
| Future Volume (vph) | 2 | 4 | 135 | 9 | 2 | 112 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | | | | 1 | 1 | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 0% | 0% | 4% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 4 | 135 | 9 | 2 | 112 |
| Future Vol, veh/h | 2 | 4 | 135 | 9 | 2 | 112 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 0 | 0 | 2 | 0 | 0 | 4 |
| Mvmt Flow | 2 | 4 | 142 | 9 | 2 | 118 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 270 | 148 | 0 | 0 | 152 | 0 |
| Stage 1 | 148 | - | - | - | - | - |
| Stage 2 | 122 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *886 | 959 | - | - | 1065 | - |
| Stage 1 | *1022 | - | - | - | - | - |
| Stage 2 | *1100 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *883 | 958 | - | - | 1064 | - |
| Mov Cap-2 Maneuver | *883 | - | - | - | - | - |
| Stage 1 | *1021 | - | - | - | - | - |
| Stage 2 | *1097 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 932 | 1064 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 4 | 131 | 9 | 2 | 112 |
| Future Volume (vph) | 2 | 4 | 131 | 9 | 2 | 112 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 69 |
| Travel Time (s) | 2.0 | | 8.5 | | | 1.9 |
| Confl. Peds. (#/hr) | | | | 1 | 1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 0% | 0% | 5% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

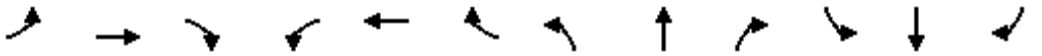
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 4 | 131 | 9 | 2 | 112 |
| Future Vol, veh/h | 2 | 4 | 131 | 9 | 2 | 112 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 0 | 0 | 2 | 0 | 0 | 5 |
| Mvmt Flow | 2 | 4 | 136 | 9 | 2 | 117 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 263 | 142 | 0 | 0 | 146 | 0 |
| Stage 1 | 142 | - | - | - | - | - |
| Stage 2 | 121 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *895 | 966 | - | - | 1071 | - |
| Stage 1 | *1028 | - | - | - | - | - |
| Stage 2 | *1100 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *892 | 965 | - | - | 1070 | - |
| Mov Cap-2 Maneuver | *892 | - | - | - | - | - |
| Stage 1 | *1027 | - | - | - | - | - |
| Stage 2 | *1097 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 939 | 1070 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 68 | 621 | 82 | 28 | 638 | 87 | 42 | 114 | 64 | 102 | 120 | 74 |
| Future Volume (vph) | 68 | 621 | 82 | 28 | 638 | 87 | 42 | 114 | 64 | 102 | 120 | 74 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 838 | 0 | 0 | 723 | 95 | 46 | 194 | 0 | 111 | 210 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 12.0 | 66.0 | | 54.0 | 54.0 | 54.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 10.0% | 55.0% | | 45.0% | 45.0% | 45.0% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.48 | | | 0.36 | 0.10 | 0.38 | 0.65 | | 0.83 | 0.74 | |
| Control Delay | | 8.5 | | | 4.1 | 4.1 | 50.3 | 55.1 | | 89.1 | 61.3 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 8.5 | | | 4.1 | 4.1 | 50.3 | 55.1 | | 89.1 | 61.3 | |
| Queue Length 50th (ft) | | 126 | | | 51 | 12 | 31 | 140 | | 83 | 154 | |
| Queue Length 95th (ft) | | 197 | | | 59 | 22 | 67 | 209 | | #163 | 230 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1744 | | | 2009 | 919 | 151 | 371 | | 167 | 354 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.48 | | | 0.36 | 0.10 | 0.30 | 0.52 | | 0.66 | 0.59 | |

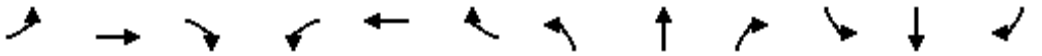
Intersection Summary

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 21.0 |
| Total Split (%) | 18% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 68 | 621 | 82 | 28 | 638 | 87 | 42 | 114 | 64 | 102 | 120 | 74 |
| Future Volume (vph) | 68 | 621 | 82 | 28 | 638 | 87 | 42 | 114 | 64 | 102 | 120 | 74 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.99 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.98 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 2974 | | | 3096 | 1290 | 1520 | 1587 | | 1534 | 1518 | |
| Flt Permitted | | 0.80 | | | 0.89 | 1.00 | 0.41 | 1.00 | | 0.44 | 1.00 | |
| Satd. Flow (perm) | | 2393 | | | 2756 | 1290 | 649 | 1587 | | 715 | 1518 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 74 | 675 | 89 | 30 | 693 | 95 | 46 | 124 | 70 | 111 | 130 | 80 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 838 | 0 | 0 | 723 | 95 | 46 | 194 | 0 | 111 | 210 | 0 |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 86.6 | | | 86.6 | 86.6 | 21.4 | 21.4 | | 21.4 | 21.4 | |
| Effective Green, g (s) | | 87.6 | | | 87.6 | 86.6 | 22.4 | 22.4 | | 22.4 | 22.4 | |
| Actuated g/C Ratio | | 0.73 | | | 0.73 | 0.72 | 0.19 | 0.19 | | 0.19 | 0.19 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1746 | | | 2011 | 930 | 121 | 296 | | 133 | 283 | |
| v/s Ratio Prot | | | | | | | | 0.12 | | | 0.14 | |
| v/s Ratio Perm | | c0.35 | | | 0.26 | 0.07 | 0.07 | | | c0.16 | | |
| v/c Ratio | | 0.48 | | | 0.36 | 0.10 | 0.38 | 0.66 | | 0.83 | 0.74 | |
| Uniform Delay, d1 | | 6.7 | | | 5.9 | 5.0 | 42.7 | 45.2 | | 47.0 | 46.1 | |
| Progression Factor | | 1.00 | | | 0.56 | 0.64 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.2 | | | 0.4 | 0.2 | 2.0 | 5.1 | | 34.1 | 10.0 | |
| Delay (s) | | 6.9 | | | 3.8 | 3.4 | 44.7 | 50.4 | | 81.1 | 56.1 | |
| Level of Service | | A | | | A | A | D | D | | F | E | |
| Approach Delay (s) | | 6.9 | | | 3.7 | | | 49.3 | | | 64.8 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 76.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

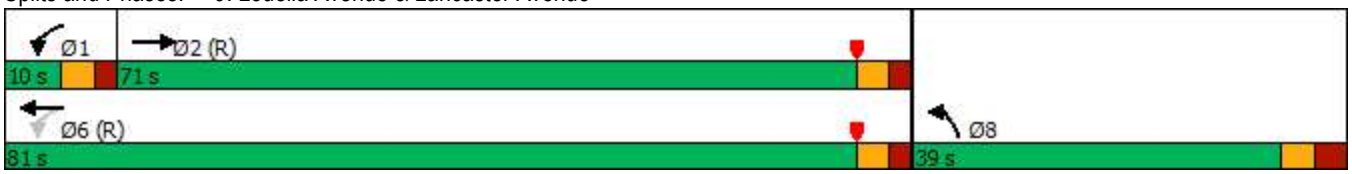
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 754 | 62 | 73 | 830 | 19 | 40 |
| Future Volume (vph) | 754 | 62 | 73 | 830 | 19 | 40 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 868 | 0 | 0 | 961 | 63 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 71.0 | | 10.0 | 81.0 | 39.0 | |
| Total Split (%) | 59.2% | | 8.3% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.34 | | | 0.49 | 0.41 | |
| Control Delay | 2.0 | | | 2.0 | 58.9 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.0 | | | 2.0 | 58.9 | |
| Queue Length 50th (ft) | 31 | | | 38 | 47 | |
| Queue Length 95th (ft) | 58 | | | 43 | 91 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2546 | | | 1974 | 474 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.34 | | | 0.49 | 0.13 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 754 | 62 | 73 | 830 | 19 | 40 |
| Future Volume (vph) | 754 | 62 | 73 | 830 | 19 | 40 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.96 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3052 | | | 3014 | 1636 | |
| Flt Permitted | 1.00 | | | 0.78 | 0.98 | |
| Satd. Flow (perm) | 3052 | | | 2368 | 1636 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 802 | 66 | 78 | 883 | 20 | 43 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 868 | 0 | 0 | 961 | 63 | 0 |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 99.1 | | | 99.1 | 9.9 | |
| Effective Green, g (s) | 100.1 | | | 100.1 | 10.9 | |
| Actuated g/C Ratio | 0.83 | | | 0.83 | 0.09 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2545 | | | 1975 | 148 | |
| v/s Ratio Prot | 0.28 | | | | c0.04 | |
| v/s Ratio Perm | | | | c0.41 | | |
| v/c Ratio | 0.34 | | | 0.49 | 0.43 | |
| Uniform Delay, d1 | 2.3 | | | 2.8 | 51.6 | |
| Progression Factor | 0.65 | | | 0.41 | 1.00 | |
| Incremental Delay, d2 | 0.3 | | | 0.2 | 2.0 | |
| Delay (s) | 1.8 | | | 1.3 | 53.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.8 | | | 1.3 | 53.6 | |
| Approach LOS | A | | | A | D | |

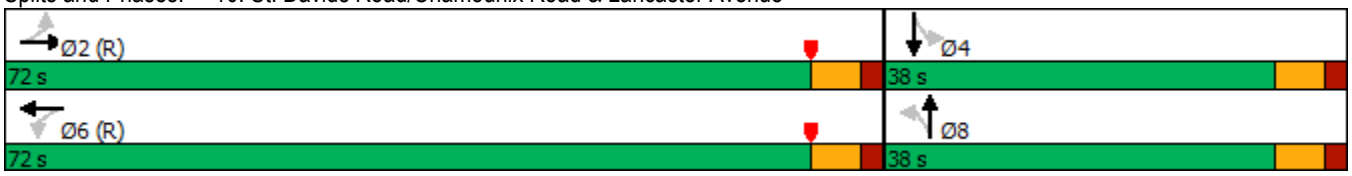
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.3 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 66.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 31 | 877 | 18 | 31 | 1086 | 77 | 10 | 9 | 41 | 58 | 19 | 40 |
| Future Volume (vph) | 31 | 877 | 18 | 31 | 1086 | 77 | 10 | 9 | 41 | 58 | 19 | 40 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1639 | | | 1078 | | | 276 | | | 428 | |
| Travel Time (s) | | 31.9 | | | 21.0 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 3 | | 1 | 1 | | 3 | 1 | | | | | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 4% | 11% | 10% | 3% | 0% | 0% | 0% | 2% | 0% | 0% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

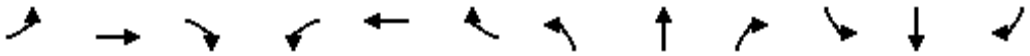
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 31 | 877 | 18 | 31 | 1086 | 77 | 10 | 9 | 41 | 58 | 19 | 40 |
| Future Volume (veh/h) | 31 | 877 | 18 | 31 | 1086 | 77 | 10 | 9 | 41 | 58 | 19 | 40 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1713 | 1782 | 1845 | 1791 | 1845 | 1891 | 1865 | 1891 | 1881 | 1849 | 1881 |
| Adj Flow Rate, veh/h | 32 | 895 | 16 | 32 | 1108 | 78 | 10 | 9 | 40 | 59 | 19 | 39 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 91 | 2384 | 42 | 76 | 2443 | 170 | 54 | 40 | 116 | 124 | 35 | 55 |
| Arrive On Green | 0.80 | 0.81 | 0.80 | 0.80 | 0.81 | 0.80 | 0.09 | 0.10 | 0.09 | 0.09 | 0.10 | 0.09 |
| Sat Flow, veh/h | 69 | 2951 | 52 | 51 | 3024 | 211 | 156 | 390 | 1150 | 736 | 342 | 539 |
| Grp Volume(v), veh/h | 468 | 0 | 475 | 629 | 0 | 589 | 59 | 0 | 0 | 117 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1522 | 0 | 1550 | 1694 | 0 | 1593 | 1696 | 0 | 0 | 1617 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 9.4 | 0.0 | 0.0 | 12.5 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.0 | 0.0 | 9.4 | 11.5 | 0.0 | 12.5 | 3.7 | 0.0 | 0.0 | 7.6 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.05 | | 0.13 | 0.17 | | 0.68 | 0.50 | | 0.33 |
| Lane Grp Cap(c), veh/h | 1251 | 0 | 1252 | 1387 | 0 | 1286 | 195 | 0 | 0 | 198 | 0 | 0 |
| V/C Ratio(X) | 0.37 | 0.00 | 0.38 | 0.45 | 0.00 | 0.46 | 0.30 | 0.00 | 0.00 | 0.59 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1251 | 0 | 1252 | 1387 | 0 | 1286 | 510 | 0 | 0 | 500 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.8 | 0.0 | 2.9 | 3.1 | 0.0 | 3.3 | 46.5 | 0.0 | 0.0 | 48.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.9 | 0.0 | 0.9 | 1.1 | 0.0 | 1.2 | 1.2 | 0.0 | 0.0 | 3.9 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.6 | 0.0 | 7.7 | 10.3 | 0.0 | 9.8 | 3.2 | 0.0 | 0.0 | 6.7 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.7 | 0.0 | 3.8 | 4.2 | 0.0 | 4.4 | 47.7 | 0.0 | 0.0 | 52.0 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 943 | | | 1218 | | | 59 | | | 117 | |
| Approach Delay, s/veh | | 3.7 | | | 4.3 | | | 47.7 | | | 52.0 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 93.9 | | 16.1 | | 93.9 | | 16.1 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 11.4 | | 9.6 | | 14.5 | | 5.7 |
| Green Ext Time (p_c), s | | 4.3 | | 0.6 | | 6.1 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.6 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 10 | 5 | 2 | 36 | 23 | 2 | 111 | 4 | 3 | 92 | 41 |
| Future Volume (vph) | 14 | 10 | 5 | 2 | 36 | 23 | 2 | 111 | 4 | 3 | 92 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 2 | | 2 | 2 | | 2 | | | 2 | 2 | | |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 4% | 100% | 2% | 0% | 0% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.8 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 14 | 10 | 5 | 2 | 36 | 23 | 2 | 111 | 4 | 3 | 92 | 41 |
| Future Vol, veh/h | 14 | 10 | 5 | 2 | 36 | 23 | 2 | 111 | 4 | 3 | 92 | 41 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 4 | 100 | 2 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 15 | 11 | 5 | 2 | 38 | 24 | 2 | 118 | 4 | 3 | 92 | 41 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.9 | 7.8 | 10.5 | 7.9 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 48% | 3% | 2% |
| Vol Thru, % | 95% | 34% | 59% | 68% |
| Vol Right, % | 3% | 17% | 38% | 30% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 117 | 29 | 61 | 136 |
| LT Vol | 2 | 14 | 2 | 3 |
| Through Vol | 111 | 10 | 36 | 92 |
| RT Vol | 4 | 5 | 23 | 41 |
| Lane Flow Rate | 124 | 31 | 65 | 136 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.206 | 0.04 | 0.079 | 0.156 |
| Departure Headway (Hd) | 5.958 | 4.642 | 4.39 | 4.122 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 606 | 773 | 818 | 872 |
| Service Time | 3.958 | 2.661 | 2.407 | 2.137 |
| HCM Lane V/C Ratio | 0.205 | 0.04 | 0.079 | 0.156 |
| HCM Control Delay | 10.5 | 7.9 | 7.8 | 7.9 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 0.8 | 0.1 | 0.3 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 3 | 43 | 34 | 11 | 12 | 30 |
| Future Volume (vph) | 3 | 43 | 34 | 11 | 12 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | 1 | 4 | | 2 | 2 | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Heavy Vehicles (%) | 0% | 0% | 3% | 0% | 0% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

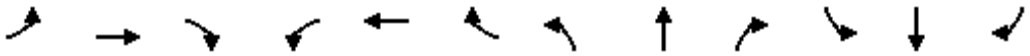
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 43 | 34 | 11 | 12 | 30 |
| Future Vol, veh/h | 3 | 43 | 34 | 11 | 12 | 30 |
| Conflicting Peds, #/hr | 1 | 4 | 0 | 2 | 2 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 3 | 0 | 0 | 3 |
| Mvmt Flow | 4 | 56 | 44 | 14 | 16 | 39 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 125 | 57 | 0 | 0 | 60 | 0 |
| Stage 1 | 53 | - | - | - | - | - |
| Stage 2 | 72 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1012 | 1079 | - | - | 1145 | - |
| Stage 1 | 1133 | - | - | - | - | - |
| Stage 2 | 1110 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 995 | 1073 | - | - | 1143 | - |
| Mov Cap-2 Maneuver | 995 | - | - | - | - | - |
| Stage 1 | 1131 | - | - | - | - | - |
| Stage 2 | 1093 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.6 | 0 | 2.3 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1068 | 1143 | - |
| HCM Lane V/C Ratio | - | - | 0.056 | 0.014 | - |
| HCM Control Delay (s) | - | - | 8.6 | 8.2 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

# *2020 PROJECTED CONDITIONS*

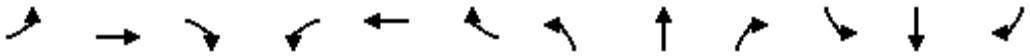


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 789 | 42 | 28 | 912 | 43 | 142 | 111 | 42 | 141 | 84 | 69 |
| Future Volume (vph) | 35 | 789 | 42 | 28 | 912 | 43 | 142 | 111 | 42 | 141 | 84 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 942 | 0 | 0 | 1068 | 0 | 0 | 321 | 0 | 0 | 319 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 62.0 | 62.0 | | 62.0 | 62.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Total Split (%) | 59.0% | 59.0% | | 59.0% | 59.0% | | 41.0% | 41.0% | | 41.0% | 41.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.75 | | | 0.70 | | | 0.88 | | | 0.77 | |
| Control Delay | | 27.7 | | | 19.0 | | | 58.2 | | | 44.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 27.7 | | | 19.0 | | | 58.2 | | | 44.2 | |
| Queue Length 50th (ft) | | 335 | | | 276 | | | 194 | | | 184 | |
| Queue Length 95th (ft) | | 459 | | | 382 | | | #335 | | | 283 | |
| Internal Link Dist (ft) | | 1072 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1256 | | | 1527 | | | 412 | | | 469 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.75 | | | 0.70 | | | 0.78 | | | 0.68 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 6 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 789 | 42 | 28 | 912 | 43 | 142 | 111 | 42 | 141 | 84 | 69 |
| Future Volume (vph) | 35 | 789 | 42 | 28 | 912 | 43 | 142 | 111 | 42 | 141 | 84 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.77 | | | *0.90 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.98 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2456 | | | 2889 | | | 1588 | | | 1812 | |
| Flt Permitted | | 0.86 | | | 0.89 | | | 0.68 | | | 0.68 | |
| Satd. Flow (perm) | | 2110 | | | 2567 | | | 1109 | | | 1264 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 38 | 858 | 46 | 30 | 991 | 47 | 154 | 121 | 46 | 153 | 91 | 75 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 942 | 0 | 0 | 1068 | 0 | 0 | 321 | 0 | 0 | 319 | 0 |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 61.5 | | | 61.5 | | | 33.5 | | | 33.5 | |
| Effective Green, g (s) | | 62.5 | | | 62.5 | | | 34.5 | | | 34.5 | |
| Actuated g/C Ratio | | 0.60 | | | 0.60 | | | 0.33 | | | 0.33 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1255 | | | 1527 | | | 364 | | | 415 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.45 | | | 0.42 | | | c0.29 | | | 0.25 | |
| v/c Ratio | | 0.75 | | | 0.70 | | | 0.88 | | | 0.77 | |
| Uniform Delay, d1 | | 15.5 | | | 14.7 | | | 33.3 | | | 31.7 | |
| Progression Factor | | 1.36 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 4.0 | | | 2.7 | | | 21.3 | | | 8.3 | |
| Delay (s) | | 25.1 | | | 17.4 | | | 54.6 | | | 40.0 | |
| Level of Service | | C | | | B | | | D | | | D | |
| Approach Delay (s) | | 25.1 | | | 17.4 | | | 54.6 | | | 40.0 | |
| Approach LOS | | C | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 27.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.80 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 80.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 895 | 77 | 72 | 964 | 20 | 75 |
| Future Volume (vph) | 895 | 77 | 72 | 964 | 20 | 75 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | -2% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 546 | 89 | |
| Travel Time (s) | 7.3 | | | 10.6 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.6 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 895 | 77 | 72 | 964 | 20 | 75 |
| Future Vol, veh/h | 895 | 77 | 72 | 964 | 20 | 75 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | -2 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 973 | 84 | 78 | 1048 | 22 | 82 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1057 | 0 | 1699 | 533 |
| Stage 1 | - | - | - | - | 1015 | - |
| Stage 2 | - | - | - | - | 684 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 935 | - | 132 | *828 |
| Stage 1 | - | - | - | - | 822 | - |
| Stage 2 | - | - | - | - | 464 | - |
| Platoon blocked, % | - | - | 1 | - | 1 | 1 |
| Mov Cap-1 Maneuver | - | - | 935 | - | 106 | *826 |
| Mov Cap-2 Maneuver | - | - | - | - | 106 | - |
| Stage 1 | - | - | - | - | 822 | - |
| Stage 2 | - | - | - | - | 370 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.4 | 20.1 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 340 | - | - | 935 | - |
| HCM Lane V/C Ratio | 0.304 | - | - | 0.084 | - |
| HCM Control Delay (s) | 20.1 | - | - | 9.2 | 0.8 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.3 | - | - | 0.3 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 93 | 202 | 15 | 33 | 121 |
| Future Volume (vph) | 9 | 93 | 202 | 15 | 33 | 121 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | -2% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 199 |
| Travel Time (s) | 2.0 | | 8.5 | | | 5.4 |
| Confl. Peds. (#/hr) | 4 | 4 | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 8% | 2% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

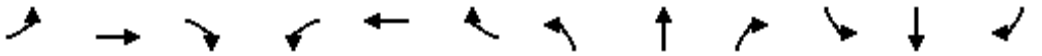
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 93 | 202 | 15 | 33 | 121 |
| Future Vol, veh/h | 9 | 93 | 202 | 15 | 33 | 121 |
| Conflicting Peds, #/hr | 4 | 4 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | -2 | - | 2 | - | - | -2 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 8 | 2 | 2 | 2 |
| Mvmt Flow | 10 | 101 | 220 | 16 | 36 | 132 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 436 | 232 | 0 | 0 | 236 | 0 |
| Stage 1 | 228 | - | - | - | - | - |
| Stage 2 | 208 | - | - | - | - | - |
| Critical Hdwy | 6.02 | 6.02 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.02 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.02 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 721 | 869 | - | - | 997 | - |
| Stage 1 | 959 | - | - | - | - | - |
| Stage 2 | 1011 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 690 | 866 | - | - | 997 | - |
| Mov Cap-2 Maneuver | 690 | - | - | - | - | - |
| Stage 1 | 959 | - | - | - | - | - |
| Stage 2 | 968 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.9 | 0 | 1.9 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 847 | 997 | - |
| HCM Lane V/C Ratio | - | - | 0.131 | 0.036 | - |
| HCM Control Delay (s) | - | - | 9.9 | 8.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 661 | 25 | 36 | 804 | 116 | 40 | 99 | 43 | 94 | 92 | 35 |
| Future Volume (vph) | 29 | 661 | 25 | 36 | 804 | 116 | 40 | 99 | 43 | 94 | 92 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 785 | 0 | 0 | 924 | 127 | 44 | 156 | 0 | 103 | 139 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 13.0 | 48.0 | | 35.0 | 35.0 | 35.0 | 31.0 | 31.0 | | 31.0 | 31.0 | |
| Total Split (%) | 12.4% | 45.7% | | 33.3% | 33.3% | 33.3% | 29.5% | 29.5% | | 29.5% | 29.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | -1.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.39 | | | 0.46 | 0.13 | 0.30 | 0.56 | | 0.72 | 0.54 | |
| Control Delay | | 6.7 | | | 5.8 | 5.3 | 40.7 | 46.6 | | 66.6 | 46.0 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 6.7 | | | 5.8 | 5.3 | 40.7 | 46.6 | | 66.6 | 46.0 | |
| Queue Length 50th (ft) | | 88 | | | 64 | 16 | 26 | 97 | | 66 | 86 | |
| Queue Length 95th (ft) | | 160 | | | 136 | m44 | 55 | 149 | | 117 | 136 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1994 | | | 2004 | 967 | 213 | 398 | | 206 | 372 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.39 | | | 0.46 | 0.13 | 0.21 | 0.39 | | 0.50 | 0.37 | |

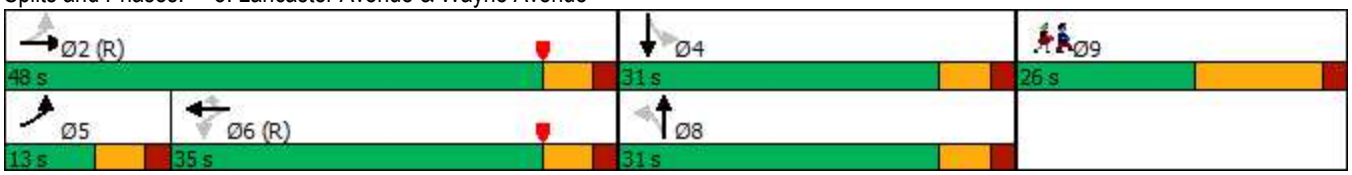
Intersection Summary

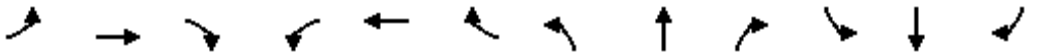
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 25% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 33 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 661 | 25 | 36 | 804 | 116 | 40 | 99 | 43 | 94 | 92 | 35 |
| Future Volume (vph) | 29 | 661 | 25 | 36 | 804 | 116 | 40 | 99 | 43 | 94 | 92 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 5.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.98 | 1.00 | | 0.97 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3077 | | | 3088 | 1336 | 1397 | 1601 | | 1455 | 1502 | |
| Flt Permitted | | 0.88 | | | 0.88 | 1.00 | 0.58 | 1.00 | | 0.54 | 1.00 | |
| Satd. Flow (perm) | | 2724 | | | 2737 | 1336 | 859 | 1601 | | 827 | 1502 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 32 | 726 | 27 | 40 | 884 | 127 | 44 | 109 | 47 | 103 | 101 | 38 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 785 | 0 | 0 | 924 | 127 | 44 | 156 | 0 | 103 | 139 | 0 |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 75.9 | | | 75.9 | 75.9 | 17.1 | 17.1 | | 17.1 | 17.1 | |
| Effective Green, g (s) | | 76.9 | | | 76.9 | 76.9 | 18.1 | 18.1 | | 18.1 | 18.1 | |
| Actuated g/C Ratio | | 0.73 | | | 0.73 | 0.73 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1995 | | | 2004 | 978 | 148 | 275 | | 142 | 258 | |
| v/s Ratio Prot | | | | | | | | 0.10 | | | 0.09 | |
| v/s Ratio Perm | | 0.29 | | | c0.34 | 0.10 | 0.05 | | | c0.12 | | |
| v/c Ratio | | 0.39 | | | 0.46 | 0.13 | 0.30 | 0.57 | | 0.73 | 0.54 | |
| Uniform Delay, d1 | | 5.3 | | | 5.7 | 4.2 | 37.9 | 39.9 | | 41.1 | 39.6 | |
| Progression Factor | | 1.00 | | | 0.79 | 0.97 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.6 | 0.2 | 1.1 | 2.7 | | 16.7 | 2.2 | |
| Delay (s) | | 5.4 | | | 5.1 | 4.2 | 39.0 | 42.5 | | 57.8 | 41.8 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 5.4 | | | 5.0 | | | 41.8 | | | 48.6 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 76.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

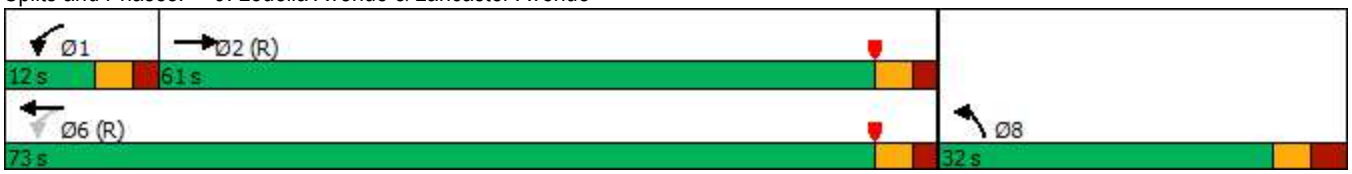
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 785 | 50 | 96 | 968 | 31 | 44 |
| Future Volume (vph) | 785 | 50 | 96 | 968 | 31 | 44 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 928 | 0 | 0 | 1183 | 83 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 61.0 | | 12.0 | 73.0 | 32.0 | |
| Total Split (%) | 58.1% | | 11.4% | 69.5% | 30.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.38 | | | 0.64 | 0.45 | |
| Control Delay | 2.6 | | | 3.1 | 50.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.6 | | | 3.1 | 50.6 | |
| Queue Length 50th (ft) | 66 | | | 58 | 53 | |
| Queue Length 95th (ft) | 70 | | | 68 | 98 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2450 | | | 1846 | 440 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.38 | | | 0.64 | 0.19 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 48 (46%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 785 | 50 | 96 | 968 | 31 | 44 |
| Future Volume (vph) | 785 | 50 | 96 | 968 | 31 | 44 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3042 | | | 3067 | 1712 | |
| Flt Permitted | 1.00 | | | 0.74 | 0.98 | |
| Satd. Flow (perm) | 3042 | | | 2292 | 1712 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 872 | 56 | 107 | 1076 | 34 | 49 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 928 | 0 | 0 | 1183 | 83 | 0 |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 83.6 | | | 83.6 | 10.4 | |
| Effective Green, g (s) | 84.6 | | | 84.6 | 11.4 | |
| Actuated g/C Ratio | 0.81 | | | 0.81 | 0.11 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2450 | | | 1846 | 185 | |
| v/s Ratio Prot | 0.31 | | | | c0.05 | |
| v/s Ratio Perm | | | | c0.52 | | |
| v/c Ratio | 0.38 | | | 0.64 | 0.45 | |
| Uniform Delay, d1 | 2.9 | | | 4.1 | 43.9 | |
| Progression Factor | 0.70 | | | 0.40 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.5 | 1.7 | |
| Delay (s) | 2.4 | | | 2.2 | 45.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.4 | | | 2.2 | 45.6 | |
| Approach LOS | A | | | A | D | |

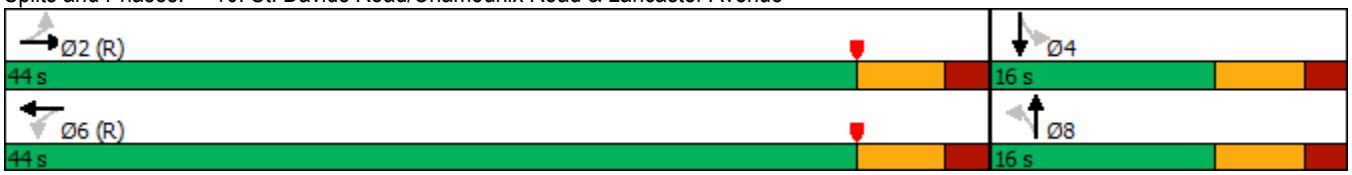
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 71.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 866 | 9 | 13 | 1136 | 287 | 20 | 68 | 71 | 93 | 38 | 40 |
| Future Volume (vph) | 14 | 866 | 9 | 13 | 1136 | 287 | 20 | 68 | 71 | 93 | 38 | 40 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 412 | | | 578 | | | 276 | | | 428 | |
| Travel Time (s) | | 8.0 | | | 11.3 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 6 | | | | | 6 | 4 | | 5 | 5 | | 4 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 4% | 1% | 0% | 0% | 4% | 1% | 5% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 44.0 | 44.0 | | 44.0 | 44.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (%) | 73.3% | 73.3% | | 73.3% | 73.3% | | 26.7% | 26.7% | | 26.7% | 26.7% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 20 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Coordinated | |

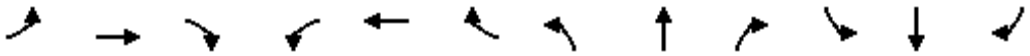
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 14 | 866 | 9 | 13 | 1136 | 287 | 20 | 68 | 71 | 93 | 38 | 40 |
| Future Volume (veh/h) | 14 | 866 | 9 | 13 | 1136 | 287 | 20 | 68 | 71 | 93 | 38 | 40 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1731 | 1782 | 1845 | 1785 | 1845 | 1891 | 1858 | 1891 | 1881 | 1838 | 1881 |
| Adj Flow Rate, veh/h | 15 | 952 | 9 | 14 | 1248 | 294 | 22 | 75 | 75 | 102 | 42 | 44 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 0 | 0 | 5 | 5 | 5 |
| Cap, veh/h | 72 | 2126 | 20 | 67 | 1769 | 408 | 90 | 143 | 127 | 219 | 70 | 60 |
| Arrive On Green | 0.65 | 0.67 | 0.65 | 0.65 | 0.67 | 0.65 | 0.15 | 0.17 | 0.15 | 0.15 | 0.17 | 0.15 |
| Sat Flow, veh/h | 15 | 3192 | 30 | 9 | 2657 | 613 | 133 | 852 | 762 | 755 | 418 | 359 |
| Grp Volume(v), veh/h | 503 | 0 | 473 | 830 | 0 | 726 | 172 | 0 | 0 | 188 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1667 | 0 | 1570 | 1766 | 0 | 1513 | 1746 | 0 | 0 | 1532 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.6 | 0.0 | 0.0 | 18.7 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.3 | 0.0 | 8.6 | 17.8 | 0.0 | 18.7 | 5.5 | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 |
| Prop In Lane | 0.03 | | 0.02 | 0.02 | | 0.41 | 0.13 | | 0.44 | 0.54 | | 0.23 |
| Lane Grp Cap(c), veh/h | 1144 | 0 | 1046 | 1208 | 0 | 1008 | 331 | 0 | 0 | 323 | 0 | 0 |
| V/C Ratio(X) | 0.44 | 0.00 | 0.45 | 0.69 | 0.00 | 0.72 | 0.52 | 0.00 | 0.00 | 0.58 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1144 | 0 | 1046 | 1208 | 0 | 1008 | 357 | 0 | 0 | 346 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 4.7 | 0.0 | 4.8 | 6.3 | 0.0 | 6.6 | 23.4 | 0.0 | 0.0 | 24.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.2 | 0.0 | 1.4 | 3.2 | 0.0 | 4.4 | 1.8 | 0.0 | 0.0 | 2.8 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.9 | 0.0 | 7.4 | 15.1 | 0.0 | 13.6 | 5.2 | 0.0 | 0.0 | 5.9 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 6.0 | 0.0 | 6.2 | 9.5 | 0.0 | 11.0 | 25.2 | 0.0 | 0.0 | 26.8 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | B | C | | | C | | |
| Approach Vol, veh/h | | 976 | | | 1556 | | | 172 | | | 188 | |
| Approach Delay, s/veh | | 6.1 | | | 10.2 | | | 25.2 | | | 26.8 | |
| Approach LOS | | A | | | B | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 45.0 | | 15.0 | | 45.0 | | 15.0 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 38.0 | | 10.0 | | 38.0 | | 10.0 |
| Max Q Clear Time (g_c+I1), s | | 10.6 | | 9.0 | | 20.7 | | 7.5 |
| Green Ext Time (p_c), s | | 4.2 | | 0.1 | | 7.1 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 10.8 |
| HCM 2010 LOS | B |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 17 | 6 | 5 | 93 | 10 | 28 | 169 | 11 | 5 | 65 | 19 |
| Future Volume (vph) | 5 | 17 | 6 | 5 | 93 | 10 | 28 | 169 | 11 | 5 | 65 | 19 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 7 | | 3 | 3 | | 7 | 10 | | | | | 10 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles (%) | 20% | 0% | 17% | 0% | 2% | 0% | 18% | 6% | 0% | 0% | 2% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 9.9 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 17 | 6 | 5 | 93 | 10 | 28 | 169 | 11 | 5 | 65 | 19 |
| Future Vol, veh/h | 5 | 17 | 6 | 5 | 93 | 10 | 28 | 169 | 11 | 5 | 65 | 19 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles, % | 20 | 0 | 17 | 0 | 2 | 0 | 18 | 6 | 0 | 0 | 2 | 5 |
| Mvmt Flow | 7 | 24 | 8 | 7 | 131 | 14 | 39 | 238 | 15 | 7 | 92 | 27 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.8 | 9.3 | 11 | 8.6 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 13% | 18% | 5% | 6% |
| Vol Thru, % | 81% | 61% | 86% | 73% |
| Vol Right, % | 5% | 21% | 9% | 21% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 208 | 28 | 108 | 89 |
| LT Vol | 28 | 5 | 5 | 5 |
| Through Vol | 169 | 17 | 93 | 65 |
| RT Vol | 11 | 6 | 10 | 19 |
| Lane Flow Rate | 293 | 39 | 152 | 125 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.393 | 0.059 | 0.207 | 0.161 |
| Departure Headway (Hd) | 4.827 | 5.362 | 4.91 | 4.622 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 744 | 664 | 727 | 772 |
| Service Time | 2.871 | 3.427 | 2.962 | 2.672 |
| HCM Lane V/C Ratio | 0.394 | 0.059 | 0.209 | 0.162 |
| HCM Control Delay | 11 | 8.8 | 9.3 | 8.6 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 1.9 | 0.2 | 0.8 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 5 | 29 | 89 | 31 | 17 | 43 |
| Future Volume (vph) | 5 | 29 | 89 | 31 | 17 | 43 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | | 14 | | 7 | 7 | |
| Peak Hour Factor | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 32% | 23% | 9% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

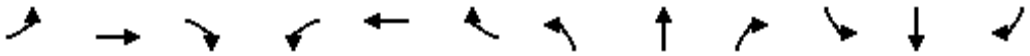
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 29 | 89 | 31 | 17 | 43 |
| Future Vol, veh/h | 5 | 29 | 89 | 31 | 17 | 43 |
| Conflicting Peds, #/hr | 0 | 14 | 0 | 7 | 7 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 54 | 54 | 54 | 54 | 54 | 54 |
| Heavy Vehicles, % | 0 | 3 | 0 | 32 | 23 | 9 |
| Mvmt Flow | 9 | 54 | 165 | 57 | 31 | 80 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 343 | 215 | 0 | 0 | 229 | 0 |
| Stage 1 | 201 | - | - | - | - | - |
| Stage 2 | 142 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.23 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 750 | 877 | - | - | 1003 | - |
| Stage 1 | 964 | - | - | - | - | - |
| Stage 2 | 1028 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 720 | 860 | - | - | 996 | - |
| Mov Cap-2 Maneuver | 720 | - | - | - | - | - |
| Stage 1 | 957 | - | - | - | - | - |
| Stage 2 | 994 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.7 | 0 | 2.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 836 | 996 | - |
| HCM Lane V/C Ratio | - | - | 0.075 | 0.032 | - |
| HCM Control Delay (s) | - | - | 9.7 | 8.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |

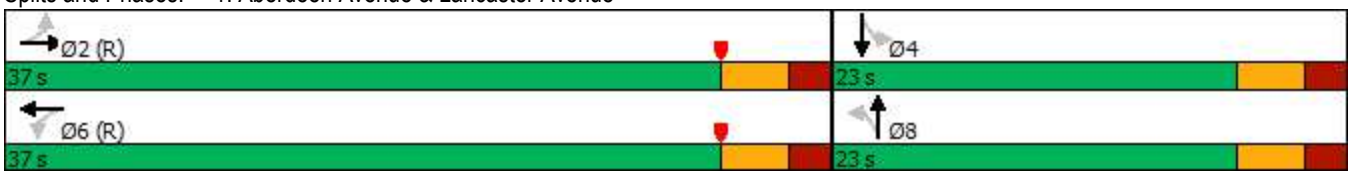


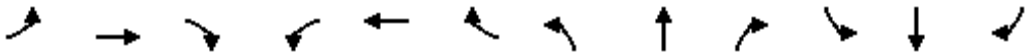
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 824 | 35 | 25 | 921 | 59 | 97 | 66 | 33 | 120 | 112 | 68 |
| Future Volume (vph) | 33 | 824 | 35 | 25 | 921 | 59 | 97 | 66 | 33 | 120 | 112 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1121 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 30.6 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 919 | 0 | 0 | 1036 | 0 | 0 | 202 | 0 | 0 | 309 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 37.0 | 37.0 | | 37.0 | 37.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (%) | 61.7% | 61.7% | | 61.7% | 61.7% | | 38.3% | 38.3% | | 38.3% | 38.3% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.65 | | | 0.73 | | | 0.61 | | | 0.75 | |
| Control Delay | | 10.7 | | | 13.7 | | | 26.6 | | | 32.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 10.7 | | | 13.7 | | | 26.6 | | | 32.1 | |
| Queue Length 50th (ft) | | 228 | | | 160 | | | 60 | | | 97 | |
| Queue Length 95th (ft) | | 298 | | | 257 | | | 118 | | | #182 | |
| Internal Link Dist (ft) | | 1041 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1410 | | | 1419 | | | 377 | | | 465 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.65 | | | 0.73 | | | 0.54 | | | 0.66 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |

Actuated Cycle Length: 60
Offset: 38 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 824 | 35 | 25 | 921 | 59 | 97 | 66 | 33 | 120 | 112 | 68 |
| Future Volume (vph) | 33 | 824 | 35 | 25 | 921 | 59 | 97 | 66 | 33 | 120 | 112 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.83 | | | *0.80 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.98 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2732 | | | 2640 | | | 1694 | | | 1831 | |
| Flt Permitted | | 0.88 | | | 0.91 | | | 0.69 | | | 0.79 | |
| Satd. Flow (perm) | | 2404 | | | 2418 | | | 1192 | | | 1470 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 34 | 849 | 36 | 26 | 949 | 61 | 100 | 68 | 34 | 124 | 115 | 70 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 919 | 0 | 0 | 1036 | 0 | 0 | 202 | 0 | 0 | 309 | 0 |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 34.2 | | | 34.2 | | | 15.8 | | | 15.8 | |
| Effective Green, g (s) | | 35.2 | | | 35.2 | | | 16.8 | | | 16.8 | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | | | 0.28 | | | 0.28 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1410 | | | 1418 | | | 333 | | | 411 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.38 | | | c0.43 | | | 0.17 | | | c0.21 | |
| v/c Ratio | | 0.65 | | | 0.73 | | | 0.61 | | | 0.75 | |
| Uniform Delay, d1 | | 8.3 | | | 9.0 | | | 18.7 | | | 19.7 | |
| Progression Factor | | 0.95 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 2.2 | | | 3.4 | | | 3.1 | | | 7.6 | |
| Delay (s) | | 10.1 | | | 12.3 | | | 21.8 | | | 27.3 | |
| Level of Service | | B | | | B | | | C | | | C | |
| Approach Delay (s) | | 10.1 | | | 12.3 | | | 21.8 | | | 27.3 | |
| Approach LOS | | B | | | B | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 78.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 914 | 62 | 60 | 989 | 17 | 61 |
| Future Volume (vph) | 914 | 62 | 60 | 989 | 17 | 61 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | -2% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 542 | 89 | |
| Travel Time (s) | 7.3 | | | 10.6 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 914 | 62 | 60 | 989 | 17 | 61 |
| Future Vol, veh/h | 914 | 62 | 60 | 989 | 17 | 61 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | -2 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 942 | 64 | 62 | 1020 | 18 | 63 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1006 | 0 | 1611 | 506 |
| Stage 1 | - | - | - | - | 974 | - |
| Stage 2 | - | - | - | - | 637 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *176 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *498 | - |
| Platoon blocked, % | - | - | 1 | - | 1 | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *150 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *150 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *425 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.1 | 15.8 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 414 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.194 | - | - | 0.063 | - |
| HCM Control Delay (s) | 15.8 | - | - | 8.9 | 0.6 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.7 | - | - | 0.2 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 11 | 75 | 122 | 12 | 30 | 142 |
| Future Volume (vph) | 11 | 75 | 122 | 12 | 30 | 142 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | -2% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 279 | | | 199 |
| Travel Time (s) | 2.0 | | 7.6 | | | 5.4 |
| Confl. Peds. (#/hr) | 6 | 6 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

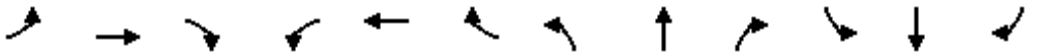
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.7 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 75 | 122 | 12 | 30 | 142 |
| Future Vol, veh/h | 11 | 75 | 122 | 12 | 30 | 142 |
| Conflicting Peds, #/hr | 6 | 6 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | -2 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 0 | 2 | 2 | 3 |
| Mvmt Flow | 11 | 77 | 126 | 12 | 31 | 146 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 346 | 138 | 0 | 0 | 138 | 0 |
| Stage 1 | 132 | - | - | - | - | - |
| Stage 2 | 214 | - | - | - | - | - |
| Critical Hdwy | 6.02 | 6.02 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.02 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.02 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 803 | 978 | - | - | 1077 | - |
| Stage 1 | 1054 | - | - | - | - | - |
| Stage 2 | 993 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 773 | 972 | - | - | 1077 | - |
| Mov Cap-2 Maneuver | 773 | - | - | - | - | - |
| Stage 1 | 1054 | - | - | - | - | - |
| Stage 2 | 957 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 1.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 941 | 1077 | - |
| HCM Lane V/C Ratio | - | - | 0.094 | 0.029 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 729 | 53 | 33 | 683 | 94 | 22 | 89 | 36 | 103 | 145 | 46 |
| Future Volume (vph) | 40 | 729 | 53 | 33 | 683 | 94 | 22 | 89 | 36 | 103 | 145 | 46 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 533 | | | 714 | | | 348 | | | 368 | |
| Travel Time (s) | | 14.5 | | | 19.5 | | | 9.5 | | | 10.0 | |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 839 | 0 | 0 | 731 | 96 | 22 | 128 | 0 | 105 | 195 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 61.0 | | 31.0 | 31.0 | 31.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 25.0% | 50.8% | | 25.8% | 25.8% | 25.8% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | -2.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.42 | | | 0.35 | 0.10 | 0.19 | 0.47 | | 0.64 | 0.70 | |
| Control Delay | | 7.0 | | | 3.5 | 2.7 | 44.1 | 49.3 | | 62.4 | 59.7 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 7.0 | | | 3.5 | 2.7 | 44.1 | 49.3 | | 62.4 | 59.7 | |
| Queue Length 50th (ft) | | 110 | | | 45 | 7 | 15 | 90 | | 76 | 144 | |
| Queue Length 95th (ft) | | 180 | | | 105 | 26 | 38 | 143 | | 130 | 211 | |
| Internal Link Dist (ft) | | 453 | | | 634 | | | 268 | | | 288 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2021 | | | 2060 | 1000 | 155 | 369 | | 225 | 377 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.42 | | | 0.35 | 0.10 | 0.14 | 0.35 | | 0.47 | 0.52 | |

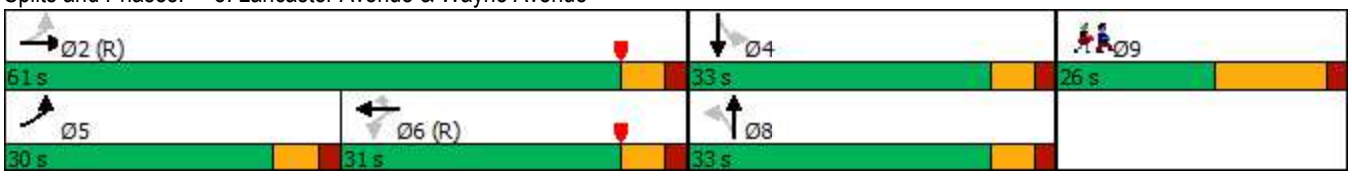
Intersection Summary

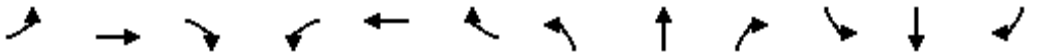
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 19 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 729 | 53 | 33 | 683 | 94 | 22 | 89 | 36 | 103 | 145 | 46 |
| Future Volume (vph) | 40 | 729 | 53 | 33 | 683 | 94 | 22 | 89 | 36 | 103 | 145 | 46 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.96 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.96 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3085 | | | 3150 | 1378 | 1509 | 1579 | | 1542 | 1613 | |
| Flt Permitted | | 0.88 | | | 0.88 | 1.00 | 0.42 | 1.00 | | 0.59 | 1.00 | |
| Satd. Flow (perm) | | 2714 | | | 2768 | 1378 | 662 | 1579 | | 957 | 1613 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 41 | 744 | 54 | 34 | 697 | 96 | 22 | 91 | 37 | 105 | 148 | 47 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 839 | 0 | 0 | 731 | 96 | 22 | 128 | 0 | 105 | 195 | 0 |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 88.4 | | | 88.4 | 88.4 | 19.6 | 19.6 | | 19.6 | 19.6 | |
| Effective Green, g (s) | | 89.4 | | | 89.4 | 90.4 | 20.6 | 20.6 | | 20.6 | 20.6 | |
| Actuated g/C Ratio | | 0.75 | | | 0.75 | 0.75 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2021 | | | 2062 | 1038 | 113 | 271 | | 164 | 276 | |
| v/s Ratio Prot | | | | | | | | 0.08 | | | c0.12 | |
| v/s Ratio Perm | | c0.31 | | | 0.26 | 0.07 | 0.03 | | | 0.11 | | |
| v/c Ratio | | 0.42 | | | 0.35 | 0.09 | 0.19 | 0.47 | | 0.64 | 0.71 | |
| Uniform Delay, d1 | | 5.6 | | | 5.3 | 3.9 | 42.6 | 44.8 | | 46.3 | 46.9 | |
| Progression Factor | | 1.00 | | | 0.52 | 0.52 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.4 | 0.2 | 0.8 | 1.3 | | 8.3 | 8.0 | |
| Delay (s) | | 5.8 | | | 3.2 | 2.2 | 43.4 | 46.1 | | 54.5 | 54.8 | |
| Level of Service | | A | | | A | A | D | D | | D | D | |
| Approach Delay (s) | | 5.8 | | | 3.1 | | | 45.7 | | | 54.7 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.55 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 26.0 |
| Intersection Capacity Utilization | 77.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

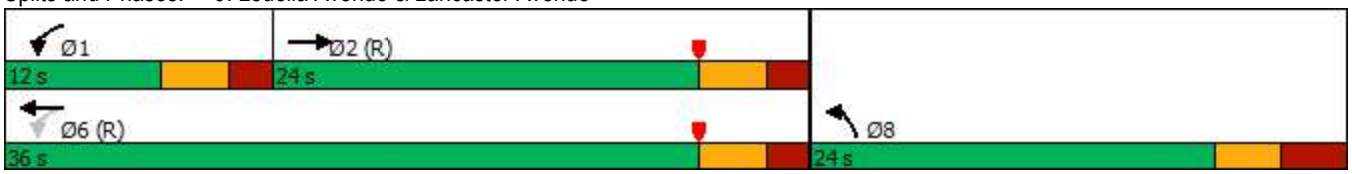
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 877 | 32 | 53 | 857 | 15 | 29 |
| Future Volume (vph) | 877 | 32 | 53 | 857 | 15 | 29 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 714 | | | 1121 | 430 | |
| Travel Time (s) | 19.5 | | | 30.6 | 11.7 | |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 947 | 0 | 0 | 948 | 46 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 24.0 | | 12.0 | 36.0 | 24.0 | |
| Total Split (%) | 40.0% | | 20.0% | 60.0% | 40.0% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.42 | | | 0.49 | 0.20 | |
| Control Delay | 5.8 | | | 2.5 | 24.5 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 5.8 | | | 2.5 | 24.5 | |
| Queue Length 50th (ft) | 144 | | | 28 | 15 | |
| Queue Length 95th (ft) | 133 | | | 42 | 39 | |
| Internal Link Dist (ft) | 634 | | | 1041 | 350 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2230 | | | 1918 | 520 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.42 | | | 0.49 | 0.09 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |

Offset: 6 (10%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 877 | 32 | 53 | 857 | 15 | 29 |
| Future Volume (vph) | 877 | 32 | 53 | 857 | 15 | 29 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.98 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3128 | | | 3130 | 1634 | |
| Flt Permitted | 1.00 | | | 0.86 | 0.98 | |
| Satd. Flow (perm) | 3128 | | | 2690 | 1634 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 914 | 33 | 55 | 893 | 16 | 30 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 947 | 0 | 0 | 948 | 46 | 0 |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 41.8 | | | 41.8 | 7.2 | |
| Effective Green, g (s) | 42.8 | | | 42.8 | 8.2 | |
| Actuated g/C Ratio | 0.71 | | | 0.71 | 0.14 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2231 | | | 1918 | 223 | |
| v/s Ratio Prot | 0.30 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.35 | | |
| v/c Ratio | 0.42 | | | 0.49 | 0.21 | |
| Uniform Delay, d1 | 3.5 | | | 3.8 | 23.0 | |
| Progression Factor | 1.40 | | | 0.45 | 1.00 | |
| Incremental Delay, d2 | 0.6 | | | 0.1 | 0.5 | |
| Delay (s) | 5.5 | | | 1.8 | 23.5 | |
| Level of Service | A | | | A | C | |
| Approach Delay (s) | 5.5 | | | 1.8 | 23.5 | |
| Approach LOS | A | | | A | C | |

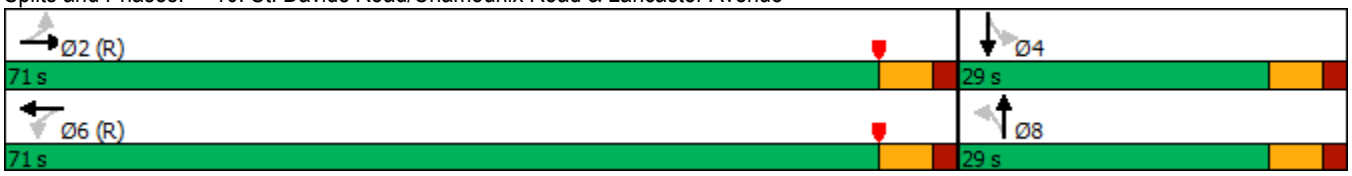
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.1 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 13.0 |
| Intersection Capacity Utilization | 67.5% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 968 | 16 | 39 | 1023 | 142 | 4 | 25 | 32 | 75 | 22 | 43 |
| Future Volume (vph) | 34 | 968 | 16 | 39 | 1023 | 142 | 4 | 25 | 32 | 75 | 22 | 43 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 444 | | | 516 | | | 295 | | | 258 | |
| Travel Time (s) | | 8.6 | | | 10.1 | | | 8.0 | | | 7.0 | |
| Confl. Peds. (#/hr) | 5 | | 3 | 3 | | 5 | | | 8 | 8 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 25% | 0% | 3% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 71.0 | 71.0 | | 71.0 | 71.0 | | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Total Split (%) | 71.0% | 71.0% | | 71.0% | 71.0% | | 29.0% | 29.0% | | 29.0% | 29.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 100 | |
| Actuated Cycle Length: 100 | |
| Offset: 66 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 50 | |
| Control Type: Actuated-Coordinated | |

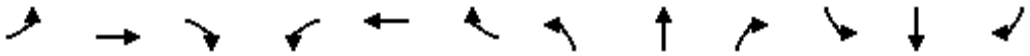
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 34 | 968 | 16 | 39 | 1023 | 142 | 4 | 25 | 32 | 75 | 22 | 43 |
| Future Volume (veh/h) | 34 | 968 | 16 | 39 | 1023 | 142 | 4 | 25 | 32 | 75 | 22 | 43 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.98 | 0.99 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1827 | 1845 | 1891 | 1834 | 1891 | 1881 | 1870 | 1881 |
| Adj Flow Rate, veh/h | 36 | 1030 | 16 | 41 | 1088 | 145 | 4 | 27 | 34 | 80 | 23 | 46 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 89 | 2360 | 36 | 89 | 2189 | 289 | 44 | 93 | 109 | 152 | 37 | 60 |
| Arrive On Green | 0.79 | 0.78 | 0.77 | 0.79 | 0.78 | 0.77 | 0.13 | 0.12 | 0.11 | 0.13 | 0.12 | 0.11 |
| Sat Flow, veh/h | 66 | 3044 | 47 | 65 | 2825 | 372 | 48 | 747 | 872 | 776 | 293 | 477 |
| Grp Volume(v), veh/h | 535 | 0 | 547 | 653 | 0 | 621 | 65 | 0 | 0 | 149 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1559 | 0 | 1598 | 1666 | 0 | 1596 | 1667 | 0 | 0 | 1546 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 11.7 | 0.0 | 0.0 | 14.5 | 0.0 | 0.0 | 0.0 | 5.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 9.7 | 0.0 | 11.7 | 12.4 | 0.0 | 14.5 | 3.6 | 0.0 | 0.0 | 9.0 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.06 | | 0.23 | 0.06 | | 0.52 | 0.54 | | 0.31 |
| Lane Grp Cap(c), veh/h | 1262 | 0 | 1238 | 1347 | 0 | 1237 | 263 | 0 | 0 | 264 | 0 | 0 |
| V/C Ratio(X) | 0.42 | 0.00 | 0.44 | 0.48 | 0.00 | 0.50 | 0.25 | 0.00 | 0.00 | 0.56 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1262 | 0 | 1238 | 1347 | 0 | 1237 | 450 | 0 | 0 | 431 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 3.6 | 0.0 | 3.9 | 3.9 | 0.0 | 4.2 | 40.1 | 0.0 | 0.0 | 41.9 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.0 | 0.0 | 1.1 | 1.3 | 0.0 | 1.5 | 0.7 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 8.4 | 0.0 | 9.2 | 10.3 | 0.0 | 11.0 | 3.0 | 0.0 | 0.0 | 7.4 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 4.7 | 0.0 | 5.0 | 5.2 | 0.0 | 5.7 | 40.7 | 0.0 | 0.0 | 44.6 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 1082 | | | 1274 | | | 65 | | | 149 | |
| Approach Delay, s/veh | | 4.8 | | | 5.4 | | | 40.7 | | | 44.6 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 82.5 | | 17.5 | | 82.5 | | 17.5 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 65.0 | | 23.0 | | 65.0 | | 23.0 |
| Max Q Clear Time (g_c+I1), s | | 13.7 | | 11.0 | | 16.5 | | 5.6 |
| Green Ext Time (p_c), s | | 5.3 | | 0.6 | | 6.8 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 8.3 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 15 | 9 | 5 | 7 | 71 | 10 | 9 | 117 | 6 | 5 | 99 | 14 |
| Future Volume (vph) | 15 | 9 | 5 | 7 | 71 | 10 | 9 | 117 | 6 | 5 | 99 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1097 | | | 652 | | | 218 | | | 279 | |
| Travel Time (s) | | 29.9 | | | 17.8 | | | 5.9 | | | 7.6 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 7 | | 5 | 5 | | 7 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles (%) | 7% | 0% | 40% | 0% | 1% | 0% | 11% | 11% | 0% | 0% | 3% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.5 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 15 | 9 | 5 | 7 | 71 | 10 | 9 | 117 | 6 | 5 | 99 | 14 |
| Future Vol, veh/h | 15 | 9 | 5 | 7 | 71 | 10 | 9 | 117 | 6 | 5 | 99 | 14 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles, % | 7 | 0 | 40 | 0 | 1 | 0 | 11 | 11 | 0 | 0 | 3 | 0 |
| Mvmt Flow | 19 | 11 | 6 | 9 | 89 | 13 | 11 | 146 | 8 | 6 | 124 | 18 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.2 | 8.4 | 8.8 | 8.4 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 7% | 52% | 8% | 4% |
| Vol Thru, % | 89% | 31% | 81% | 84% |
| Vol Right, % | 5% | 17% | 11% | 12% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 132 | 29 | 88 | 118 |
| LT Vol | 9 | 15 | 7 | 5 |
| Through Vol | 117 | 9 | 71 | 99 |
| RT Vol | 6 | 5 | 10 | 14 |
| Lane Flow Rate | 165 | 36 | 110 | 148 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.21 | 0.049 | 0.141 | 0.179 |
| Departure Headway (Hd) | 4.585 | 4.874 | 4.61 | 4.377 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 784 | 735 | 779 | 820 |
| Service Time | 2.607 | 2.903 | 2.635 | 2.398 |
| HCM Lane V/C Ratio | 0.21 | 0.049 | 0.141 | 0.18 |
| HCM Control Delay | 8.8 | 8.2 | 8.4 | 8.4 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.8 | 0.2 | 0.5 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 44 | 85 | 11 | 16 | 60 |
| Future Volume (vph) | 9 | 44 | 85 | 11 | 16 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1097 | | 261 | | | 430 |
| Travel Time (s) | 29.9 | | 7.1 | | | 11.7 |
| Confl. Peds. (#/hr) | 1 | 24 | | 10 | 10 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 0% | 19% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

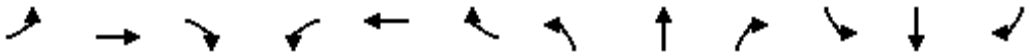
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 44 | 85 | 11 | 16 | 60 |
| Future Vol, veh/h | 9 | 44 | 85 | 11 | 16 | 60 |
| Conflicting Peds, #/hr | 1 | 24 | 0 | 10 | 10 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 87 | 87 | 87 | 87 | 87 | 87 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 19 | 2 |
| Mvmt Flow | 10 | 51 | 98 | 13 | 18 | 69 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 221 | 139 | 0 | 0 | 121 | 0 |
| Stage 1 | 115 | - | - | - | - | - |
| Stage 2 | 106 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.22 | - | - | 4.5 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3.2 | - |
| Pot Cap-1 Maneuver | 887 | 969 | - | - | 1020 | - |
| Stage 1 | 1059 | - | - | - | - | - |
| Stage 2 | 1069 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 860 | 938 | - | - | 1010 | - |
| Mov Cap-2 Maneuver | 860 | - | - | - | - | - |
| Stage 1 | 1048 | - | - | - | - | - |
| Stage 2 | 1048 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 1.8 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 924 | 1010 | - |
| HCM Lane V/C Ratio | - | - | 0.066 | 0.018 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |

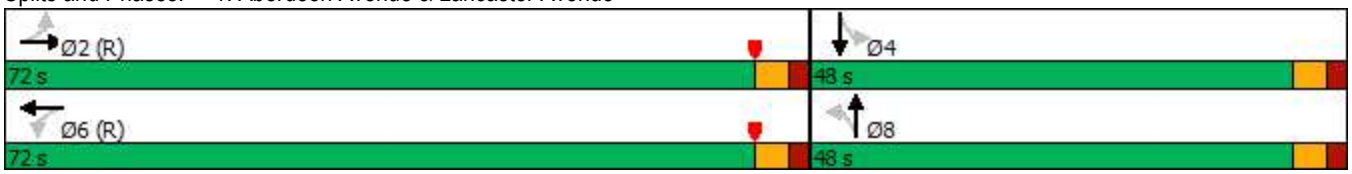


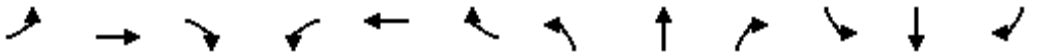
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 676 | 49 | 26 | 826 | 50 | 90 | 96 | 43 | 114 | 72 | 64 |
| Future Volume (vph) | 39 | 676 | 49 | 26 | 826 | 50 | 90 | 96 | 43 | 114 | 72 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 788 | 0 | 0 | 931 | 0 | 0 | 236 | 0 | 0 | 258 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.44 | | | 0.52 | | | 0.76 | | | 0.84 | |
| Control Delay | | 12.7 | | | 11.5 | | | 57.1 | | | 64.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 12.7 | | | 11.5 | | | 57.1 | | | 64.8 | |
| Queue Length 50th (ft) | | 118 | | | 181 | | | 170 | | | 190 | |
| Queue Length 95th (ft) | | 269 | | | 303 | | | 238 | | | 265 | |
| Internal Link Dist (ft) | | 1062 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1776 | | | 1798 | | | 460 | | | 458 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.44 | | | 0.52 | | | 0.51 | | | 0.56 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |

Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 676 | 49 | 26 | 826 | 50 | 90 | 96 | 43 | 114 | 72 | 64 |
| Future Volume (vph) | 39 | 676 | 49 | 26 | 826 | 50 | 90 | 96 | 43 | 114 | 72 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.94 | | | *0.88 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 3051 | | | 2867 | | | 1680 | | | 1807 | |
| Flt Permitted | | 0.85 | | | 0.91 | | | 0.73 | | | 0.68 | |
| Satd. Flow (perm) | | 2588 | | | 2618 | | | 1257 | | | 1251 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 40 | 697 | 51 | 27 | 852 | 52 | 93 | 99 | 44 | 118 | 74 | 66 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 788 | 0 | 0 | 931 | 0 | 0 | 236 | 0 | 0 | 258 | 0 |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 81.4 | | | 81.4 | | | 28.6 | | | 28.6 | |
| Effective Green, g (s) | | 82.4 | | | 82.4 | | | 29.6 | | | 29.6 | |
| Actuated g/C Ratio | | 0.69 | | | 0.69 | | | 0.25 | | | 0.25 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1777 | | | 1797 | | | 310 | | | 308 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.30 | | | c0.36 | | | 0.19 | | | c0.21 | |
| v/c Ratio | | 0.44 | | | 0.52 | | | 0.76 | | | 0.84 | |
| Uniform Delay, d1 | | 8.5 | | | 9.1 | | | 41.9 | | | 42.9 | |
| Progression Factor | | 1.23 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.8 | | | 1.1 | | | 10.5 | | | 17.7 | |
| Delay (s) | | 11.2 | | | 10.2 | | | 52.4 | | | 60.6 | |
| Level of Service | | B | | | B | | | D | | | E | |
| Approach Delay (s) | | 11.2 | | | 10.2 | | | 52.4 | | | 60.6 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 21.0 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.60 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 79.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 774 | 58 | 55 | 888 | 15 | 57 |
| Future Volume (vph) | 774 | 58 | 55 | 888 | 15 | 57 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | -2% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 545 | 89 | |
| Travel Time (s) | 7.3 | | | 10.6 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 774 | 58 | 55 | 888 | 15 | 57 |
| Future Vol, veh/h | 774 | 58 | 55 | 888 | 15 | 57 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | -2 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 798 | 60 | 57 | 915 | 15 | 59 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 858 | 0 | 1407 | 436 |
| Stage 1 | - | - | - | - | 828 | - |
| Stage 2 | - | - | - | - | 579 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1064 | - | *239 | *880 |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *544 | - |
| Platoon blocked, % | - | - | 1 | - | 1 | 1 |
| Mov Cap-1 Maneuver | - | - | *1064 | - | *212 | *875 |
| Mov Cap-2 Maneuver | - | - | - | - | *212 | - |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *482 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.9 | 12.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 530 | - | - | * 1064 | - |
| HCM Lane V/C Ratio | 0.14 | - | - | 0.053 | - |
| HCM Control Delay (s) | 12.9 | - | - | 8.6 | 0.4 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 0.2 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 70 | 158 | 11 | 27 | 120 |
| Future Volume (vph) | 9 | 70 | 158 | 11 | 27 | 120 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | -2% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 199 |
| Travel Time (s) | 2.0 | | 8.1 | | | 5.4 |
| Confl. Peds. (#/hr) | 9 | 9 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

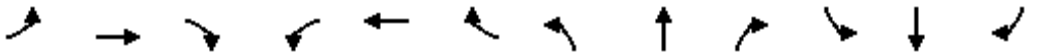
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 70 | 158 | 11 | 27 | 120 |
| Future Vol, veh/h | 9 | 70 | 158 | 11 | 27 | 120 |
| Conflicting Peds, #/hr | 9 | 9 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | -2 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 1 |
| Mvmt Flow | 9 | 72 | 163 | 11 | 28 | 124 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 358 | 178 | 0 | 0 | 174 | 0 |
| Stage 1 | 169 | - | - | - | - | - |
| Stage 2 | 189 | - | - | - | - | - |
| Critical Hdwy | 6.02 | 6.02 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.02 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.02 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 798 | 930 | - | - | 1047 | - |
| Stage 1 | 1016 | - | - | - | - | - |
| Stage 2 | 1027 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 768 | 922 | - | - | 1047 | - |
| Mov Cap-2 Maneuver | 768 | - | - | - | - | - |
| Stage 1 | 1016 | - | - | - | - | - |
| Stage 2 | 989 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.4 | 0 | 1.6 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 901 | 1047 | - |
| HCM Lane V/C Ratio | - | - | 0.09 | 0.027 | - |
| HCM Control Delay (s) | - | - | 9.4 | 8.5 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

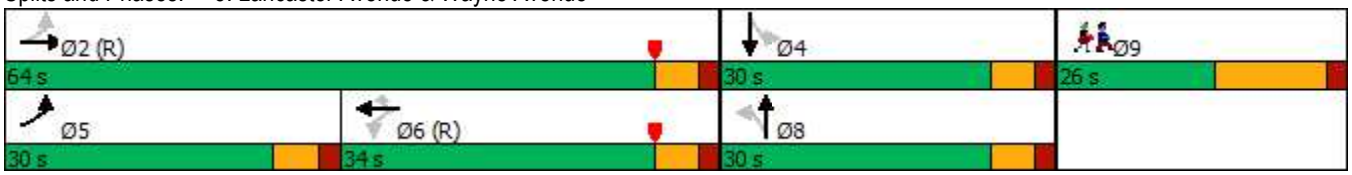


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 688 | 38 | 47 | 788 | 91 | 60 | 81 | 70 | 66 | 80 | 60 |
| Future Volume (vph) | 38 | 688 | 38 | 47 | 788 | 91 | 60 | 81 | 70 | 66 | 80 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 787 | 0 | 0 | 860 | 94 | 62 | 156 | 0 | 68 | 144 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 64.0 | | 34.0 | 34.0 | 34.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 25.0% | 53.3% | | 28.3% | 28.3% | 28.3% | 25.0% | 25.0% | | 25.0% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.38 | | | 0.42 | 0.09 | 0.50 | 0.65 | | 0.57 | 0.62 | |
| Control Delay | | 5.6 | | | 3.5 | 3.1 | 59.9 | 60.4 | | 64.6 | 58.8 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 5.6 | | | 3.5 | 3.1 | 59.9 | 60.4 | | 64.6 | 58.8 | |
| Queue Length 50th (ft) | | 88 | | | 53 | 11 | 45 | 115 | | 50 | 106 | |
| Queue Length 95th (ft) | | 148 | | | 67 | 19 | 87 | 178 | | 95 | 165 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2078 | | | 2069 | 1009 | 172 | 334 | | 167 | 325 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.38 | | | 0.42 | 0.09 | 0.36 | 0.47 | | 0.41 | 0.44 | |

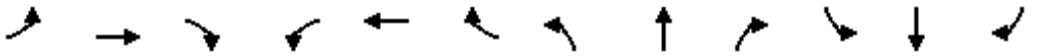
Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 688 | 38 | 47 | 788 | 91 | 60 | 81 | 70 | 66 | 80 | 60 |
| Future Volume (vph) | 38 | 688 | 38 | 47 | 788 | 91 | 60 | 81 | 70 | 66 | 80 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.97 | | 1.00 | 0.97 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.93 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3124 | | | 3148 | 1378 | 1491 | 1592 | | 1558 | 1549 | |
| Flt Permitted | | 0.86 | | | 0.86 | 1.00 | 0.52 | 1.00 | | 0.49 | 1.00 | |
| Satd. Flow (perm) | | 2708 | | | 2699 | 1378 | 818 | 1592 | | 797 | 1549 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 39 | 709 | 39 | 48 | 812 | 94 | 62 | 84 | 72 | 68 | 82 | 62 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 787 | 0 | 0 | 860 | 94 | 62 | 156 | 0 | 68 | 144 | 0 |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 91.1 | | | 91.1 | 91.1 | 16.9 | 16.9 | | 16.9 | 16.9 | |
| Effective Green, g (s) | | 92.1 | | | 92.1 | 91.1 | 17.9 | 17.9 | | 17.9 | 17.9 | |
| Actuated g/C Ratio | | 0.77 | | | 0.77 | 0.76 | 0.15 | 0.15 | | 0.15 | 0.15 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2078 | | | 2071 | 1046 | 122 | 237 | | 118 | 231 | |
| v/s Ratio Prot | | | | | | | | c0.10 | | | 0.09 | |
| v/s Ratio Perm | | 0.29 | | | c0.32 | 0.07 | 0.08 | | | 0.09 | | |
| v/c Ratio | | 0.38 | | | 0.42 | 0.09 | 0.51 | 0.66 | | 0.58 | 0.62 | |
| Uniform Delay, d1 | | 4.6 | | | 4.8 | 3.7 | 47.0 | 48.2 | | 47.5 | 47.9 | |
| Progression Factor | | 1.00 | | | 0.54 | 0.66 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.6 | 0.2 | 3.3 | 6.5 | | 6.7 | 5.2 | |
| Delay (s) | | 4.7 | | | 3.1 | 2.6 | 50.3 | 54.6 | | 54.2 | 53.0 | |
| Level of Service | | A | | | A | A | D | D | | D | D | |
| Approach Delay (s) | | 4.7 | | | 3.1 | | | 53.4 | | | 53.4 | |
| Approach LOS | | A | | | A | | | D | | | D | |

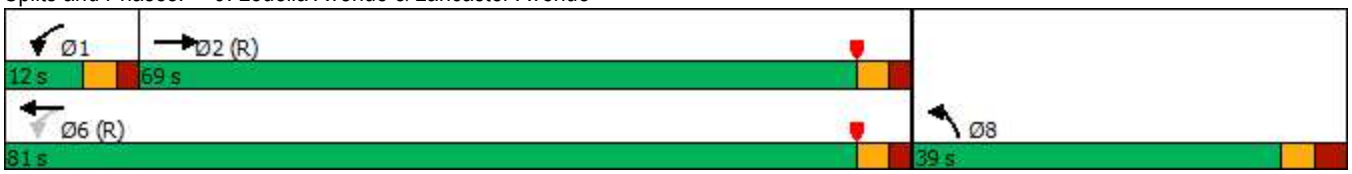
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.54 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 77.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 779 | 57 | 49 | 937 | 41 | 64 |
| Future Volume (vph) | 779 | 57 | 49 | 937 | 41 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 870 | 0 | 0 | 1027 | 110 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.34 | | | 0.48 | 0.55 | |
| Control Delay | 3.0 | | | 2.8 | 59.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 3.0 | | | 2.8 | 59.6 | |
| Queue Length 50th (ft) | 60 | | | 55 | 82 | |
| Queue Length 95th (ft) | 90 | | | 66 | 136 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2534 | | | 2161 | 483 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.34 | | | 0.48 | 0.23 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 779 | 57 | 49 | 937 | 41 | 64 |
| Future Volume (vph) | 779 | 57 | 49 | 937 | 41 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.97 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3140 | | | 3135 | 1678 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3140 | | | 2678 | 1678 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 811 | 59 | 51 | 976 | 43 | 67 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 870 | 0 | 0 | 1027 | 110 | 0 |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 95.9 | | | 95.9 | 13.1 | |
| Effective Green, g (s) | 96.9 | | | 96.9 | 14.1 | |
| Actuated g/C Ratio | 0.81 | | | 0.81 | 0.12 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2535 | | | 2162 | 197 | |
| v/s Ratio Prot | 0.28 | | | | c0.07 | |
| v/s Ratio Perm | | | | c0.38 | | |
| v/c Ratio | 0.34 | | | 0.48 | 0.56 | |
| Uniform Delay, d1 | 3.1 | | | 3.6 | 50.0 | |
| Progression Factor | 0.78 | | | 0.54 | 1.00 | |
| Incremental Delay, d2 | 0.3 | | | 0.1 | 3.4 | |
| Delay (s) | 2.7 | | | 2.1 | 53.4 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.7 | | | 2.1 | 53.4 | |
| Approach LOS | A | | | A | D | |

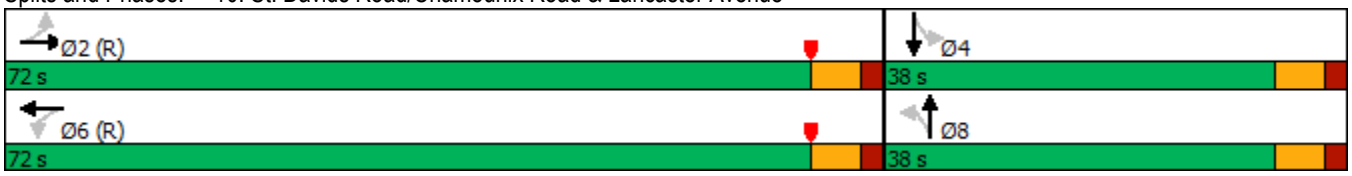
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 5.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.51 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 72.0% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 27 | 863 | 17 | 36 | 1005 | 63 | 14 | 17 | 41 | 55 | 17 | 40 |
| Future Volume (vph) | 27 | 863 | 17 | 36 | 1005 | 63 | 14 | 17 | 41 | 55 | 17 | 40 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 473 | | | 513 | | | 642 | | | 402 | |
| Travel Time (s) | | 9.2 | | | 10.0 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | 5 | | 2 | 2 | | 5 | | | 4 | 4 | | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 8% | 0% | 0% | 2% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

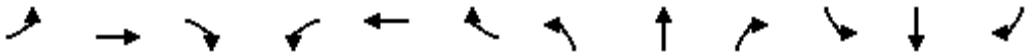
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 27 | 863 | 17 | 36 | 1005 | 63 | 14 | 17 | 41 | 55 | 17 | 40 |
| Future Volume (veh/h) | 27 | 863 | 17 | 36 | 1005 | 63 | 14 | 17 | 41 | 55 | 17 | 40 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1862 | 1891 | 1881 | 1863 | 1881 |
| Adj Flow Rate, veh/h | 28 | 881 | 16 | 37 | 1026 | 61 | 14 | 17 | 42 | 56 | 17 | 36 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 85 | 2510 | 45 | 94 | 2492 | 147 | 58 | 50 | 93 | 121 | 32 | 51 |
| Arrive On Green | 0.80 | 0.81 | 0.80 | 0.80 | 0.81 | 0.80 | 0.09 | 0.10 | 0.09 | 0.09 | 0.10 | 0.09 |
| Sat Flow, veh/h | 62 | 3084 | 55 | 72 | 3062 | 180 | 201 | 523 | 981 | 754 | 333 | 536 |
| Grp Volume(v), veh/h | 464 | 0 | 461 | 572 | 0 | 552 | 73 | 0 | 0 | 109 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1604 | 0 | 1596 | 1683 | 0 | 1631 | 1705 | 0 | 0 | 1622 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.3 | 0.0 | 0.0 | 10.5 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.4 | 0.0 | 8.3 | 9.4 | 0.0 | 10.5 | 4.5 | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 |
| Prop In Lane | 0.06 | | 0.03 | 0.06 | | 0.11 | 0.19 | | 0.58 | 0.51 | | 0.33 |
| Lane Grp Cap(c), veh/h | 1326 | 0 | 1299 | 1389 | 0 | 1328 | 186 | 0 | 0 | 189 | 0 | 0 |
| V/C Ratio(X) | 0.35 | 0.00 | 0.35 | 0.41 | 0.00 | 0.42 | 0.39 | 0.00 | 0.00 | 0.58 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1326 | 0 | 1299 | 1389 | 0 | 1328 | 507 | 0 | 0 | 489 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.6 | 0.0 | 2.7 | 2.8 | 0.0 | 2.9 | 47.4 | 0.0 | 0.0 | 48.4 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.7 | 0.0 | 0.8 | 0.9 | 0.0 | 1.0 | 1.9 | 0.0 | 0.0 | 3.9 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.0 | 0.0 | 7.0 | 8.9 | 0.0 | 8.6 | 4.0 | 0.0 | 0.0 | 6.3 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.3 | 0.0 | 3.4 | 3.7 | 0.0 | 3.9 | 49.4 | 0.0 | 0.0 | 52.3 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 925 | | | 1124 | | | 73 | | | 109 | |
| Approach Delay, s/veh | | 3.4 | | | 3.8 | | | 49.4 | | | 52.3 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 94.5 | | 15.5 | | 94.5 | | 15.5 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 10.3 | | 9.0 | | 12.5 | | 6.5 |
| Green Ext Time (p_c), s | | 4.1 | | 0.5 | | 5.4 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.5 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 7 | 14 | 3 | 4 | 27 | 16 | 3 | 107 | 11 | 5 | 99 | 18 |
| Future Volume (vph) | 7 | 14 | 3 | 4 | 27 | 16 | 3 | 107 | 11 | 5 | 99 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 6 | | 6 | 6 | | 6 | 2 | | 4 | 4 | | 2 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% | 0% | 1% | 11% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 7 | 14 | 3 | 4 | 27 | 16 | 3 | 107 | 11 | 5 | 99 | 18 |
| Future Vol, veh/h | 7 | 14 | 3 | 4 | 27 | 16 | 3 | 107 | 11 | 5 | 99 | 18 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 11 |
| Mvmt Flow | 9 | 18 | 4 | 5 | 34 | 20 | 4 | 135 | 14 | 6 | 125 | 23 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.8 | 7.8 | 8.1 | 8.1 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 29% | 9% | 4% |
| Vol Thru, % | 88% | 58% | 57% | 81% |
| Vol Right, % | 9% | 12% | 34% | 15% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 121 | 24 | 47 | 122 |
| LT Vol | 3 | 7 | 4 | 5 |
| Through Vol | 107 | 14 | 27 | 99 |
| RT Vol | 11 | 3 | 16 | 18 |
| Lane Flow Rate | 153 | 30 | 59 | 154 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.176 | 0.039 | 0.073 | 0.176 |
| Departure Headway (Hd) | 4.125 | 4.623 | 4.419 | 4.093 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 855 | 779 | 816 | 860 |
| Service Time | 2.223 | 2.626 | 2.42 | 2.193 |
| HCM Lane V/C Ratio | 0.179 | 0.039 | 0.072 | 0.179 |
| HCM Control Delay | 8.1 | 7.8 | 7.8 | 8.1 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.6 | 0.1 | 0.2 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 50 | 74 | 8 | 18 | 37 |
| Future Volume (vph) | 9 | 50 | 74 | 8 | 18 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | 1 | 13 | | 5 | 5 | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Heavy Vehicles (%) | 11% | 0% | 0% | 0% | 6% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

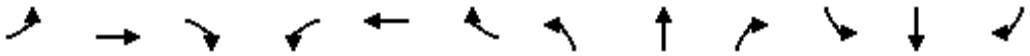
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 50 | 74 | 8 | 18 | 37 |
| Future Vol, veh/h | 9 | 50 | 74 | 8 | 18 | 37 |
| Conflicting Peds, #/hr | 1 | 13 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 72 | 72 | 72 | 72 | 72 | 72 |
| Heavy Vehicles, % | 11 | 0 | 0 | 0 | 6 | 0 |
| Mvmt Flow | 13 | 69 | 103 | 11 | 25 | 51 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 216 | 127 | 0 | 0 | 119 | 0 |
| Stage 1 | 114 | - | - | - | - | - |
| Stage 2 | 102 | - | - | - | - | - |
| Critical Hdwy | 6.51 | 6.2 | - | - | 4.4 | - |
| Critical Hdwy Stg 1 | 5.51 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.51 | - | - | - | - | - |
| Follow-up Hdwy | 3.1 | 3.1 | - | - | 3.1 | - |
| Pot Cap-1 Maneuver | 861 | 985 | - | - | 1056 | - |
| Stage 1 | 1024 | - | - | - | - | - |
| Stage 2 | 1038 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 835 | 968 | - | - | 1051 | - |
| Mov Cap-2 Maneuver | 835 | - | - | - | - | - |
| Stage 1 | 1019 | - | - | - | - | - |
| Stage 2 | 1012 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 2.8 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 945 | 1051 | - |
| HCM Lane V/C Ratio | - | - | 0.087 | 0.024 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.5 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

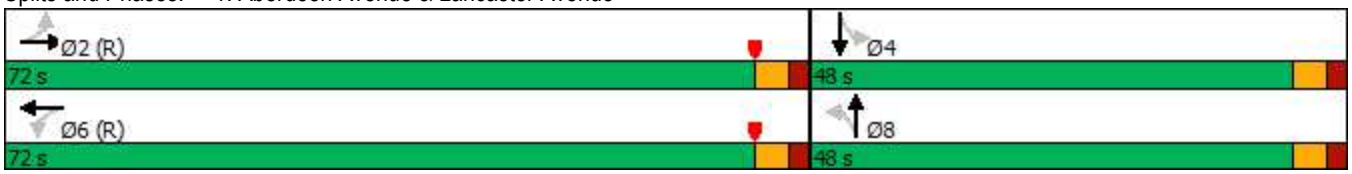


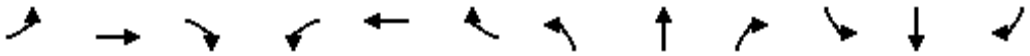
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 544 | 32 | 25 | 548 | 32 | 77 | 49 | 30 | 64 | 48 | 37 |
| Future Volume (vph) | 28 | 544 | 32 | 25 | 548 | 32 | 77 | 49 | 30 | 64 | 48 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 617 | 0 | 0 | 618 | 0 | 0 | 160 | 0 | 0 | 152 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.30 | | | 0.29 | | | 0.78 | | | 0.63 | |
| Control Delay | | 6.0 | | | 5.4 | | | 72.3 | | | 56.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 6.0 | | | 5.4 | | | 72.3 | | | 56.9 | |
| Queue Length 50th (ft) | | 51 | | | 67 | | | 120 | | | 111 | |
| Queue Length 95th (ft) | | 148 | | | 120 | | | 185 | | | 169 | |
| Internal Link Dist (ft) | | 1062 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2044 | | | 2097 | | | 437 | | | 518 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.30 | | | 0.29 | | | 0.37 | | | 0.29 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 544 | 32 | 25 | 548 | 32 | 77 | 49 | 30 | 64 | 48 | 37 |
| Future Volume (vph) | 28 | 544 | 32 | 25 | 548 | 32 | 77 | 49 | 30 | 64 | 48 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.90 | | | *0.92 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2966 | | | 3025 | | | 1664 | | | 1822 | |
| Flt Permitted | | 0.90 | | | 0.91 | | | 0.70 | | | 0.76 | |
| Satd. Flow (perm) | | 2681 | | | 2753 | | | 1194 | | | 1414 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 29 | 555 | 33 | 26 | 559 | 33 | 79 | 50 | 31 | 65 | 49 | 38 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 617 | 0 | 0 | 618 | 0 | 0 | 160 | 0 | 0 | 152 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 90.5 | | | 90.5 | | | 19.5 | | | 19.5 | |
| Effective Green, g (s) | | 91.5 | | | 91.5 | | | 20.5 | | | 20.5 | |
| Actuated g/C Ratio | | 0.76 | | | 0.76 | | | 0.17 | | | 0.17 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 2044 | | | 2099 | | | 203 | | | 241 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.23 | | | 0.22 | | | c0.13 | | | 0.11 | |
| v/c Ratio | | 0.30 | | | 0.29 | | | 0.79 | | | 0.63 | |
| Uniform Delay, d1 | | 4.4 | | | 4.4 | | | 47.7 | | | 46.2 | |
| Progression Factor | | 1.11 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 0.4 | | | 18.1 | | | 5.3 | |
| Delay (s) | | 5.2 | | | 4.7 | | | 65.8 | | | 51.5 | |
| Level of Service | | A | | | A | | | E | | | D | |
| Approach Delay (s) | | 5.2 | | | 4.7 | | | 65.8 | | | 51.5 | |
| Approach LOS | | A | | | A | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 58.7% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 577 | 61 | 54 | 591 | 15 | 60 |
| Future Volume (vph) | 577 | 61 | 54 | 591 | 15 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | -2% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 1647 | 89 | |
| Travel Time (s) | 7.3 | | | 32.1 | 2.4 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 577 | 61 | 54 | 591 | 15 | 60 |
| Future Vol, veh/h | 577 | 61 | 54 | 591 | 15 | 60 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | -2 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 589 | 62 | 55 | 603 | 15 | 61 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 651 | 0 | 1032 | 326 |
| Stage 1 | - | - | - | - | 620 | - |
| Stage 2 | - | - | - | - | 412 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1171 | - | *206 | *968 |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1010 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1171 | - | *191 | *968 |
| Mov Cap-2 Maneuver | - | - | - | - | *191 | - |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *939 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.9 | 12.9 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 534 | - | - | * 1171 | - |
| HCM Lane V/C Ratio | 0.143 | - | - | 0.047 | - |
| HCM Control Delay (s) | 12.9 | - | - | 8.2 | 0.2 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 0.1 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 8 | 69 | 87 | 10 | 26 | 79 |
| Future Volume (vph) | 8 | 69 | 87 | 10 | 26 | 79 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | -2% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 199 |
| Travel Time (s) | 2.0 | | 8.1 | | | 5.4 |
| Confl. Peds. (#/hr) | | | | 6 | 6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

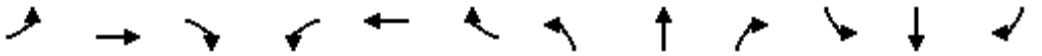
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 8 | 69 | 87 | 10 | 26 | 79 |
| Future Vol, veh/h | 8 | 69 | 87 | 10 | 26 | 79 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 6 | 6 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | -2 | - | 2 | - | - | -2 |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 8 | 70 | 89 | 10 | 27 | 81 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 235 | 100 | 0 | 0 | 105 | 0 |
| Stage 1 | 100 | - | - | - | - | - |
| Stage 2 | 135 | - | - | - | - | - |
| Critical Hdwy | 6 | 6 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 928 | 1026 | - | - | 1106 | - |
| Stage 1 | 1089 | - | - | - | - | - |
| Stage 2 | 1076 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 898 | 1020 | - | - | 1100 | - |
| Mov Cap-2 Maneuver | 898 | - | - | - | - | - |
| Stage 1 | 1082 | - | - | - | - | - |
| Stage 2 | 1048 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 2.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1006 | 1100 | - |
| HCM Lane V/C Ratio | - | - | 0.078 | 0.024 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 57 | 492 | 27 | 42 | 495 | 98 | 29 | 53 | 60 | 73 | 67 | 53 |
| Future Volume (vph) | 57 | 492 | 27 | 42 | 495 | 98 | 29 | 53 | 60 | 73 | 67 | 53 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 606 | 0 | 0 | 565 | 103 | 31 | 119 | 0 | 77 | 127 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 61.0 | | 31.0 | 31.0 | 31.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 25.0% | 50.8% | | 25.8% | 25.8% | 25.8% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.30 | | | 0.27 | 0.10 | 0.26 | 0.56 | | 0.60 | 0.60 | |
| Control Delay | | 4.4 | | | 2.9 | 2.9 | 50.5 | 58.2 | | 67.0 | 60.5 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 4.4 | | | 2.9 | 2.9 | 50.5 | 58.2 | | 67.0 | 60.5 | |
| Queue Length 50th (ft) | | 57 | | | 36 | 11 | 22 | 88 | | 57 | 94 | |
| Queue Length 95th (ft) | | 98 | | | 47 | 22 | 51 | 142 | | 105 | 152 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2046 | | | 2131 | 1067 | 208 | 374 | | 227 | 370 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.30 | | | 0.27 | 0.10 | 0.15 | 0.32 | | 0.34 | 0.34 | |

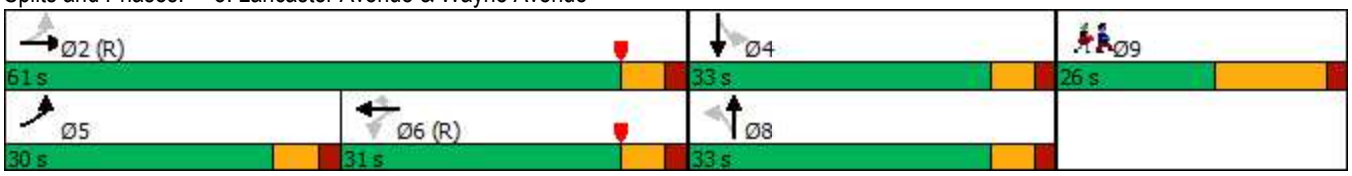
Intersection Summary

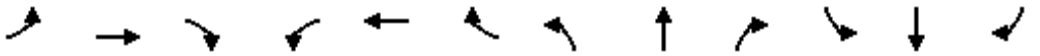
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 57 | 492 | 27 | 42 | 495 | 98 | 29 | 53 | 60 | 73 | 67 | 53 |
| Future Volume (vph) | 57 | 492 | 27 | 42 | 495 | 98 | 29 | 53 | 60 | 73 | 67 | 53 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.98 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.97 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.92 | | 1.00 | 0.93 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3123 | | | 3150 | 1393 | 1521 | 1595 | | 1591 | 1574 | |
| Flt Permitted | | 0.83 | | | 0.86 | 1.00 | 0.55 | 1.00 | | 0.58 | 1.00 | |
| Satd. Flow (perm) | | 2613 | | | 2718 | 1393 | 884 | 1595 | | 970 | 1574 | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 60 | 518 | 28 | 44 | 521 | 103 | 31 | 56 | 63 | 77 | 71 | 56 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 606 | 0 | 0 | 565 | 103 | 31 | 119 | 0 | 77 | 127 | 0 |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 93.1 | | | 93.1 | 93.1 | 14.9 | 14.9 | | 14.9 | 14.9 | |
| Effective Green, g (s) | | 94.1 | | | 94.1 | 93.1 | 15.9 | 15.9 | | 15.9 | 15.9 | |
| Actuated g/C Ratio | | 0.78 | | | 0.78 | 0.78 | 0.13 | 0.13 | | 0.13 | 0.13 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2049 | | | 2131 | 1080 | 117 | 211 | | 128 | 208 | |
| v/s Ratio Prot | | | | | | | | 0.07 | | | c0.08 | |
| v/s Ratio Perm | | c0.23 | | | 0.21 | 0.07 | 0.04 | | | 0.08 | | |
| v/c Ratio | | 0.30 | | | 0.27 | 0.10 | 0.26 | 0.56 | | 0.60 | 0.61 | |
| Uniform Delay, d1 | | 3.6 | | | 3.5 | 3.3 | 46.8 | 48.8 | | 49.1 | 49.1 | |
| Progression Factor | | 1.00 | | | 0.67 | 0.71 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.3 | 0.2 | 1.2 | 3.4 | | 7.7 | 5.2 | |
| Delay (s) | | 3.7 | | | 2.6 | 2.5 | 48.0 | 52.2 | | 56.8 | 54.3 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 3.7 | | | 2.6 | | | 51.4 | | | 55.3 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.41 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 56.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

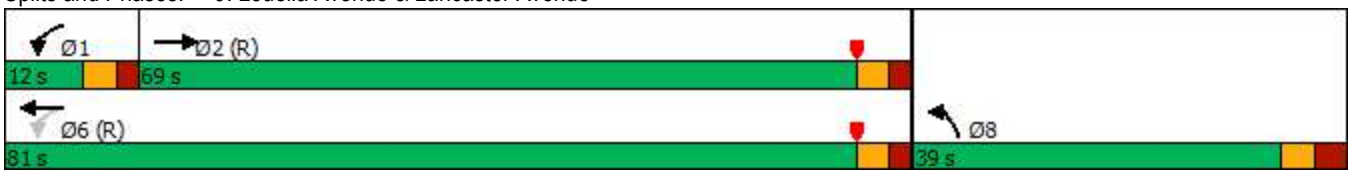
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 583 | 63 | 22 | 624 | 26 | 16 |
| Future Volume (vph) | 583 | 63 | 22 | 624 | 26 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 718 | 0 | 0 | 717 | 47 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.27 | | | 0.30 | 0.34 | |
| Control Delay | 1.8 | | | 2.4 | 57.9 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 1.8 | | | 2.4 | 57.9 | |
| Queue Length 50th (ft) | 28 | | | 36 | 35 | |
| Queue Length 95th (ft) | 42 | | | 51 | 73 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2639 | | | 2430 | 491 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.27 | | | 0.30 | 0.10 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 583 | 63 | 22 | 624 | 26 | 16 |
| Future Volume (vph) | 583 | 63 | 22 | 624 | 26 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.95 | |
| Flt Protected | 1.00 | | | 1.00 | 0.97 | |
| Satd. Flow (prot) | 3126 | | | 3140 | 1727 | |
| Flt Permitted | 1.00 | | | 0.91 | 0.97 | |
| Satd. Flow (perm) | 3126 | | | 2877 | 1727 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 648 | 70 | 24 | 693 | 29 | 18 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 718 | 0 | 0 | 717 | 47 | 0 |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 100.3 | | | 100.3 | 8.7 | |
| Effective Green, g (s) | 101.3 | | | 101.3 | 9.7 | |
| Actuated g/C Ratio | 0.84 | | | 0.84 | 0.08 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2638 | | | 2428 | 139 | |
| v/s Ratio Prot | 0.23 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.25 | | |
| v/c Ratio | 0.27 | | | 0.30 | 0.34 | |
| Uniform Delay, d1 | 1.9 | | | 1.9 | 52.1 | |
| Progression Factor | 0.77 | | | 0.98 | 1.00 | |
| Incremental Delay, d2 | 0.2 | | | 0.1 | 1.4 | |
| Delay (s) | 1.7 | | | 2.0 | 53.6 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.7 | | | 2.0 | 53.6 | |
| Approach LOS | A | | | A | D | |

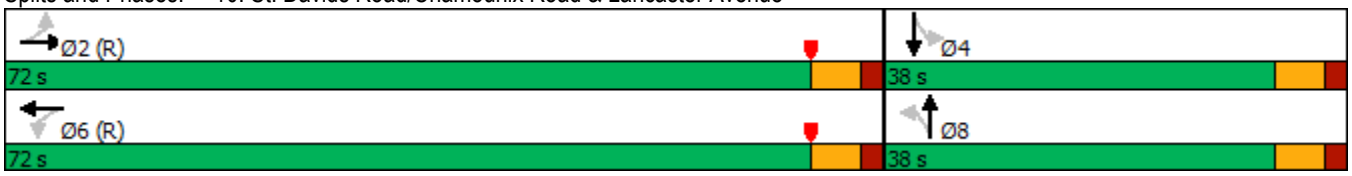
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.5 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.31 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 45.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 21 | 619 | 6 | 30 | 655 | 33 | 12 | 6 | 42 | 37 | 13 | 24 |
| Future Volume (vph) | 21 | 619 | 6 | 30 | 655 | 33 | 12 | 6 | 42 | 37 | 13 | 24 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1647 | | | 744 | | | 642 | | | 402 | |
| Travel Time (s) | | 32.1 | | | 14.5 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | | | | | | | | | 1 | 1 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 2% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

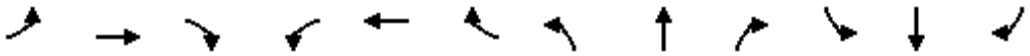
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 21 | 619 | 6 | 30 | 655 | 33 | 12 | 6 | 42 | 37 | 13 | 24 |
| Future Volume (veh/h) | 21 | 619 | 6 | 30 | 655 | 33 | 12 | 6 | 42 | 37 | 13 | 24 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1865 | 1891 | 1881 | 1881 | 1881 |
| Adj Flow Rate, veh/h | 22 | 659 | 5 | 32 | 697 | 33 | 13 | 6 | 45 | 39 | 14 | 20 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 93 | 2657 | 20 | 122 | 2581 | 121 | 56 | 18 | 82 | 107 | 28 | 32 |
| Arrive On Green | 0.83 | 0.84 | 0.83 | 0.83 | 0.84 | 0.83 | 0.06 | 0.07 | 0.06 | 0.06 | 0.07 | 0.06 |
| Sat Flow, veh/h | 70 | 3163 | 24 | 103 | 3073 | 144 | 236 | 264 | 1185 | 827 | 402 | 464 |
| Grp Volume(v), veh/h | 350 | 0 | 336 | 387 | 0 | 375 | 64 | 0 | 0 | 73 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1655 | 0 | 1602 | 1682 | 0 | 1638 | 1685 | 0 | 0 | 1692 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 4.7 | 0.0 | 0.0 | 5.3 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.4 | 0.0 | 4.7 | 4.8 | 0.0 | 5.3 | 3.9 | 0.0 | 0.0 | 4.4 | 0.0 | 0.0 |
| Prop In Lane | 0.06 | | 0.01 | 0.08 | | 0.09 | 0.20 | | 0.70 | 0.53 | | 0.27 |
| Lane Grp Cap(c), veh/h | 1410 | 0 | 1345 | 1432 | 0 | 1376 | 141 | 0 | 0 | 152 | 0 | 0 |
| V/C Ratio(X) | 0.25 | 0.00 | 0.25 | 0.27 | 0.00 | 0.27 | 0.45 | 0.00 | 0.00 | 0.48 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1410 | 0 | 1345 | 1432 | 0 | 1376 | 499 | 0 | 0 | 498 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 1.8 | 0.0 | 1.8 | 1.8 | 0.0 | 1.8 | 50.0 | 0.0 | 0.0 | 50.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 0.4 | 0.5 | 0.0 | 0.5 | 3.2 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 4.3 | 0.0 | 4.0 | 4.8 | 0.0 | 4.5 | 3.7 | 0.0 | 0.0 | 4.2 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 2.2 | 0.0 | 2.2 | 2.3 | 0.0 | 2.3 | 53.2 | 0.0 | 0.0 | 53.4 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 686 | | | 762 | | | 64 | | | 73 | |
| Approach Delay, s/veh | | 2.2 | | | 2.3 | | | 53.2 | | | 53.4 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 97.4 | | 12.6 | | 97.4 | | 12.6 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 6.7 | | 6.4 | | 7.3 | | 5.9 |
| Green Ext Time (p_c), s | | 2.7 | | 0.3 | | 3.1 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 6.7 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 2 | 2 | 3 | 10 | 8 | 5 | 72 | 2 | 5 | 43 | 12 |
| Future Volume (vph) | 24 | 2 | 2 | 3 | 10 | 8 | 5 | 72 | 2 | 5 | 43 | 12 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 1 | | 2 | 2 | | 1 | 6 | | 3 | 3 | | 6 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 8% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 24 | 2 | 2 | 3 | 10 | 8 | 5 | 72 | 2 | 5 | 43 | 12 |
| Future Vol, veh/h | 24 | 2 | 2 | 3 | 10 | 8 | 5 | 72 | 2 | 5 | 43 | 12 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 33 | 3 | 3 | 4 | 14 | 11 | 7 | 99 | 3 | 7 | 59 | 16 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.7 | 7.3 | 7.7 | 7.5 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 6% | 86% | 14% | 8% |
| Vol Thru, % | 91% | 7% | 48% | 72% |
| Vol Right, % | 3% | 7% | 38% | 20% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 79 | 28 | 21 | 60 |
| LT Vol | 5 | 24 | 3 | 5 |
| Through Vol | 72 | 2 | 10 | 43 |
| RT Vol | 2 | 2 | 8 | 12 |
| Lane Flow Rate | 108 | 38 | 29 | 82 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.123 | 0.047 | 0.032 | 0.091 |
| Departure Headway (Hd) | 4.077 | 4.379 | 4.057 | 3.996 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 873 | 806 | 867 | 888 |
| Service Time | 2.13 | 2.471 | 2.155 | 2.057 |
| HCM Lane V/C Ratio | 0.124 | 0.047 | 0.033 | 0.092 |
| HCM Control Delay | 7.7 | 7.7 | 7.3 | 7.5 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.1 | 0.1 | 0.3 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 36 | 21 | 3 | 10 | 29 |
| Future Volume (vph) | 4 | 36 | 21 | 3 | 10 | 29 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | | 5 | | 4 | 4 | |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

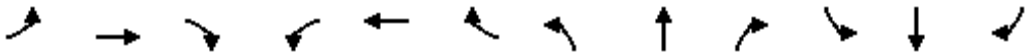
| Intersection | |
|---|---|
| Int Delay, s/veh | 4.1 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 36 | 21 | 3 | 10 | 29 |
| Future Vol, veh/h | 4 | 36 | 21 | 3 | 10 | 29 |
| Conflicting Peds, #/hr | 0 | 5 | 0 | 4 | 4 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 73 | 73 | 73 | 73 | 73 | 73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 5 | 49 | 29 | 4 | 14 | 40 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 103 | 40 | 0 | 0 | 37 | 0 |
| Stage 1 | 35 | - | - | - | - | - |
| Stage 2 | 68 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1043 | 1103 | - | - | 1166 | - |
| Stage 1 | 1155 | - | - | - | - | - |
| Stage 2 | 1115 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 1026 | 1094 | - | - | 1162 | - |
| Mov Cap-2 Maneuver | 1026 | - | - | - | - | - |
| Stage 1 | 1150 | - | - | - | - | - |
| Stage 2 | 1102 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.5 | 0 | 2.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1087 | 1162 | - |
| HCM Lane V/C Ratio | - | - | 0.05 | 0.012 | - |
| HCM Control Delay (s) | - | - | 8.5 | 8.1 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

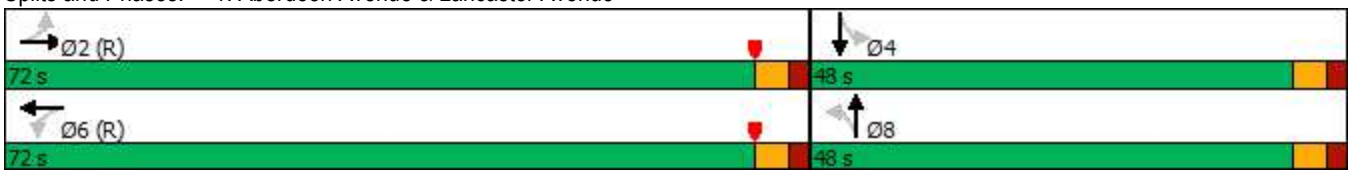


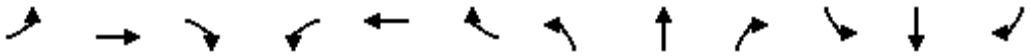
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 710 | 45 | 32 | 762 | 73 | 106 | 65 | 43 | 116 | 62 | 81 |
| Future Volume (vph) | 38 | 710 | 45 | 32 | 762 | 73 | 106 | 65 | 43 | 116 | 62 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 827 | 0 | 0 | 903 | 0 | 0 | 223 | 0 | 0 | 270 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.60 | | | 0.55 | | | 0.77 | | | 0.81 | |
| Control Delay | | 18.8 | | | 12.4 | | | 59.0 | | | 60.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 18.8 | | | 12.4 | | | 59.0 | | | 60.2 | |
| Queue Length 50th (ft) | | 252 | | | 187 | | | 161 | | | 197 | |
| Queue Length 95th (ft) | | 388 | | | 318 | | | 230 | | | 270 | |
| Internal Link Dist (ft) | | 1072 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1371 | | | 1647 | | | 421 | | | 488 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.60 | | | 0.55 | | | 0.53 | | | 0.55 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 710 | 45 | 32 | 762 | 73 | 106 | 65 | 43 | 116 | 62 | 81 |
| Future Volume (vph) | 38 | 710 | 45 | 32 | 762 | 73 | 106 | 65 | 43 | 116 | 62 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.75 | | | *0.86 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2356 | | | 2758 | | | 1673 | | | 1796 | |
| Flt Permitted | | 0.85 | | | 0.87 | | | 0.67 | | | 0.73 | |
| Satd. Flow (perm) | | 2009 | | | 2415 | | | 1148 | | | 1332 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 40 | 740 | 47 | 33 | 794 | 76 | 110 | 68 | 45 | 121 | 65 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 827 | 0 | 0 | 903 | 0 | 0 | 223 | 0 | 0 | 270 | 0 |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 80.9 | | | 80.9 | | | 29.1 | | | 29.1 | |
| Effective Green, g (s) | | 81.9 | | | 81.9 | | | 30.1 | | | 30.1 | |
| Actuated g/C Ratio | | 0.68 | | | 0.68 | | | 0.25 | | | 0.25 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1371 | | | 1648 | | | 287 | | | 334 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.41 | | | 0.37 | | | 0.19 | | | c0.20 | |
| v/c Ratio | | 0.60 | | | 0.55 | | | 0.78 | | | 0.81 | |
| Uniform Delay, d1 | | 10.3 | | | 9.7 | | | 41.8 | | | 42.2 | |
| Progression Factor | | 1.41 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 1.9 | | | 1.3 | | | 12.4 | | | 13.4 | |
| Delay (s) | | 16.4 | | | 11.0 | | | 54.2 | | | 55.6 | |
| Level of Service | | B | | | B | | | D | | | E | |
| Approach Delay (s) | | 16.4 | | | 11.0 | | | 54.2 | | | 55.6 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 77.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 781 | 79 | 70 | 852 | 20 | 77 |
| Future Volume (vph) | 781 | 79 | 70 | 852 | 20 | 77 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 1639 | 89 | |
| Travel Time (s) | 7.3 | | | 31.9 | 2.4 | |
| Confl. Peds. (#/hr) | | 1 | 1 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 3% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.7 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 781 | 79 | 70 | 852 | 20 | 77 |
| Future Vol, veh/h | 781 | 79 | 70 | 852 | 20 | 77 |
| Conflicting Peds, #/hr | 0 | 1 | 1 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 4 | 2 | 2 | 3 | 2 | 2 |
| Mvmt Flow | 814 | 82 | 73 | 888 | 21 | 80 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 897 | 0 | 1446 | 449 |
| Stage 1 | - | - | - | - | 856 | - |
| Stage 2 | - | - | - | - | 590 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1035 | - | *97 | *880 |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *878 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 1034 | - | *83 | *879 |
| Mov Cap-2 Maneuver | - | - | - | - | *83 | - |
| Stage 1 | - | - | - | - | *911 | - |
| Stage 2 | - | - | - | - | *756 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.1 | 23.4 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 295 | - | - | 1034 | - |
| HCM Lane V/C Ratio | 0.343 | - | - | 0.071 | - |
| HCM Control Delay (s) | 23.4 | - | - | 8.7 | 0.5 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.5 | - | - | 0.2 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 11 | 89 | 114 | 14 | 34 | 105 |
| Future Volume (vph) | 11 | 89 | 114 | 14 | 34 | 105 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 199 |
| Travel Time (s) | 2.0 | | 8.5 | | | 5.4 |
| Confl. Peds. (#/hr) | | | | 1 | 1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 5% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

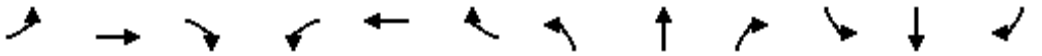
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.3 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 89 | 114 | 14 | 34 | 105 |
| Future Vol, veh/h | 11 | 89 | 114 | 14 | 34 | 105 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 5 |
| Mvmt Flow | 11 | 93 | 119 | 15 | 35 | 109 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 307 | 128 | 0 | 0 | 135 | 0 |
| Stage 1 | 128 | - | - | - | - | - |
| Stage 2 | 179 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 837 | 983 | - | - | 1080 | - |
| Stage 1 | 1043 | - | - | - | - | - |
| Stage 2 | 1031 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 807 | 982 | - | - | 1079 | - |
| Mov Cap-2 Maneuver | 807 | - | - | - | - | - |
| Stage 1 | 1042 | - | - | - | - | - |
| Stage 2 | 995 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 2.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 959 | 1079 | - |
| HCM Lane V/C Ratio | - | - | 0.109 | 0.033 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 68 | 633 | 82 | 31 | 649 | 91 | 42 | 114 | 67 | 106 | 120 | 74 |
| Future Volume (vph) | 68 | 633 | 82 | 31 | 649 | 91 | 42 | 114 | 67 | 106 | 120 | 74 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 851 | 0 | 0 | 739 | 99 | 46 | 197 | 0 | 115 | 210 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 12.0 | 66.0 | | 54.0 | 54.0 | 54.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 10.0% | 55.0% | | 45.0% | 45.0% | 45.0% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.49 | | | 0.37 | 0.11 | 0.37 | 0.65 | | 0.85 | 0.73 | |
| Control Delay | | 8.8 | | | 4.1 | 3.9 | 49.2 | 54.7 | | 91.6 | 59.8 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 8.8 | | | 4.1 | 3.9 | 49.2 | 54.7 | | 91.6 | 59.8 | |
| Queue Length 50th (ft) | | 133 | | | 52 | 13 | 31 | 141 | | 86 | 153 | |
| Queue Length 95th (ft) | | 202 | | | 58 | 22 | 67 | 213 | | #173 | 230 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1733 | | | 1975 | 915 | 153 | 370 | | 166 | 354 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.49 | | | 0.37 | 0.11 | 0.30 | 0.53 | | 0.69 | 0.59 | |

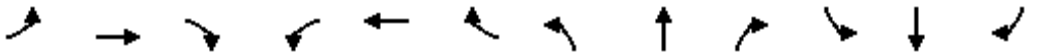
Intersection Summary

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 21.0 |
| Total Split (%) | 18% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 68 | 633 | 82 | 31 | 649 | 91 | 42 | 114 | 67 | 106 | 120 | 74 |
| Future Volume (vph) | 68 | 633 | 82 | 31 | 649 | 91 | 42 | 114 | 67 | 106 | 120 | 74 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.99 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.98 | | | 1.00 | 0.85 | 1.00 | 0.94 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 2975 | | | 3096 | 1290 | 1520 | 1584 | | 1535 | 1519 | |
| Flt Permitted | | 0.80 | | | 0.88 | 1.00 | 0.41 | 1.00 | | 0.44 | 1.00 | |
| Satd. Flow (perm) | | 2389 | | | 2718 | 1290 | 658 | 1584 | | 712 | 1519 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 74 | 688 | 89 | 34 | 705 | 99 | 46 | 124 | 73 | 115 | 130 | 80 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 851 | 0 | 0 | 739 | 99 | 46 | 197 | 0 | 115 | 210 | 0 |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 86.2 | | | 86.2 | 86.2 | 21.8 | 21.8 | | 21.8 | 21.8 | |
| Effective Green, g (s) | | 87.2 | | | 87.2 | 86.2 | 22.8 | 22.8 | | 22.8 | 22.8 | |
| Actuated g/C Ratio | | 0.73 | | | 0.73 | 0.72 | 0.19 | 0.19 | | 0.19 | 0.19 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1736 | | | 1975 | 926 | 125 | 300 | | 135 | 288 | |
| v/s Ratio Prot | | | | | | | | 0.12 | | | 0.14 | |
| v/s Ratio Perm | | c0.36 | | | 0.27 | 0.08 | 0.07 | | | c0.16 | | |
| v/c Ratio | | 0.49 | | | 0.37 | 0.11 | 0.37 | 0.66 | | 0.85 | 0.73 | |
| Uniform Delay, d1 | | 7.0 | | | 6.2 | 5.2 | 42.3 | 45.0 | | 47.0 | 45.7 | |
| Progression Factor | | 1.00 | | | 0.52 | 0.61 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.2 | | | 0.5 | 0.2 | 1.8 | 5.1 | | 37.3 | 8.9 | |
| Delay (s) | | 7.2 | | | 3.7 | 3.3 | 44.2 | 50.1 | | 84.3 | 54.6 | |
| Level of Service | | A | | | A | A | D | D | | F | D | |
| Approach Delay (s) | | 7.2 | | | 3.7 | | | 49.0 | | | 65.1 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 77.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

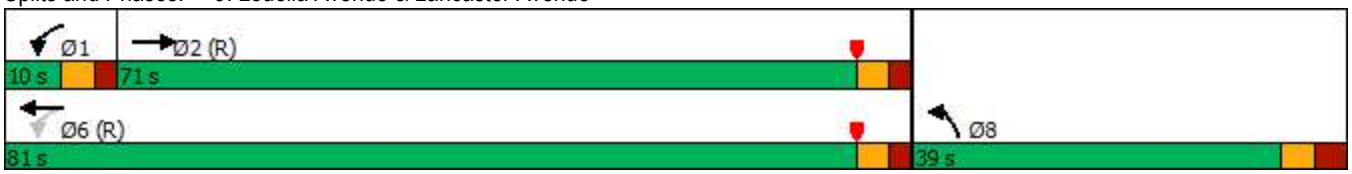
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 772 | 62 | 74 | 847 | 19 | 41 |
| Future Volume (vph) | 772 | 62 | 74 | 847 | 19 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 887 | 0 | 0 | 980 | 64 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 71.0 | | 10.0 | 81.0 | 39.0 | |
| Total Split (%) | 59.2% | | 8.3% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.35 | | | 0.50 | 0.42 | |
| Control Delay | 2.0 | | | 3.0 | 59.0 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.0 | | | 3.0 | 59.0 | |
| Queue Length 50th (ft) | 32 | | | 65 | 48 | |
| Queue Length 95th (ft) | 60 | | | 76 | 91 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2545 | | | 1965 | 474 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.35 | | | 0.50 | 0.14 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 772 | 62 | 74 | 847 | 19 | 41 |
| Future Volume (vph) | 772 | 62 | 74 | 847 | 19 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.96 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3053 | | | 3015 | 1636 | |
| Flt Permitted | 1.00 | | | 0.78 | 0.98 | |
| Satd. Flow (perm) | 3053 | | | 2356 | 1636 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 821 | 66 | 79 | 901 | 20 | 44 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 887 | 0 | 0 | 980 | 64 | 0 |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 99.0 | | | 99.0 | 10.0 | |
| Effective Green, g (s) | 100.0 | | | 100.0 | 11.0 | |
| Actuated g/C Ratio | 0.83 | | | 0.83 | 0.09 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2544 | | | 1963 | 149 | |
| v/s Ratio Prot | 0.29 | | | | c0.04 | |
| v/s Ratio Perm | | | | c0.42 | | |
| v/c Ratio | 0.35 | | | 0.50 | 0.43 | |
| Uniform Delay, d1 | 2.3 | | | 2.9 | 51.5 | |
| Progression Factor | 0.64 | | | 0.70 | 1.00 | |
| Incremental Delay, d2 | 0.3 | | | 0.2 | 2.0 | |
| Delay (s) | 1.8 | | | 2.2 | 53.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.8 | | | 2.2 | 53.5 | |
| Approach LOS | A | | | A | D | |

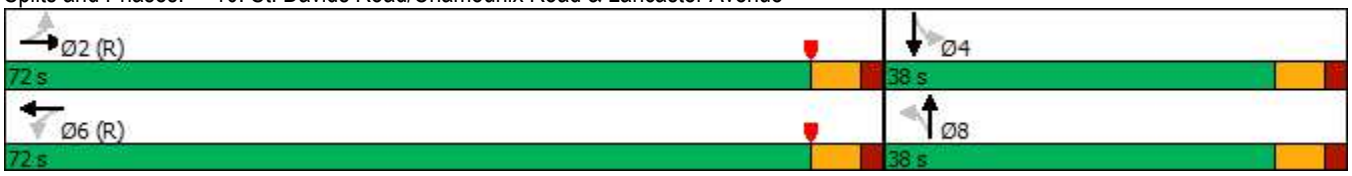
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.7 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 67.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 32 | 861 | 18 | 31 | 1087 | 77 | 11 | 9 | 41 | 58 | 19 | 41 |
| Future Volume (vph) | 32 | 861 | 18 | 31 | 1087 | 77 | 11 | 9 | 41 | 58 | 19 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1639 | | | 1078 | | | 276 | | | 428 | |
| Travel Time (s) | | 31.9 | | | 21.0 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 3 | | 1 | 1 | | 3 | 1 | | | | | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 4% | 11% | 10% | 3% | 0% | 0% | 0% | 2% | 0% | 0% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

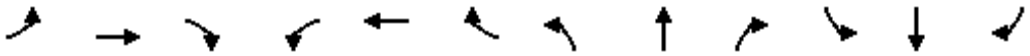
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 32 | 861 | 18 | 31 | 1087 | 77 | 11 | 9 | 41 | 58 | 19 | 41 |
| Future Volume (veh/h) | 32 | 861 | 18 | 31 | 1087 | 77 | 11 | 9 | 41 | 58 | 19 | 41 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1714 | 1782 | 1845 | 1791 | 1845 | 1891 | 1865 | 1891 | 1881 | 1849 | 1881 |
| Adj Flow Rate, veh/h | 33 | 879 | 16 | 32 | 1109 | 78 | 11 | 9 | 40 | 59 | 19 | 40 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 95 | 2368 | 43 | 76 | 2443 | 170 | 56 | 40 | 116 | 123 | 35 | 56 |
| Arrive On Green | 0.80 | 0.81 | 0.80 | 0.80 | 0.81 | 0.80 | 0.09 | 0.10 | 0.09 | 0.09 | 0.10 | 0.09 |
| Sat Flow, veh/h | 74 | 2933 | 53 | 51 | 3027 | 211 | 173 | 393 | 1133 | 729 | 341 | 548 |
| Grp Volume(v), veh/h | 459 | 0 | 469 | 630 | 0 | 589 | 60 | 0 | 0 | 118 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1510 | 0 | 1550 | 1696 | 0 | 1593 | 1699 | 0 | 0 | 1618 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 9.2 | 0.0 | 0.0 | 12.5 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.8 | 0.0 | 9.2 | 11.6 | 0.0 | 12.5 | 3.7 | 0.0 | 0.0 | 7.7 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.05 | | 0.13 | 0.18 | | 0.67 | 0.50 | | 0.34 |
| Lane Grp Cap(c), veh/h | 1240 | 0 | 1251 | 1388 | 0 | 1285 | 197 | 0 | 0 | 199 | 0 | 0 |
| V/C Ratio(X) | 0.37 | 0.00 | 0.38 | 0.45 | 0.00 | 0.46 | 0.31 | 0.00 | 0.00 | 0.59 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1240 | 0 | 1251 | 1388 | 0 | 1285 | 510 | 0 | 0 | 500 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.8 | 0.0 | 2.9 | 3.2 | 0.0 | 3.3 | 46.4 | 0.0 | 0.0 | 48.1 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.8 | 0.0 | 0.9 | 1.1 | 0.0 | 1.2 | 1.2 | 0.0 | 0.0 | 3.9 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.4 | 0.0 | 7.6 | 10.3 | 0.0 | 9.8 | 3.2 | 0.0 | 0.0 | 6.8 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.7 | 0.0 | 3.8 | 4.2 | 0.0 | 4.5 | 47.7 | 0.0 | 0.0 | 52.0 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 928 | | | 1219 | | | 60 | | | 118 | |
| Approach Delay, s/veh | | 3.7 | | | 4.3 | | | 47.7 | | | 52.0 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 93.8 | | 16.2 | | 93.8 | | 16.2 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 11.2 | | 9.7 | | 14.5 | | 5.7 |
| Green Ext Time (p_c), s | | 4.3 | | 0.6 | | 6.1 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.6 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 13 | 10 | 5 | 2 | 36 | 21 | 2 | 102 | 4 | 4 | 93 | 41 |
| Future Volume (vph) | 13 | 10 | 5 | 2 | 36 | 21 | 2 | 102 | 4 | 4 | 93 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 2 | | 2 | 2 | | 2 | | | 2 | 2 | | |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 4% | 100% | 2% | 0% | 0% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.7 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 13 | 10 | 5 | 2 | 36 | 21 | 2 | 102 | 4 | 4 | 93 | 41 |
| Future Vol, veh/h | 13 | 10 | 5 | 2 | 36 | 21 | 2 | 102 | 4 | 4 | 93 | 41 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 4 | 100 | 2 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 14 | 11 | 5 | 2 | 38 | 22 | 2 | 109 | 4 | 4 | 93 | 41 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.8 | 7.7 | 10.3 | 7.9 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 46% | 3% | 3% |
| Vol Thru, % | 94% | 36% | 61% | 67% |
| Vol Right, % | 4% | 18% | 36% | 30% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 108 | 28 | 59 | 138 |
| LT Vol | 2 | 13 | 2 | 4 |
| Through Vol | 102 | 10 | 36 | 93 |
| RT Vol | 4 | 5 | 21 | 41 |
| Lane Flow Rate | 115 | 30 | 63 | 138 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.187 | 0.038 | 0.076 | 0.158 |
| Departure Headway (Hd) | 5.852 | 4.605 | 4.375 | 4.102 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 607 | 780 | 822 | 877 |
| Service Time | 3.949 | 2.618 | 2.386 | 2.114 |
| HCM Lane V/C Ratio | 0.189 | 0.038 | 0.077 | 0.157 |
| HCM Control Delay | 10.3 | 7.8 | 7.7 | 7.9 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 0.7 | 0.1 | 0.2 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 3 | 43 | 35 | 10 | 12 | 31 |
| Future Volume (vph) | 3 | 43 | 35 | 10 | 12 | 31 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | 1 | 4 | | 2 | 2 | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Heavy Vehicles (%) | 0% | 0% | 3% | 0% | 0% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

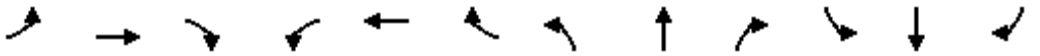
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 43 | 35 | 10 | 12 | 31 |
| Future Vol, veh/h | 3 | 43 | 35 | 10 | 12 | 31 |
| Conflicting Peds, #/hr | 1 | 4 | 0 | 2 | 2 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 3 | 0 | 0 | 3 |
| Mvmt Flow | 4 | 56 | 45 | 13 | 16 | 40 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 127 | 58 | 0 | 0 | 60 | 0 |
| Stage 1 | 54 | - | - | - | - | - |
| Stage 2 | 73 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1009 | 1077 | - | - | 1145 | - |
| Stage 1 | 1132 | - | - | - | - | - |
| Stage 2 | 1109 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 992 | 1071 | - | - | 1143 | - |
| Mov Cap-2 Maneuver | 992 | - | - | - | - | - |
| Stage 1 | 1130 | - | - | - | - | - |
| Stage 2 | 1092 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.6 | 0 | 2.3 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1065 | 1143 | - |
| HCM Lane V/C Ratio | - | - | 0.056 | 0.014 | - |
| HCM Control Delay (s) | - | - | 8.6 | 8.2 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

# *2020 PROJECTED CONDITIONS WITH PENNDOT-REQUESTED IMPROVEMENTS*

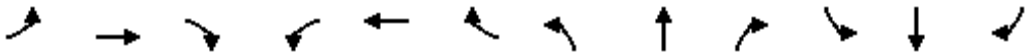


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 789 | 42 | 28 | 912 | 43 | 142 | 111 | 42 | 141 | 84 | 69 |
| Future Volume (vph) | 35 | 789 | 42 | 28 | 912 | 43 | 142 | 111 | 42 | 141 | 84 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 942 | 0 | 0 | 1068 | 0 | 0 | 275 | 46 | 0 | 319 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 62.0 | 62.0 | | 62.0 | 62.0 | | 43.0 | 43.0 | 43.0 | 43.0 | 43.0 | |
| Total Split (%) | 59.0% | 59.0% | | 59.0% | 59.0% | | 41.0% | 41.0% | 41.0% | 41.0% | 41.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.76 | | | 0.71 | | | 0.76 | 0.10 | | 0.95 | |
| Control Delay | | 28.4 | | | 19.6 | | | 44.7 | 23.5 | | 71.7 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 28.4 | | | 19.6 | | | 44.7 | 23.5 | | 71.7 | |
| Queue Length 50th (ft) | | 335 | | | 286 | | | 155 | 20 | | 197 | |
| Queue Length 95th (ft) | | 459 | | | 383 | | | 256 | 46 | | #359 | |
| Internal Link Dist (ft) | | 1072 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 1241 | | | 1507 | | | 401 | 493 | | 372 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.76 | | | 0.71 | | | 0.69 | 0.09 | | 0.86 | |

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 6 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

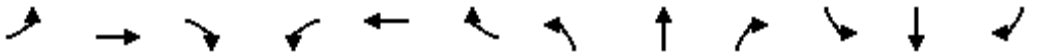
Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 789 | 42 | 28 | 912 | 43 | 142 | 111 | 42 | 141 | 84 | 69 |
| Future Volume (vph) | 35 | 789 | 42 | 28 | 912 | 43 | 142 | 111 | 42 | 141 | 84 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.77 | | | *0.90 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 0.98 | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 2456 | | | 2889 | | | 1622 | 1363 | | 1812 | |
| Flt Permitted | | 0.86 | | | 0.89 | | | 0.65 | 1.00 | | 0.54 | |
| Satd. Flow (perm) | | 2110 | | | 2567 | | | 1080 | 1363 | | 1003 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 38 | 858 | 46 | 30 | 991 | 47 | 154 | 121 | 46 | 153 | 91 | 75 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 942 | 0 | 0 | 1068 | 0 | 0 | 275 | 46 | 0 | 319 | 0 |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 60.7 | | | 60.7 | | | 34.3 | 34.3 | | 34.3 | |
| Effective Green, g (s) | | 61.7 | | | 61.7 | | | 35.3 | 34.3 | | 35.3 | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | | | 0.34 | 0.33 | | 0.34 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1239 | | | 1508 | | | 363 | 445 | | 337 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.45 | | | 0.42 | | | 0.25 | 0.03 | | c0.32 | |
| v/c Ratio | | 0.76 | | | 0.71 | | | 0.76 | 0.10 | | 0.95 | |
| Uniform Delay, d1 | | 16.1 | | | 15.3 | | | 31.0 | 24.6 | | 33.9 | |
| Progression Factor | | 1.35 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 4.2 | | | 2.8 | | | 8.8 | 0.1 | | 34.9 | |
| Delay (s) | | 26.0 | | | 18.1 | | | 39.8 | 24.7 | | 68.8 | |
| Level of Service | | C | | | B | | | D | C | | E | |
| Approach Delay (s) | | 26.0 | | | 18.1 | | | 37.6 | | | 68.8 | |
| Approach LOS | | C | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 29.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.83 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.5% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

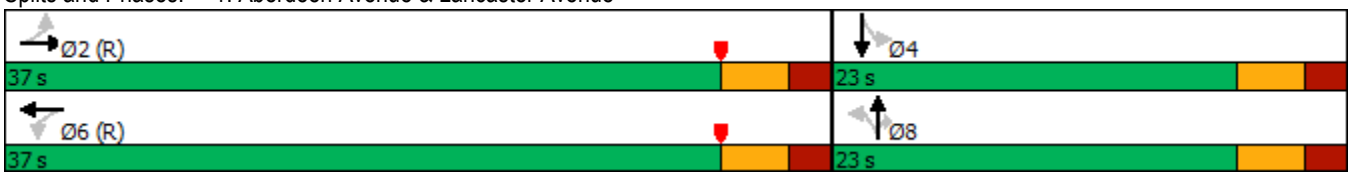


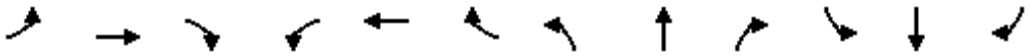
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 824 | 35 | 25 | 921 | 59 | 97 | 66 | 33 | 120 | 112 | 68 |
| Future Volume (vph) | 33 | 824 | 35 | 25 | 921 | 59 | 97 | 66 | 33 | 120 | 112 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1121 | | | 179 | | | 199 | | | 464 | |
| Travel Time (s) | | 30.6 | | | 3.5 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 919 | 0 | 0 | 1036 | 0 | 0 | 168 | 34 | 0 | 309 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 37.0 | 37.0 | | 37.0 | 37.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (%) | 61.7% | 61.7% | | 61.7% | 61.7% | | 38.3% | 38.3% | 38.3% | 38.3% | 38.3% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.65 | | | 0.73 | | | 0.52 | 0.09 | | 0.76 | |
| Control Delay | | 10.7 | | | 13.7 | | | 24.0 | 16.0 | | 33.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 10.7 | | | 13.7 | | | 24.0 | 16.0 | | 33.0 | |
| Queue Length 50th (ft) | | 228 | | | 160 | | | 49 | 9 | | 97 | |
| Queue Length 95th (ft) | | 298 | | | 257 | | | 99 | 26 | | #195 | |
| Internal Link Dist (ft) | | 1041 | | | 99 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 1411 | | | 1420 | | | 364 | 447 | | 459 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.65 | | | 0.73 | | | 0.46 | 0.08 | | 0.67 | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 38 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Coordinated | |
| # 95th percentile volume exceeds capacity, queue may be longer. | |
| Queue shown is maximum after two cycles. | |

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 824 | 35 | 25 | 921 | 59 | 97 | 66 | 33 | 120 | 112 | 68 |
| Future Volume (vph) | 33 | 824 | 35 | 25 | 921 | 59 | 97 | 66 | 33 | 120 | 112 | 68 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.83 | | | *0.80 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 2732 | | | 2640 | | | 1729 | 1492 | | 1831 | |
| Flt Permitted | | 0.88 | | | 0.91 | | | 0.65 | 1.00 | | 0.78 | |
| Satd. Flow (perm) | | 2404 | | | 2418 | | | 1152 | 1492 | | 1452 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 34 | 849 | 36 | 26 | 949 | 61 | 100 | 68 | 34 | 124 | 115 | 70 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 919 | 0 | 0 | 1036 | 0 | 0 | 168 | 34 | 0 | 309 | 0 |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 34.2 | | | 34.2 | | | 15.8 | 15.8 | | 15.8 | |
| Effective Green, g (s) | | 35.2 | | | 35.2 | | | 16.8 | 15.8 | | 16.8 | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | | | 0.28 | 0.26 | | 0.28 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1410 | | | 1418 | | | 322 | 392 | | 406 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.38 | | | c0.43 | | | 0.15 | 0.02 | | c0.21 | |
| v/c Ratio | | 0.65 | | | 0.73 | | | 0.52 | 0.09 | | 0.76 | |
| Uniform Delay, d1 | | 8.3 | | | 9.0 | | | 18.2 | 16.7 | | 19.8 | |
| Progression Factor | | 0.95 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 2.2 | | | 3.4 | | | 1.5 | 0.1 | | 8.2 | |
| Delay (s) | | 10.1 | | | 12.3 | | | 19.7 | 16.8 | | 28.0 | |
| Level of Service | | B | | | B | | | B | B | | C | |
| Approach Delay (s) | | 10.1 | | | 12.3 | | | 19.2 | | | 28.0 | |
| Approach LOS | | B | | | B | | | B | | | C | |

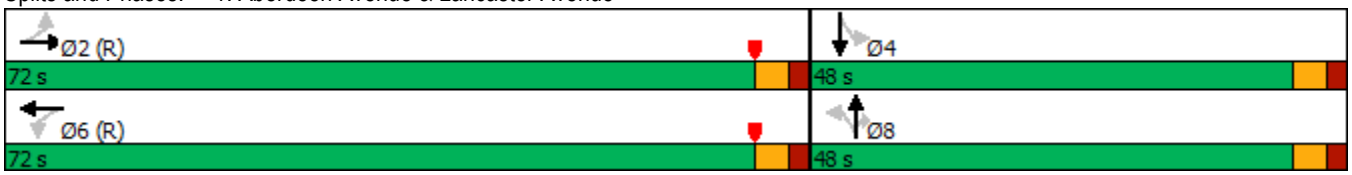
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 81.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

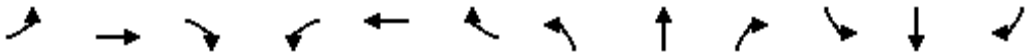
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 676 | 49 | 26 | 826 | 50 | 90 | 96 | 43 | 114 | 72 | 64 |
| Future Volume (vph) | 39 | 676 | 49 | 26 | 826 | 50 | 90 | 96 | 43 | 114 | 72 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 179 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 3.5 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 788 | 0 | 0 | 931 | 0 | 0 | 192 | 44 | 0 | 258 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | 48.0 | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.45 | | | 0.52 | | | 0.63 | 0.12 | | 0.94 | |
| Control Delay | | 13.0 | | | 11.9 | | | 47.8 | 33.0 | | 84.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 13.0 | | | 11.9 | | | 47.8 | 33.0 | | 84.4 | |
| Queue Length 50th (ft) | | 120 | | | 184 | | | 132 | 27 | | 197 | |
| Queue Length 95th (ft) | | 272 | | | 308 | | | 191 | 52 | | 279 | |
| Internal Link Dist (ft) | | 1062 | | | 99 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 1764 | | | 1786 | | | 448 | 526 | | 400 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.45 | | | 0.52 | | | 0.43 | 0.08 | | 0.65 | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 50 | |
| Control Type: Actuated-Coordinated | |

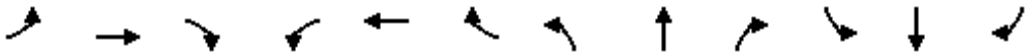
Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 676 | 49 | 26 | 826 | 50 | 90 | 96 | 43 | 114 | 72 | 64 |
| Future Volume (vph) | 39 | 676 | 49 | 26 | 826 | 50 | 90 | 96 | 43 | 114 | 72 | 64 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.94 | | | *0.88 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 0.97 | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 0.99 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 3051 | | | 2867 | | | 1723 | 1468 | | 1805 | |
| Flt Permitted | | 0.85 | | | 0.91 | | | 0.69 | 1.00 | | 0.59 | |
| Satd. Flow (perm) | | 2588 | | | 2618 | | | 1225 | 1468 | | 1093 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 40 | 697 | 51 | 27 | 852 | 52 | 93 | 99 | 44 | 118 | 74 | 66 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 788 | 0 | 0 | 931 | 0 | 0 | 192 | 44 | 0 | 258 | 0 |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 80.8 | | | 80.8 | | | 29.2 | 29.2 | | 29.2 | |
| Effective Green, g (s) | | 81.8 | | | 81.8 | | | 30.2 | 29.2 | | 30.2 | |
| Actuated g/C Ratio | | 0.68 | | | 0.68 | | | 0.25 | 0.24 | | 0.25 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1764 | | | 1784 | | | 308 | 357 | | 275 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.30 | | | c0.36 | | | 0.16 | 0.03 | | c0.24 | |
| v/c Ratio | | 0.45 | | | 0.52 | | | 0.62 | 0.12 | | 0.94 | |
| Uniform Delay, d1 | | 8.7 | | | 9.4 | | | 39.9 | 35.4 | | 44.0 | |
| Progression Factor | | 1.23 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.8 | | | 1.1 | | | 3.9 | 0.2 | | 37.5 | |
| Delay (s) | | 11.5 | | | 10.5 | | | 43.7 | 35.6 | | 81.5 | |
| Level of Service | | B | | | B | | | D | D | | F | |
| Approach Delay (s) | | 11.5 | | | 10.5 | | | 42.2 | | | 81.5 | |
| Approach LOS | | B | | | B | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 80.7% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

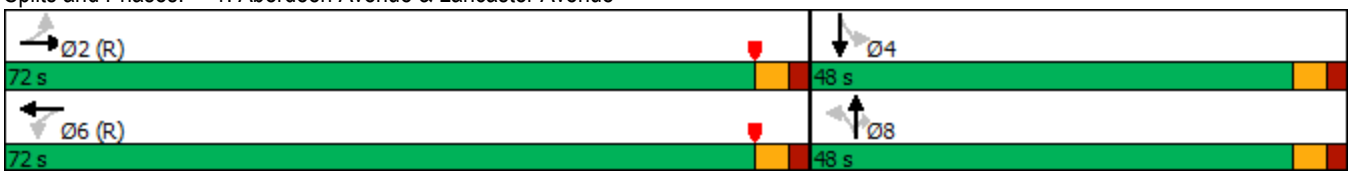


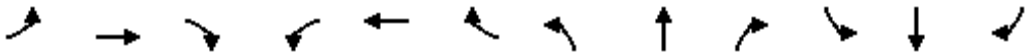
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 544 | 32 | 25 | 548 | 32 | 77 | 49 | 30 | 64 | 48 | 37 |
| Future Volume (vph) | 28 | 544 | 32 | 25 | 548 | 32 | 77 | 49 | 30 | 64 | 48 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 179 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 3.5 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 617 | 0 | 0 | 618 | 0 | 0 | 129 | 31 | 0 | 152 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | 48.0 | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.29 | | | 0.29 | | | 0.75 | 0.15 | | 0.83 | |
| Control Delay | | 5.2 | | | 4.6 | | | 74.3 | 43.9 | | 82.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 5.2 | | | 4.6 | | | 74.3 | 43.9 | | 82.1 | |
| Queue Length 50th (ft) | | 46 | | | 61 | | | 97 | 21 | | 116 | |
| Queue Length 95th (ft) | | 139 | | | 108 | | | 157 | 48 | | 182 | |
| Internal Link Dist (ft) | | 1062 | | | 99 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 2094 | | | 2148 | | | 411 | 529 | | 441 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.29 | | | 0.29 | | | 0.31 | 0.06 | | 0.34 | |

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue

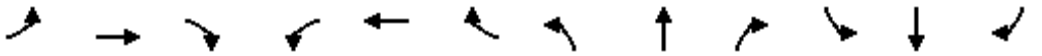




| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 544 | 32 | 25 | 548 | 32 | 77 | 49 | 30 | 64 | 48 | 37 |
| Future Volume (vph) | 28 | 544 | 32 | 25 | 548 | 32 | 77 | 49 | 30 | 64 | 48 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.90 | | | *0.92 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 0.98 | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.98 | 1.00 | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 2966 | | | 3025 | | | 1702 | 1479 | | 1820 | |
| Flt Permitted | | 0.90 | | | 0.91 | | | 0.64 | 1.00 | | 0.65 | |
| Satd. Flow (perm) | | 2681 | | | 2754 | | | 1125 | 1479 | | 1205 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 29 | 555 | 33 | 26 | 559 | 33 | 79 | 50 | 31 | 65 | 49 | 38 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 617 | 0 | 0 | 618 | 0 | 0 | 129 | 31 | 0 | 152 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 92.7 | | | 92.7 | | | 17.3 | 17.3 | | 17.3 | |
| Effective Green, g (s) | | 93.7 | | | 93.7 | | | 18.3 | 17.3 | | 18.3 | |
| Actuated g/C Ratio | | 0.78 | | | 0.78 | | | 0.15 | 0.14 | | 0.15 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 2093 | | | 2150 | | | 171 | 213 | | 183 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.23 | | | 0.22 | | | 0.11 | 0.02 | | c0.13 | |
| v/c Ratio | | 0.29 | | | 0.29 | | | 0.75 | 0.15 | | 0.83 | |
| Uniform Delay, d1 | | 3.7 | | | 3.7 | | | 48.7 | 44.9 | | 49.3 | |
| Progression Factor | | 1.13 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 0.3 | | | 17.1 | 0.3 | | 26.1 | |
| Delay (s) | | 4.6 | | | 4.1 | | | 65.8 | 45.2 | | 75.5 | |
| Level of Service | | A | | | A | | | E | D | | E | |
| Approach Delay (s) | | 4.6 | | | 4.1 | | | 61.8 | | | 75.5 | |
| Approach LOS | | A | | | A | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.3 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.38 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 61.6% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

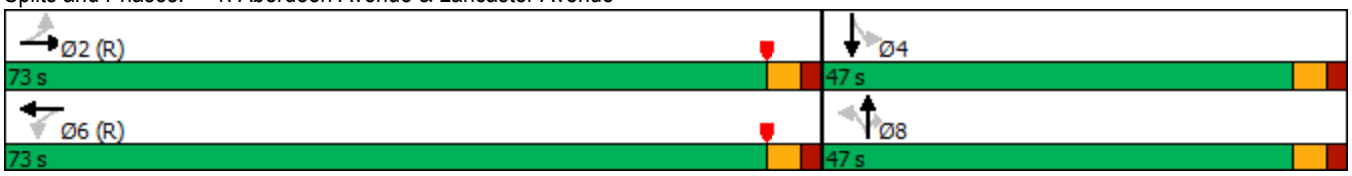


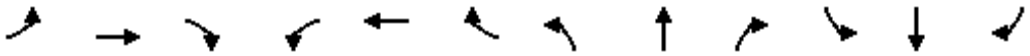
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 710 | 45 | 32 | 762 | 73 | 106 | 65 | 43 | 116 | 62 | 81 |
| Future Volume (vph) | 38 | 710 | 45 | 32 | 762 | 73 | 106 | 65 | 43 | 116 | 62 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 179 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 3.5 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 827 | 0 | 0 | 903 | 0 | 0 | 178 | 45 | 0 | 270 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 73.0 | 73.0 | | 73.0 | 73.0 | | 47.0 | 47.0 | 47.0 | 47.0 | 47.0 | |
| Total Split (%) | 60.8% | 60.8% | | 60.8% | 60.8% | | 39.2% | 39.2% | 39.2% | 39.2% | 39.2% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.61 | | | 0.55 | | | 0.63 | 0.12 | | 0.91 | |
| Control Delay | | 19.8 | | | 13.0 | | | 48.6 | 32.3 | | 76.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 19.8 | | | 13.0 | | | 48.6 | 32.3 | | 76.2 | |
| Queue Length 50th (ft) | | 271 | | | 192 | | | 122 | 27 | | 203 | |
| Queue Length 95th (ft) | | 380 | | | 325 | | | 180 | 52 | | 283 | |
| Internal Link Dist (ft) | | 1072 | | | 99 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 1357 | | | 1630 | | | 391 | 530 | | 412 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.61 | | | 0.55 | | | 0.46 | 0.08 | | 0.66 | |

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



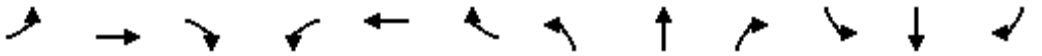


| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 38 | 710 | 45 | 32 | 762 | 73 | 106 | 65 | 43 | 116 | 62 | 81 |
| Future Volume (vph) | 38 | 710 | 45 | 32 | 762 | 73 | 106 | 65 | 43 | 116 | 62 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.75 | | | *0.86 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 2356 | | | 2758 | | | 1705 | 1515 | | 1796 | |
| Flt Permitted | | 0.85 | | | 0.87 | | | 0.62 | 1.00 | | 0.63 | |
| Satd. Flow (perm) | | 2009 | | | 2415 | | | 1093 | 1515 | | 1152 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 40 | 740 | 47 | 33 | 794 | 76 | 110 | 68 | 45 | 121 | 65 | 84 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 827 | 0 | 0 | 903 | 0 | 0 | 178 | 45 | 0 | 270 | 0 |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 80.1 | | | 80.1 | | | 29.9 | 29.9 | | 29.9 | |
| Effective Green, g (s) | | 81.1 | | | 81.1 | | | 30.9 | 29.9 | | 30.9 | |
| Actuated g/C Ratio | | 0.68 | | | 0.68 | | | 0.26 | 0.25 | | 0.26 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1357 | | | 1632 | | | 281 | 377 | | 296 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.41 | | | 0.37 | | | 0.16 | 0.03 | | c0.23 | |
| v/c Ratio | | 0.61 | | | 0.55 | | | 0.63 | 0.12 | | 0.91 | |
| Uniform Delay, d1 | | 10.7 | | | 10.1 | | | 39.5 | 34.9 | | 43.2 | |
| Progression Factor | | 1.42 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 2.0 | | | 1.4 | | | 4.6 | 0.1 | | 30.5 | |
| Delay (s) | | 17.2 | | | 11.4 | | | 44.1 | 35.0 | | 73.7 | |
| Level of Service | | B | | | B | | | D | D | | E | |
| Approach Delay (s) | | 17.2 | | | 11.4 | | | 42.3 | | | 73.7 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 81.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

# *2025 BASE CONDITIONS*

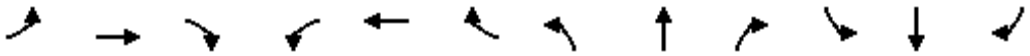


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 806 | 35 | 11 | 982 | 44 | 74 | 111 | 34 | 144 | 87 | 70 |
| Future Volume (vph) | 36 | 806 | 35 | 11 | 982 | 44 | 74 | 111 | 34 | 144 | 87 | 70 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 953 | 0 | 0 | 1127 | 0 | 0 | 238 | 0 | 0 | 328 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 62.0 | 62.0 | | 62.0 | 62.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Total Split (%) | 59.0% | 59.0% | | 59.0% | 59.0% | | 41.0% | 41.0% | | 41.0% | 41.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.74 | | | 0.67 | | | 0.62 | | | 0.86 | |
| Control Delay | | 26.4 | | | 16.8 | | | 37.5 | | | 55.5 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 26.4 | | | 16.8 | | | 37.5 | | | 55.5 | |
| Queue Length 50th (ft) | | 325 | | | 260 | | | 134 | | | 204 | |
| Queue Length 95th (ft) | | 467 | | | 397 | | | 200 | | | 295 | |
| Internal Link Dist (ft) | | 1072 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1295 | | | 1683 | | | 470 | | | 464 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.74 | | | 0.67 | | | 0.51 | | | 0.71 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 6 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 806 | 35 | 11 | 982 | 44 | 74 | 111 | 34 | 144 | 87 | 70 |
| Future Volume (vph) | 36 | 806 | 35 | 11 | 982 | 44 | 74 | 111 | 34 | 144 | 87 | 70 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.77 | | | *0.90 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.98 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2461 | | | 2898 | | | 1603 | | | 1813 | |
| Flt Permitted | | 0.85 | | | 0.94 | | | 0.78 | | | 0.67 | |
| Satd. Flow (perm) | | 2093 | | | 2719 | | | 1267 | | | 1251 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 39 | 876 | 38 | 12 | 1067 | 48 | 80 | 121 | 37 | 157 | 95 | 76 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 953 | 0 | 0 | 1127 | 0 | 0 | 238 | 0 | 0 | 328 | 0 |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 64.0 | | | 64.0 | | | 31.0 | | | 31.0 | |
| Effective Green, g (s) | | 65.0 | | | 65.0 | | | 32.0 | | | 32.0 | |
| Actuated g/C Ratio | | 0.62 | | | 0.62 | | | 0.30 | | | 0.30 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1295 | | | 1683 | | | 386 | | | 381 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.46 | | | 0.41 | | | 0.19 | | | c0.26 | |
| v/c Ratio | | 0.74 | | | 0.67 | | | 0.62 | | | 0.86 | |
| Uniform Delay, d1 | | 14.0 | | | 13.0 | | | 31.2 | | | 34.4 | |
| Progression Factor | | 1.41 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 3.6 | | | 2.1 | | | 2.9 | | | 17.7 | |
| Delay (s) | | 23.4 | | | 15.2 | | | 34.2 | | | 52.1 | |
| Level of Service | | C | | | B | | | C | | | D | |
| Approach Delay (s) | | 23.4 | | | 15.2 | | | 34.2 | | | 52.1 | |
| Approach LOS | | C | | | B | | | C | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.78 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 86.7% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 971 | 12 | 0 | 1037 | 0 | 0 |
| Future Volume (vph) | 971 | 12 | 0 | 1037 | 0 | 0 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 971 | 12 | 0 | 1037 | 0 | 0 |
| Future Vol, veh/h | 971 | 12 | 0 | 1037 | 0 | 0 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1055 | 13 | 0 | 1127 | 0 | 0 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1068 | 0 | 1630 | 538 |
| Stage 1 | - | - | - | - | 1062 | - |
| Stage 2 | - | - | - | - | 568 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 851 | - | *69 | *892 |
| Stage 1 | - | - | - | - | *587 | - |
| Stage 2 | - | - | - | - | *782 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 851 | - | *69 | *889 |
| Mov Cap-2 Maneuver | - | - | - | - | *69 | - |
| Stage 1 | - | - | - | - | *587 | - |
| Stage 2 | - | - | - | - | *780 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 0 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | - | 851 | - |
| HCM Lane V/C Ratio | - | - | - | - | - |
| HCM Control Delay (s) | 0 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | - | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 969 | 2 | 0 | 1032 | 5 | 15 |
| Future Volume (vph) | 969 | 2 | 0 | 1032 | 5 | 15 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 969 | 2 | 0 | 1032 | 5 | 15 |
| Future Vol, veh/h | 969 | 2 | 0 | 1032 | 5 | 15 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1053 | 2 | 0 | 1122 | 5 | 16 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1055 | 0 | 1619 | 532 |
| Stage 1 | - | - | - | - | 1054 | - |
| Stage 2 | - | - | - | - | 565 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *71 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *782 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *71 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *71 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *780 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 22.8 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 224 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.097 | - | - | - | - |
| HCM Control Delay (s) | 22.8 | - | - | 0 | - |
| HCM Lane LOS | C | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 964 | 20 | 3 | 1032 | 0 | 6 |
| Future Volume (vph) | 964 | 20 | 3 | 1032 | 0 | 6 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 964 | 20 | 3 | 1032 | 0 | 6 |
| Future Vol, veh/h | 964 | 20 | 3 | 1032 | 0 | 6 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1048 | 22 | 3 | 1122 | 0 | 7 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1070 | 0 | 1630 | 539 |
| Stage 1 | - | - | - | - | 1059 | - |
| Stage 2 | - | - | - | - | 571 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *69 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *782 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *68 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *68 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *774 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 9.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 792 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.008 | - | - | 0.003 | - |
| HCM Control Delay (s) | 9.6 | - | - | 8.8 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 967 | 3 | 3 | 1033 | 2 | 16 |
| Future Volume (vph) | 967 | 3 | 3 | 1033 | 2 | 16 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1639 | 89 | |
| Travel Time (s) | 1.7 | | | 31.9 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 967 | 3 | 3 | 1033 | 2 | 16 |
| Future Vol, veh/h | 967 | 3 | 3 | 1033 | 2 | 16 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 1051 | 3 | 3 | 1123 | 2 | 17 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1054 | 0 | 1625 | 531 |
| Stage 1 | - | - | - | - | 1053 | - |
| Stage 2 | - | - | - | - | 572 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *962 | - | *70 | *795 |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *782 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *962 | - | *69 | *792 |
| Mov Cap-2 Maneuver | - | - | - | - | *69 | - |
| Stage 1 | - | - | - | - | *824 | - |
| Stage 2 | - | - | - | - | *774 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 15.4 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 366 | - | - | * 962 | - |
| HCM Lane V/C Ratio | 0.053 | - | - | 0.003 | - |
| HCM Control Delay (s) | 15.4 | - | - | 8.8 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 1 | 8 | 211 | 5 | 11 | 122 |
| Future Volume (vph) | 1 | 8 | 211 | 5 | 11 | 122 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 4 | 4 | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 8% | 2% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 1 | 8 | 211 | 5 | 11 | 122 |
| Future Vol, veh/h | 1 | 8 | 211 | 5 | 11 | 122 |
| Conflicting Peds, #/hr | 4 | 4 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 8 | 2 | 2 | 2 |
| Mvmt Flow | 1 | 9 | 229 | 5 | 12 | 133 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 393 | 236 | 0 | 0 | 234 | 0 |
| Stage 1 | 232 | - | - | - | - | - |
| Stage 2 | 161 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 742 | 854 | - | - | 999 | - |
| Stage 1 | 931 | - | - | - | - | - |
| Stage 2 | 1062 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 730 | 851 | - | - | 999 | - |
| Mov Cap-2 Maneuver | 730 | - | - | - | - | - |
| Stage 1 | 931 | - | - | - | - | - |
| Stage 2 | 1044 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.4 | 0 | 0.7 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 836 | 999 | - |
| HCM Lane V/C Ratio | - | - | 0.012 | 0.012 | - |
| HCM Control Delay (s) | - | - | 9.4 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 1 | 215 | 12 | 1 | 122 |
| Future Volume (vph) | 4 | 1 | 215 | 12 | 1 | 122 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 69 |
| Travel Time (s) | 2.0 | | 8.5 | | | 1.9 |
| Confl. Peds. (#/hr) | 4 | 4 | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 8% | 2% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

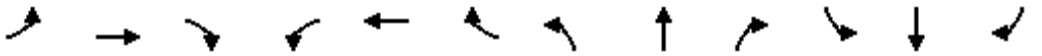
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 1 | 215 | 12 | 1 | 122 |
| Future Vol, veh/h | 4 | 1 | 215 | 12 | 1 | 122 |
| Conflicting Peds, #/hr | 4 | 4 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 8 | 2 | 2 | 2 |
| Mvmt Flow | 4 | 1 | 234 | 13 | 1 | 133 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 380 | 245 | 0 | 0 | 247 | 0 |
| Stage 1 | 241 | - | - | - | - | - |
| Stage 2 | 139 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *757 | 844 | - | - | 989 | - |
| Stage 1 | *921 | - | - | - | - | - |
| Stage 2 | *1085 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *753 | 841 | - | - | 989 | - |
| Mov Cap-2 Maneuver | *753 | - | - | - | - | - |
| Stage 1 | *921 | - | - | - | - | - |
| Stage 2 | *1080 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.7 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 769 | 989 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.001 | - |
| HCM Control Delay (s) | - | - | 9.7 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 667 | 26 | 34 | 808 | 115 | 41 | 101 | 44 | 96 | 93 | 36 |
| Future Volume (vph) | 30 | 667 | 26 | 34 | 808 | 115 | 41 | 101 | 44 | 96 | 93 | 36 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 795 | 0 | 0 | 925 | 126 | 45 | 159 | 0 | 105 | 142 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 13.0 | 48.0 | | 35.0 | 35.0 | 35.0 | 31.0 | 31.0 | | 31.0 | 31.0 | |
| Total Split (%) | 12.4% | 45.7% | | 33.3% | 33.3% | 33.3% | 29.5% | 29.5% | | 29.5% | 29.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.40 | | | 0.46 | 0.13 | 0.30 | 0.57 | | 0.73 | 0.54 | |
| Control Delay | | 6.8 | | | 6.6 | 6.5 | 40.8 | 46.6 | | 67.8 | 46.0 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 6.8 | | | 6.6 | 6.5 | 40.8 | 46.6 | | 67.8 | 46.0 | |
| Queue Length 50th (ft) | | 92 | | | 70 | 18 | 27 | 99 | | 67 | 88 | |
| Queue Length 95th (ft) | | 163 | | | 163 | m53 | 57 | 152 | | 120 | 138 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1983 | | | 2011 | 950 | 211 | 398 | | 204 | 372 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.40 | | | 0.46 | 0.13 | 0.21 | 0.40 | | 0.51 | 0.38 | |

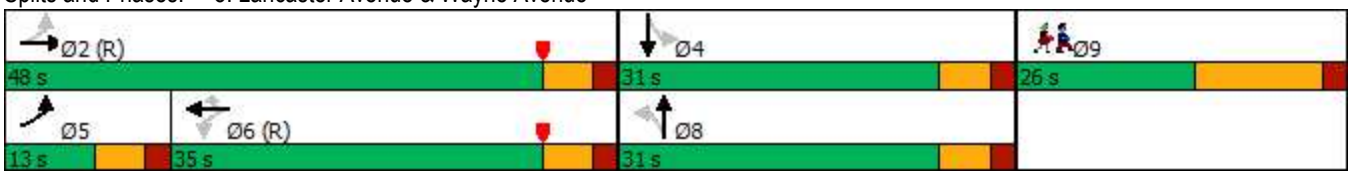
Intersection Summary

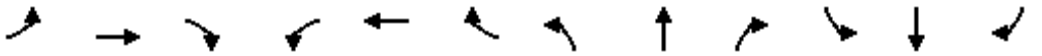
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 25% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 33 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 667 | 26 | 34 | 808 | 115 | 41 | 101 | 44 | 96 | 93 | 36 |
| Future Volume (vph) | 30 | 667 | 26 | 34 | 808 | 115 | 41 | 101 | 44 | 96 | 93 | 36 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.98 | 1.00 | | 0.97 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3076 | | | 3089 | 1335 | 1397 | 1601 | | 1456 | 1500 | |
| Flt Permitted | | 0.88 | | | 0.89 | 1.00 | 0.58 | 1.00 | | 0.53 | 1.00 | |
| Satd. Flow (perm) | | 2716 | | | 2756 | 1335 | 850 | 1601 | | 819 | 1500 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 33 | 733 | 29 | 37 | 888 | 126 | 45 | 111 | 48 | 105 | 102 | 40 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 795 | 0 | 0 | 925 | 126 | 45 | 159 | 0 | 105 | 142 | 0 |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 75.7 | | | 75.7 | 75.7 | 17.3 | 17.3 | | 17.3 | 17.3 | |
| Effective Green, g (s) | | 76.7 | | | 76.7 | 75.7 | 18.3 | 18.3 | | 18.3 | 18.3 | |
| Actuated g/C Ratio | | 0.73 | | | 0.73 | 0.72 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1983 | | | 2013 | 962 | 148 | 279 | | 142 | 261 | |
| v/s Ratio Prot | | | | | | | | 0.10 | | | 0.09 | |
| v/s Ratio Perm | | 0.29 | | | c0.34 | 0.09 | 0.05 | | | c0.13 | | |
| v/c Ratio | | 0.40 | | | 0.46 | 0.13 | 0.30 | 0.57 | | 0.74 | 0.54 | |
| Uniform Delay, d1 | | 5.4 | | | 5.7 | 4.5 | 37.8 | 39.7 | | 41.1 | 39.5 | |
| Progression Factor | | 1.00 | | | 0.91 | 1.12 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.6 | 0.2 | 1.2 | 2.7 | | 18.1 | 2.3 | |
| Delay (s) | | 5.5 | | | 5.8 | 5.3 | 39.0 | 42.4 | | 59.2 | 41.9 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 5.5 | | | 5.8 | | | 41.6 | | | 49.2 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.63 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 77.1% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

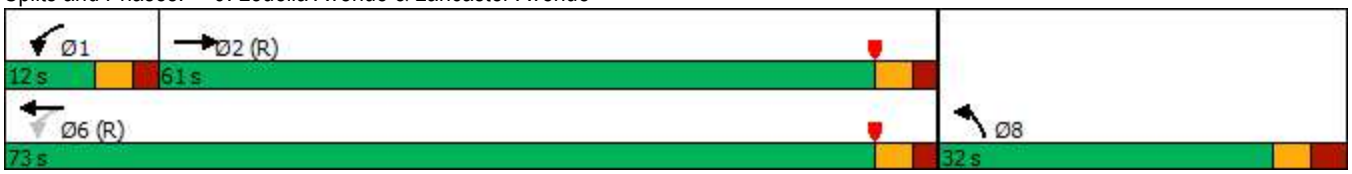
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 794 | 51 | 97 | 970 | 32 | 45 |
| Future Volume (vph) | 794 | 51 | 97 | 970 | 32 | 45 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 939 | 0 | 0 | 1186 | 86 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 61.0 | | 12.0 | 73.0 | 32.0 | |
| Total Split (%) | 58.1% | | 11.4% | 69.5% | 30.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.38 | | | 0.65 | 0.45 | |
| Control Delay | 2.7 | | | 3.6 | 50.5 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.7 | | | 3.6 | 50.5 | |
| Queue Length 50th (ft) | 67 | | | 37 | 55 | |
| Queue Length 95th (ft) | 71 | | | 44 | 101 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2443 | | | 1832 | 441 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.38 | | | 0.65 | 0.20 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 48 (46%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 794 | 51 | 97 | 970 | 32 | 45 |
| Future Volume (vph) | 794 | 51 | 97 | 970 | 32 | 45 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3041 | | | 3067 | 1714 | |
| Flt Permitted | 1.00 | | | 0.74 | 0.98 | |
| Satd. Flow (perm) | 3041 | | | 2281 | 1714 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 882 | 57 | 108 | 1078 | 36 | 50 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 939 | 0 | 0 | 1186 | 86 | 0 |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 83.4 | | | 83.4 | 10.6 | |
| Effective Green, g (s) | 84.4 | | | 84.4 | 11.6 | |
| Actuated g/C Ratio | 0.80 | | | 0.80 | 0.11 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2444 | | | 1833 | 189 | |
| v/s Ratio Prot | 0.31 | | | | c0.05 | |
| v/s Ratio Perm | | | | c0.52 | | |
| v/c Ratio | 0.38 | | | 0.65 | 0.46 | |
| Uniform Delay, d1 | 2.9 | | | 4.2 | 43.7 | |
| Progression Factor | 0.70 | | | 0.47 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.6 | 1.7 | |
| Delay (s) | 2.5 | | | 2.6 | 45.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.5 | | | 2.6 | 45.5 | |
| Approach LOS | A | | | A | D | |

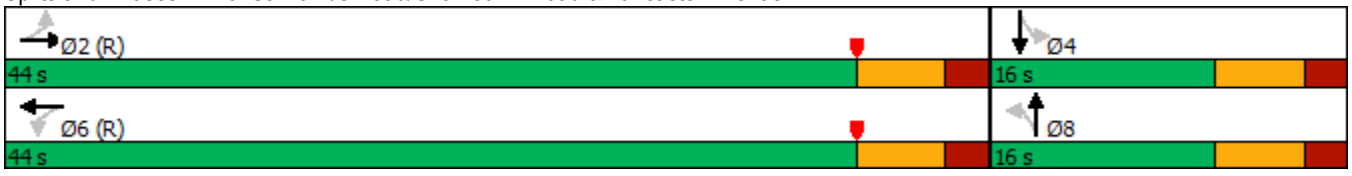
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 71.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 878 | 9 | 13 | 1143 | 293 | 20 | 69 | 72 | 94 | 39 | 39 |
| Future Volume (vph) | 14 | 878 | 9 | 13 | 1143 | 293 | 20 | 69 | 72 | 94 | 39 | 39 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1639 | | | 1078 | | | 276 | | | 428 | |
| Travel Time (s) | | 31.9 | | | 21.0 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 6 | | | | | 6 | 4 | | 5 | 5 | | 4 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 4% | 1% | 0% | 0% | 4% | 1% | 5% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 44.0 | 44.0 | | 44.0 | 44.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (%) | 73.3% | 73.3% | | 73.3% | 73.3% | | 26.7% | 26.7% | | 26.7% | 26.7% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 20 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Coordinated | |

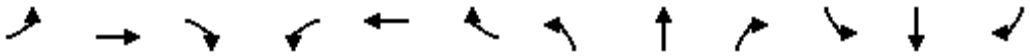
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 14 | 878 | 9 | 13 | 1143 | 293 | 20 | 69 | 72 | 94 | 39 | 39 |
| Future Volume (veh/h) | 14 | 878 | 9 | 13 | 1143 | 293 | 20 | 69 | 72 | 94 | 39 | 39 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1731 | 1782 | 1845 | 1785 | 1845 | 1891 | 1858 | 1891 | 1881 | 1838 | 1881 |
| Adj Flow Rate, veh/h | 15 | 965 | 9 | 14 | 1256 | 301 | 22 | 76 | 76 | 103 | 43 | 43 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 0 | 0 | 5 | 5 | 5 |
| Cap, veh/h | 72 | 2122 | 20 | 67 | 1760 | 413 | 90 | 144 | 129 | 220 | 71 | 58 |
| Arrive On Green | 0.65 | 0.66 | 0.65 | 0.65 | 0.66 | 0.65 | 0.15 | 0.17 | 0.15 | 0.15 | 0.17 | 0.15 |
| Sat Flow, veh/h | 15 | 3192 | 29 | 9 | 2648 | 621 | 131 | 853 | 763 | 755 | 423 | 347 |
| Grp Volume(v), veh/h | 510 | 0 | 479 | 838 | 0 | 733 | 174 | 0 | 0 | 189 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1667 | 0 | 1570 | 1766 | 0 | 1511 | 1747 | 0 | 0 | 1525 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.8 | 0.0 | 0.0 | 19.1 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.5 | 0.0 | 8.8 | 18.2 | 0.0 | 19.1 | 5.6 | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 |
| Prop In Lane | 0.03 | | 0.02 | 0.02 | | 0.41 | 0.13 | | 0.44 | 0.54 | | 0.23 |
| Lane Grp Cap(c), veh/h | 1142 | 0 | 1044 | 1206 | 0 | 1005 | 333 | 0 | 0 | 324 | 0 | 0 |
| V/C Ratio(X) | 0.45 | 0.00 | 0.46 | 0.70 | 0.00 | 0.73 | 0.52 | 0.00 | 0.00 | 0.58 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1142 | 0 | 1044 | 1206 | 0 | 1005 | 357 | 0 | 0 | 345 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 4.8 | 0.0 | 4.9 | 6.4 | 0.0 | 6.7 | 23.4 | 0.0 | 0.0 | 23.9 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.3 | 0.0 | 1.5 | 3.3 | 0.0 | 4.7 | 1.8 | 0.0 | 0.0 | 2.8 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 8.0 | 0.0 | 7.5 | 15.6 | 0.0 | 14.0 | 5.2 | 0.0 | 0.0 | 5.9 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 6.1 | 0.0 | 6.3 | 9.8 | 0.0 | 11.4 | 25.2 | 0.0 | 0.0 | 26.8 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | B | C | | | C | | |
| Approach Vol, veh/h | | 989 | | | 1571 | | | 174 | | | 189 | |
| Approach Delay, s/veh | | 6.2 | | | 10.5 | | | 25.2 | | | 26.8 | |
| Approach LOS | | A | | | B | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 44.9 | | 15.1 | | 44.9 | | 15.1 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 38.0 | | 10.0 | | 38.0 | | 10.0 |
| Max Q Clear Time (g_c+I1), s | | 10.8 | | 9.0 | | 21.1 | | 7.6 |
| Green Ext Time (p_c), s | | 4.3 | | 0.1 | | 7.1 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 11.0 |
| HCM 2010 LOS | B |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 17 | 6 | 5 | 94 | 12 | 29 | 177 | 11 | 3 | 63 | 20 |
| Future Volume (vph) | 5 | 17 | 6 | 5 | 94 | 12 | 29 | 177 | 11 | 3 | 63 | 20 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 7 | | 3 | 3 | | 7 | 10 | | | | | 10 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles (%) | 20% | 0% | 17% | 0% | 2% | 0% | 18% | 6% | 0% | 0% | 2% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10.1 |
| Intersection LOS | B |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 5 | 17 | 6 | 5 | 94 | 12 | 29 | 177 | 11 | 3 | 63 | 20 |
| Future Vol, veh/h | 5 | 17 | 6 | 5 | 94 | 12 | 29 | 177 | 11 | 3 | 63 | 20 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles, % | 20 | 0 | 17 | 0 | 2 | 0 | 18 | 6 | 0 | 0 | 2 | 5 |
| Mvmt Flow | 7 | 24 | 8 | 7 | 132 | 17 | 41 | 249 | 15 | 4 | 89 | 28 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.8 | 9.3 | 11.2 | 8.6 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 13% | 18% | 5% | 3% |
| Vol Thru, % | 82% | 61% | 85% | 73% |
| Vol Right, % | 5% | 21% | 11% | 23% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 217 | 28 | 111 | 86 |
| LT Vol | 29 | 5 | 5 | 3 |
| Through Vol | 177 | 17 | 94 | 63 |
| RT Vol | 11 | 6 | 12 | 20 |
| Lane Flow Rate | 306 | 39 | 156 | 121 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.411 | 0.059 | 0.214 | 0.156 |
| Departure Headway (Hd) | 4.836 | 5.393 | 4.924 | 4.635 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 743 | 660 | 725 | 769 |
| Service Time | 2.881 | 3.462 | 2.978 | 2.689 |
| HCM Lane V/C Ratio | 0.412 | 0.059 | 0.215 | 0.157 |
| HCM Control Delay | 11.2 | 8.8 | 9.3 | 8.6 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 2 | 0.2 | 0.8 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 5 | 30 | 90 | 32 | 17 | 43 |
| Future Volume (vph) | 5 | 30 | 90 | 32 | 17 | 43 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | | 14 | | 7 | 7 | |
| Peak Hour Factor | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 32% | 23% | 9% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

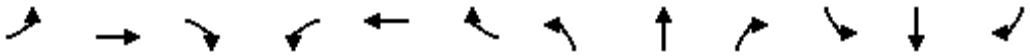
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.3 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 30 | 90 | 32 | 17 | 43 |
| Future Vol, veh/h | 5 | 30 | 90 | 32 | 17 | 43 |
| Conflicting Peds, #/hr | 0 | 14 | 0 | 7 | 7 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 54 | 54 | 54 | 54 | 54 | 54 |
| Heavy Vehicles, % | 0 | 3 | 0 | 32 | 23 | 9 |
| Mvmt Flow | 9 | 56 | 167 | 59 | 31 | 80 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 346 | 218 | 0 | 0 | 233 | 0 |
| Stage 1 | 204 | - | - | - | - | - |
| Stage 2 | 142 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.23 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 747 | 873 | - | - | 1000 | - |
| Stage 1 | 961 | - | - | - | - | - |
| Stage 2 | 1028 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 717 | 856 | - | - | 993 | - |
| Mov Cap-2 Maneuver | 717 | - | - | - | - | - |
| Stage 1 | 954 | - | - | - | - | - |
| Stage 2 | 994 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.7 | 0 | 2.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 833 | 993 | - |
| HCM Lane V/C Ratio | - | - | 0.078 | 0.032 | - |
| HCM Control Delay (s) | - | - | 9.7 | 8.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

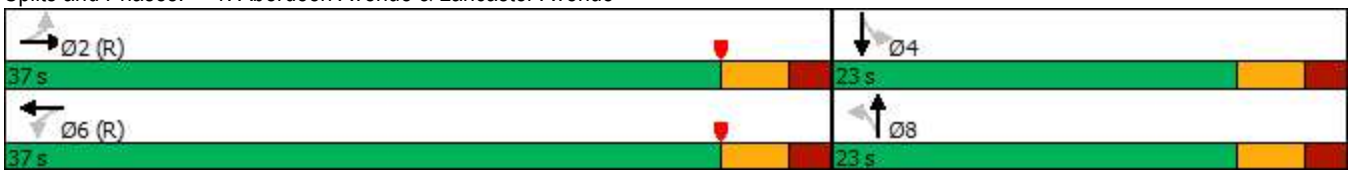


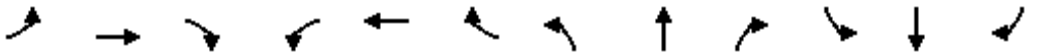
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 867 | 31 | 10 | 981 | 61 | 40 | 65 | 27 | 120 | 115 | 69 |
| Future Volume (vph) | 34 | 867 | 31 | 10 | 981 | 61 | 40 | 65 | 27 | 120 | 115 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1121 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 30.6 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 961 | 0 | 0 | 1084 | 0 | 0 | 136 | 0 | 0 | 314 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 37.0 | 37.0 | | 37.0 | 37.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (%) | 61.7% | 61.7% | | 61.7% | 61.7% | | 38.3% | 38.3% | | 38.3% | 38.3% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.68 | | | 0.74 | | | 0.34 | | | 0.74 | |
| Control Delay | | 11.3 | | | 13.7 | | | 19.0 | | | 30.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 11.3 | | | 13.7 | | | 19.0 | | | 30.4 | |
| Queue Length 50th (ft) | | 240 | | | 165 | | | 38 | | | 99 | |
| Queue Length 95th (ft) | | 316 | | | 270 | | | 76 | | | 172 | |
| Internal Link Dist (ft) | | 1041 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1414 | | | 1473 | | | 462 | | | 490 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.68 | | | 0.74 | | | 0.29 | | | 0.64 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |

Actuated Cycle Length: 60
Offset: 38 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 867 | 31 | 10 | 981 | 61 | 40 | 65 | 27 | 120 | 115 | 69 |
| Future Volume (vph) | 34 | 867 | 31 | 10 | 981 | 61 | 40 | 65 | 27 | 120 | 115 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.83 | | | *0.80 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 1.00 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2735 | | | 2642 | | | 1701 | | | 1832 | |
| Flt Permitted | | 0.87 | | | 0.94 | | | 0.85 | | | 0.83 | |
| Satd. Flow (perm) | | 2394 | | | 2495 | | | 1462 | | | 1548 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 35 | 894 | 32 | 10 | 1011 | 63 | 41 | 67 | 28 | 124 | 119 | 71 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 961 | 0 | 0 | 1084 | 0 | 0 | 136 | 0 | 0 | 314 | 0 |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 34.4 | | | 34.4 | | | 15.6 | | | 15.6 | |
| Effective Green, g (s) | | 35.4 | | | 35.4 | | | 16.6 | | | 16.6 | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | | | 0.28 | | | 0.28 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1412 | | | 1472 | | | 404 | | | 428 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.40 | | | c0.43 | | | 0.09 | | | c0.20 | |
| v/c Ratio | | 0.68 | | | 0.74 | | | 0.34 | | | 0.73 | |
| Uniform Delay, d1 | | 8.4 | | | 8.9 | | | 17.3 | | | 19.7 | |
| Progression Factor | | 0.97 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 2.5 | | | 3.3 | | | 0.5 | | | 6.4 | |
| Delay (s) | | 10.6 | | | 12.2 | | | 17.8 | | | 26.1 | |
| Level of Service | | B | | | B | | | B | | | C | |
| Approach Delay (s) | | 10.6 | | | 12.2 | | | 17.8 | | | 26.1 | |
| Approach LOS | | B | | | B | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 83.9% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 995 | 18 | 2 | 1052 | 0 | 3 |
| Future Volume (vph) | 995 | 18 | 2 | 1052 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 995 | 18 | 2 | 1052 | 0 | 3 |
| Future Vol, veh/h | 995 | 18 | 2 | 1052 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 1026 | 19 | 2 | 1085 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1045 | 0 | 1586 | 526 |
| Stage 1 | - | - | - | - | 1036 | - |
| Stage 2 | - | - | - | - | 550 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 858 | - | *75 | *905 |
| Stage 1 | - | - | - | - | *592 | - |
| Stage 2 | - | - | - | - | *764 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 858 | - | *74 | *903 |
| Mov Cap-2 Maneuver | - | - | - | - | *74 | - |
| Stage 1 | - | - | - | - | *592 | - |
| Stage 2 | - | - | - | - | *758 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 903 | - | - | 858 | - |
| HCM Lane V/C Ratio | 0.003 | - | - | 0.002 | - |
| HCM Control Delay (s) | 9 | - | - | 9.2 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 974 | 24 | 3 | 1052 | 2 | 21 |
| Future Volume (vph) | 974 | 24 | 3 | 1052 | 2 | 21 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 974 | 24 | 3 | 1052 | 2 | 21 |
| Future Vol, veh/h | 974 | 24 | 3 | 1052 | 2 | 21 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 1004 | 25 | 3 | 1085 | 2 | 22 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1029 | 0 | 1569 | 518 |
| Stage 1 | - | - | - | - | 1017 | - |
| Stage 2 | - | - | - | - | 552 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *78 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *764 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *77 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *77 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *756 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 13.6 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 444 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.053 | - | - | 0.003 | - |
| HCM Control Delay (s) | 13.6 | - | - | 8.7 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 958 | 36 | 5 | 1055 | 0 | 3 |
| Future Volume (vph) | 958 | 36 | 5 | 1055 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 958 | 36 | 5 | 1055 | 0 | 3 |
| Future Vol, veh/h | 958 | 36 | 5 | 1055 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 988 | 37 | 5 | 1088 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1025 | 0 | 1564 | 516 |
| Stage 1 | - | - | - | - | 1007 | - |
| Stage 2 | - | - | - | - | 557 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *78 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *764 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *77 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *77 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *753 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 9.5 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 812 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.004 | - | - | 0.005 | - |
| HCM Control Delay (s) | 9.5 | - | - | 8.7 | 0.1 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 960 | 1 | 4 | 1053 | 7 | 28 |
| Future Volume (vph) | 960 | 1 | 4 | 1053 | 7 | 28 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1653 | 89 | |
| Travel Time (s) | 1.7 | | | 32.2 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 960 | 1 | 4 | 1053 | 7 | 28 |
| Future Vol, veh/h | 960 | 1 | 4 | 1053 | 7 | 28 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 990 | 1 | 4 | 1086 | 7 | 29 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 991 | 0 | 1545 | 499 |
| Stage 1 | - | - | - | - | 991 | - |
| Stage 2 | - | - | - | - | 554 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *81 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *764 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *80 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *80 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *755 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 19.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 287 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.126 | - | - | 0.004 | - |
| HCM Control Delay (s) | 19.3 | - | - | 8.7 | 0 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.4 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 8 | 4 | 127 | 12 | 2 | 154 |
| Future Volume (vph) | 8 | 4 | 127 | 12 | 2 | 154 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 6 | 6 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 8 | 4 | 127 | 12 | 2 | 154 |
| Future Vol, veh/h | 8 | 4 | 127 | 12 | 2 | 154 |
| Conflicting Peds, #/hr | 6 | 6 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 0 | 2 | 2 | 3 |
| Mvmt Flow | 8 | 4 | 131 | 12 | 2 | 159 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 306 | 143 | 0 | 0 | 143 | 0 |
| Stage 1 | 137 | - | - | - | - | - |
| Stage 2 | 169 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *865 | 964 | - | - | 1073 | - |
| Stage 1 | *1033 | - | - | - | - | - |
| Stage 2 | *1060 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *858 | 958 | - | - | 1073 | - |
| Mov Cap-2 Maneuver | *858 | - | - | - | - | - |
| Stage 1 | *1033 | - | - | - | - | - |
| Stage 2 | *1051 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.1 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 889 | 1073 | - |
| HCM Lane V/C Ratio | - | - | 0.014 | 0.002 | - |
| HCM Control Delay (s) | - | - | 9.1 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 5 | 135 | 7 | 5 | 157 |
| Future Volume (vph) | 2 | 5 | 135 | 7 | 5 | 157 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 279 | | | 69 |
| Travel Time (s) | 2.0 | | 7.6 | | | 1.9 |
| Confl. Peds. (#/hr) | 6 | 6 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

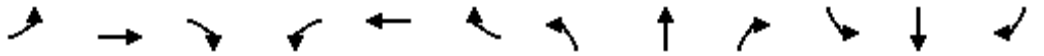
| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 5 | 135 | 7 | 5 | 157 |
| Future Vol, veh/h | 2 | 5 | 135 | 7 | 5 | 157 |
| Conflicting Peds, #/hr | 6 | 6 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 0 | 2 | 2 | 3 |
| Mvmt Flow | 2 | 5 | 139 | 7 | 5 | 162 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 321 | 149 | 0 | 0 | 146 | 0 |
| Stage 1 | 143 | - | - | - | - | - |
| Stage 2 | 178 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 844 | 957 | - | - | 1071 | - |
| Stage 1 | 1026 | - | - | - | - | - |
| Stage 2 | 1055 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 835 | 952 | - | - | 1071 | - |
| Mov Cap-2 Maneuver | 835 | - | - | - | - | - |
| Stage 1 | 1026 | - | - | - | - | - |
| Stage 2 | 1044 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9 | 0 | 0.3 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 915 | 1071 | - |
| HCM Lane V/C Ratio | - | - | 0.008 | 0.005 | - |
| HCM Control Delay (s) | - | - | 9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 41 | 759 | 54 | 33 | 688 | 93 | 23 | 90 | 40 | 109 | 148 | 47 |
| Future Volume (vph) | 41 | 759 | 54 | 33 | 688 | 93 | 23 | 90 | 40 | 109 | 148 | 47 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 533 | | | 714 | | | 348 | | | 368 | |
| Travel Time (s) | | 14.5 | | | 19.5 | | | 9.5 | | | 10.0 | |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 871 | 0 | 0 | 736 | 95 | 23 | 133 | 0 | 111 | 199 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 61.0 | | 31.0 | 31.0 | 31.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 25.0% | 50.8% | | 25.8% | 25.8% | 25.8% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | -2.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.43 | | | 0.36 | 0.10 | 0.20 | 0.49 | | 0.67 | 0.71 | |
| Control Delay | | 7.2 | | | 3.5 | 2.7 | 44.2 | 49.6 | | 65.4 | 59.7 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 7.2 | | | 3.5 | 2.7 | 44.2 | 49.6 | | 65.4 | 59.7 | |
| Queue Length 50th (ft) | | 117 | | | 40 | 8 | 15 | 94 | | 81 | 147 | |
| Queue Length 95th (ft) | | 192 | | | 98 | 23 | 39 | 147 | | 137 | 214 | |
| Internal Link Dist (ft) | | 453 | | | 634 | | | 268 | | | 288 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2013 | | | 2048 | 996 | 153 | 367 | | 221 | 377 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.43 | | | 0.36 | 0.10 | 0.15 | 0.36 | | 0.50 | 0.53 | |

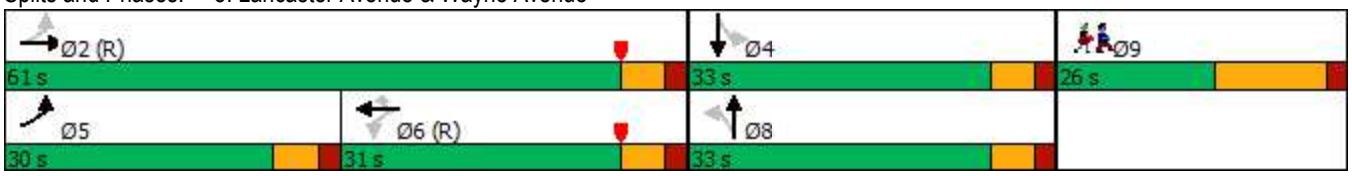
Intersection Summary

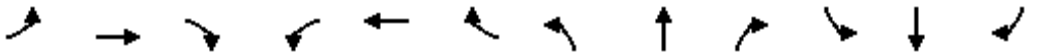
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 19 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 41 | 759 | 54 | 33 | 688 | 93 | 23 | 90 | 40 | 109 | 148 | 47 |
| Future Volume (vph) | 41 | 759 | 54 | 33 | 688 | 93 | 23 | 90 | 40 | 109 | 148 | 47 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.96 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.97 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3086 | | | 3150 | 1378 | 1510 | 1571 | | 1544 | 1613 | |
| Flt Permitted | | 0.88 | | | 0.87 | 1.00 | 0.41 | 1.00 | | 0.58 | 1.00 | |
| Satd. Flow (perm) | | 2713 | | | 2760 | 1378 | 654 | 1571 | | 940 | 1613 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 42 | 774 | 55 | 34 | 702 | 95 | 23 | 92 | 41 | 111 | 151 | 48 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 871 | 0 | 0 | 736 | 95 | 23 | 133 | 0 | 111 | 199 | 0 |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 88.1 | | | 88.1 | 88.1 | 19.9 | 19.9 | | 19.9 | 19.9 | |
| Effective Green, g (s) | | 89.1 | | | 89.1 | 90.1 | 20.9 | 20.9 | | 20.9 | 20.9 | |
| Actuated g/C Ratio | | 0.74 | | | 0.74 | 0.75 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2014 | | | 2049 | 1034 | 113 | 273 | | 163 | 280 | |
| v/s Ratio Prot | | | | | | | | 0.08 | | | c0.12 | |
| v/s Ratio Perm | | c0.32 | | | 0.27 | 0.07 | 0.04 | | | 0.12 | | |
| v/c Ratio | | 0.43 | | | 0.36 | 0.09 | 0.20 | 0.49 | | 0.68 | 0.71 | |
| Uniform Delay, d1 | | 5.9 | | | 5.4 | 4.0 | 42.4 | 44.7 | | 46.4 | 46.7 | |
| Progression Factor | | 1.00 | | | 0.51 | 0.52 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.4 | 0.2 | 0.9 | 1.4 | | 11.1 | 8.2 | |
| Delay (s) | | 6.0 | | | 3.2 | 2.2 | 43.3 | 46.1 | | 57.5 | 54.9 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 6.0 | | | 3.1 | | | 45.7 | | | 55.9 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 26.0 |
| Intersection Capacity Utilization | 78.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

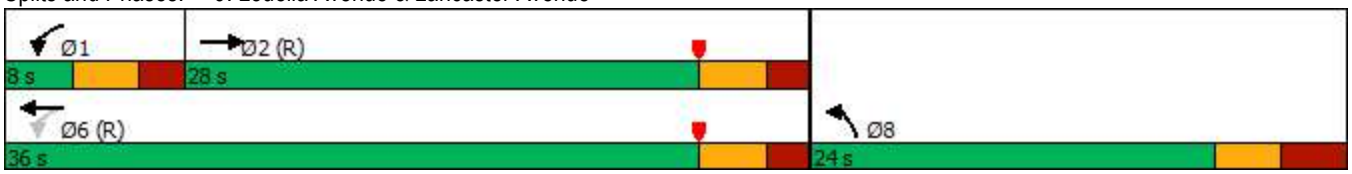
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 914 | 33 | 54 | 863 | 15 | 31 |
| Future Volume (vph) | 914 | 33 | 54 | 863 | 15 | 31 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 714 | | | 1121 | 430 | |
| Travel Time (s) | 19.5 | | | 30.6 | 11.7 | |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 986 | 0 | 0 | 955 | 48 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 28.0 | | 8.0 | 36.0 | 24.0 | |
| Total Split (%) | 46.7% | | 13.3% | 60.0% | 40.0% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.44 | | | 0.50 | 0.21 | |
| Control Delay | 5.8 | | | 2.2 | 24.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 5.8 | | | 2.2 | 24.6 | |
| Queue Length 50th (ft) | 151 | | | 21 | 16 | |
| Queue Length 95th (ft) | 129 | | | 36 | 40 | |
| Internal Link Dist (ft) | 634 | | | 1041 | 350 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2227 | | | 1901 | 520 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.44 | | | 0.50 | 0.09 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |

Offset: 6 (10%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 914 | 33 | 54 | 863 | 15 | 31 |
| Future Volume (vph) | 914 | 33 | 54 | 863 | 15 | 31 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.98 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3128 | | | 3130 | 1632 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3128 | | | 2671 | 1632 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 952 | 34 | 56 | 899 | 16 | 32 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 986 | 0 | 0 | 955 | 48 | 0 |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 41.7 | | | 41.7 | 7.3 | |
| Effective Green, g (s) | 42.7 | | | 42.7 | 8.3 | |
| Actuated g/C Ratio | 0.71 | | | 0.71 | 0.14 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2226 | | | 1900 | 225 | |
| v/s Ratio Prot | 0.32 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.36 | | |
| v/c Ratio | 0.44 | | | 0.50 | 0.21 | |
| Uniform Delay, d1 | 3.6 | | | 3.9 | 23.0 | |
| Progression Factor | 1.36 | | | 0.36 | 1.00 | |
| Incremental Delay, d2 | 0.6 | | | 0.1 | 0.5 | |
| Delay (s) | 5.6 | | | 1.6 | 23.4 | |
| Level of Service | A | | | A | C | |
| Approach Delay (s) | 5.6 | | | 1.6 | 23.4 | |
| Approach LOS | A | | | A | C | |

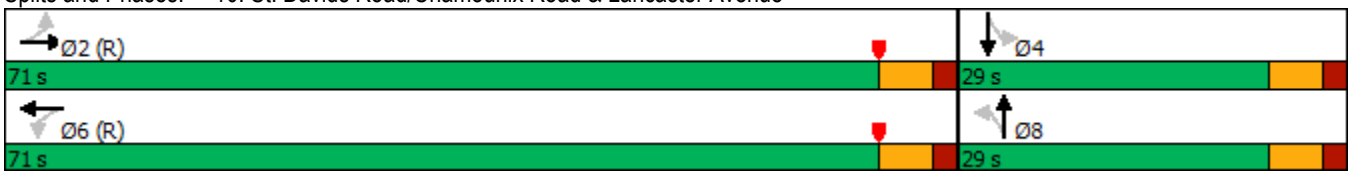
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.1 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.49 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 13.0 |
| Intersection Capacity Utilization | 68.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 980 | 17 | 40 | 1032 | 145 | 4 | 26 | 33 | 76 | 23 | 43 |
| Future Volume (vph) | 36 | 980 | 17 | 40 | 1032 | 145 | 4 | 26 | 33 | 76 | 23 | 43 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1653 | | | 896 | | | 295 | | | 258 | |
| Travel Time (s) | | 32.2 | | | 17.5 | | | 8.0 | | | 7.0 | |
| Confl. Peds. (#/hr) | 5 | | 3 | 3 | | 5 | | | 8 | 8 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 25% | 0% | 3% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 71.0 | 71.0 | | 71.0 | 71.0 | | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Total Split (%) | 71.0% | 71.0% | | 71.0% | 71.0% | | 29.0% | 29.0% | | 29.0% | 29.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 100 | |
| Actuated Cycle Length: 100 | |
| Offset: 66 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 50 | |
| Control Type: Actuated-Coordinated | |

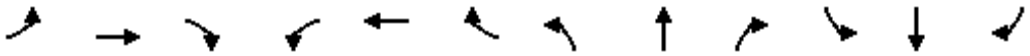
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 36 | 980 | 17 | 40 | 1032 | 145 | 4 | 26 | 33 | 76 | 23 | 43 |
| Future Volume (veh/h) | 36 | 980 | 17 | 40 | 1032 | 145 | 4 | 26 | 33 | 76 | 23 | 43 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.98 | 0.99 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1827 | 1845 | 1891 | 1835 | 1891 | 1881 | 1870 | 1881 |
| Adj Flow Rate, veh/h | 38 | 1043 | 17 | 43 | 1098 | 148 | 4 | 28 | 35 | 81 | 24 | 46 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 92 | 2341 | 38 | 91 | 2173 | 290 | 44 | 95 | 110 | 153 | 38 | 59 |
| Arrive On Green | 0.78 | 0.77 | 0.76 | 0.78 | 0.77 | 0.76 | 0.14 | 0.13 | 0.12 | 0.14 | 0.13 | 0.12 |
| Sat Flow, veh/h | 69 | 3024 | 49 | 68 | 2808 | 375 | 46 | 751 | 872 | 777 | 300 | 472 |
| Grp Volume(v), veh/h | 541 | 0 | 557 | 659 | 0 | 630 | 67 | 0 | 0 | 151 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1545 | 0 | 1598 | 1655 | 0 | 1595 | 1669 | 0 | 0 | 1548 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 12.1 | 0.0 | 0.0 | 14.9 | 0.0 | 0.0 | 0.0 | 5.4 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 9.9 | 0.0 | 12.1 | 12.6 | 0.0 | 14.9 | 3.7 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.07 | | 0.23 | 0.06 | | 0.52 | 0.54 | | 0.30 |
| Lane Grp Cap(c), veh/h | 1249 | 0 | 1236 | 1336 | 0 | 1235 | 265 | 0 | 0 | 266 | 0 | 0 |
| V/C Ratio(X) | 0.43 | 0.00 | 0.45 | 0.49 | 0.00 | 0.51 | 0.25 | 0.00 | 0.00 | 0.57 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1249 | 0 | 1236 | 1336 | 0 | 1235 | 450 | 0 | 0 | 432 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 3.7 | 0.0 | 3.9 | 4.0 | 0.0 | 4.3 | 40.0 | 0.0 | 0.0 | 41.8 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.1 | 0.0 | 1.2 | 1.3 | 0.0 | 1.5 | 0.7 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 8.5 | 0.0 | 9.6 | 10.7 | 0.0 | 11.4 | 3.1 | 0.0 | 0.0 | 7.5 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 4.8 | 0.0 | 5.1 | 5.3 | 0.0 | 5.8 | 40.7 | 0.0 | 0.0 | 44.5 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 1098 | | | 1289 | | | 67 | | | 151 | |
| Approach Delay, s/veh | | 4.9 | | | 5.5 | | | 40.7 | | | 44.5 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 82.4 | | 17.6 | | 82.4 | | 17.6 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 65.0 | | 23.0 | | 65.0 | | 23.0 |
| Max Q Clear Time (g_c+I1), s | | 14.1 | | 11.1 | | 16.9 | | 5.7 |
| Green Ext Time (p_c), s | | 5.4 | | 0.6 | | 6.9 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 8.4 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 15 | 9 | 5 | 7 | 72 | 11 | 9 | 122 | 6 | 6 | 102 | 14 |
| Future Volume (vph) | 15 | 9 | 5 | 7 | 72 | 11 | 9 | 122 | 6 | 6 | 102 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1097 | | | 652 | | | 218 | | | 279 | |
| Travel Time (s) | | 29.9 | | | 17.8 | | | 5.9 | | | 7.6 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 7 | | 5 | 5 | | 7 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles (%) | 7% | 0% | 40% | 0% | 1% | 0% | 11% | 11% | 0% | 0% | 3% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 15 | 9 | 5 | 7 | 72 | 11 | 9 | 122 | 6 | 6 | 102 | 14 |
| Future Vol, veh/h | 15 | 9 | 5 | 7 | 72 | 11 | 9 | 122 | 6 | 6 | 102 | 14 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles, % | 7 | 0 | 40 | 0 | 1 | 0 | 11 | 11 | 0 | 0 | 3 | 0 |
| Mvmt Flow | 19 | 11 | 6 | 9 | 90 | 14 | 11 | 153 | 8 | 8 | 128 | 18 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.2 | 8.4 | 8.9 | 8.4 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 7% | 52% | 8% | 5% |
| Vol Thru, % | 89% | 31% | 80% | 84% |
| Vol Right, % | 4% | 17% | 12% | 11% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 137 | 29 | 90 | 122 |
| LT Vol | 9 | 15 | 7 | 6 |
| Through Vol | 122 | 9 | 72 | 102 |
| RT Vol | 6 | 5 | 11 | 14 |
| Lane Flow Rate | 171 | 36 | 112 | 152 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.219 | 0.049 | 0.145 | 0.186 |
| Departure Headway (Hd) | 4.597 | 4.904 | 4.631 | 4.394 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 781 | 730 | 774 | 817 |
| Service Time | 2.622 | 2.938 | 2.659 | 2.418 |
| HCM Lane V/C Ratio | 0.219 | 0.049 | 0.145 | 0.186 |
| HCM Control Delay | 8.9 | 8.2 | 8.4 | 8.4 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.8 | 0.2 | 0.5 | 0.7 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 45 | 87 | 11 | 16 | 62 |
| Future Volume (vph) | 9 | 45 | 87 | 11 | 16 | 62 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1097 | | 261 | | | 430 |
| Travel Time (s) | 29.9 | | 7.1 | | | 11.7 |
| Confl. Peds. (#/hr) | 1 | 24 | | 10 | 10 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 0% | 19% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

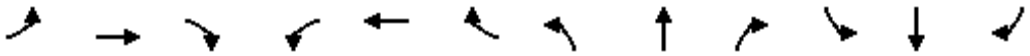
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 45 | 87 | 11 | 16 | 62 |
| Future Vol, veh/h | 9 | 45 | 87 | 11 | 16 | 62 |
| Conflicting Peds, #/hr | 1 | 24 | 0 | 10 | 10 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 87 | 87 | 87 | 87 | 87 | 87 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 19 | 2 |
| Mvmt Flow | 10 | 52 | 100 | 13 | 18 | 71 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 225 | 141 | 0 | 0 | 123 | 0 |
| Stage 1 | 117 | - | - | - | - | - |
| Stage 2 | 108 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.22 | - | - | 4.5 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3.2 | - |
| Pot Cap-1 Maneuver | 882 | 967 | - | - | 1018 | - |
| Stage 1 | 1057 | - | - | - | - | - |
| Stage 2 | 1067 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 856 | 936 | - | - | 1008 | - |
| Mov Cap-2 Maneuver | 856 | - | - | - | - | - |
| Stage 1 | 1046 | - | - | - | - | - |
| Stage 2 | 1046 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 1.8 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 922 | 1008 | - |
| HCM Lane V/C Ratio | - | - | 0.067 | 0.018 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |



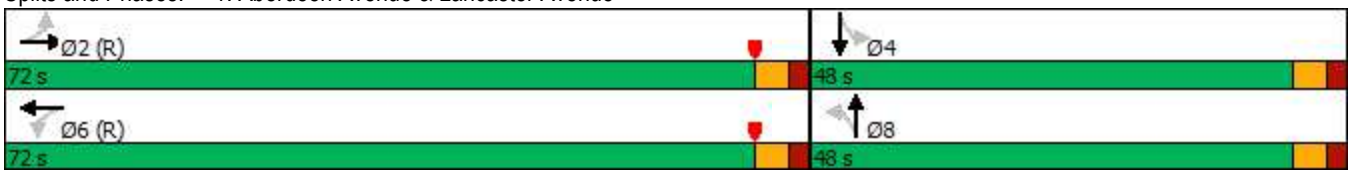
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 707 | 43 | 14 | 873 | 51 | 40 | 96 | 37 | 119 | 72 | 66 |
| Future Volume (vph) | 40 | 707 | 43 | 14 | 873 | 51 | 40 | 96 | 37 | 119 | 72 | 66 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 814 | 0 | 0 | 967 | 0 | 0 | 178 | 0 | 0 | 265 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.46 | | | 0.52 | | | 0.49 | | | 0.87 | |
| Control Delay | | 13.2 | | | 11.6 | | | 41.9 | | | 68.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 13.2 | | | 11.6 | | | 41.9 | | | 68.6 | |
| Queue Length 50th (ft) | | 129 | | | 189 | | | 118 | | | 197 | |
| Queue Length 95th (ft) | | 283 | | | 314 | | | 170 | | | 274 | |
| Internal Link Dist (ft) | | 1062 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1769 | | | 1852 | | | 540 | | | 455 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.46 | | | 0.52 | | | 0.33 | | | 0.58 | |

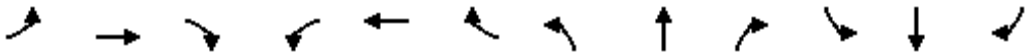
| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |

# Timing Plan: SAT Peak
## 1: Aberdeen Avenue & Lancaster Avenue

Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 707 | 43 | 14 | 873 | 51 | 40 | 96 | 37 | 119 | 72 | 66 |
| Future Volume (vph) | 40 | 707 | 43 | 14 | 873 | 51 | 40 | 96 | 37 | 119 | 72 | 66 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.94 | | | *0.88 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 3057 | | | 2872 | | | 1687 | | | 1805 | |
| Flt Permitted | | 0.84 | | | 0.94 | | | 0.86 | | | 0.67 | |
| Satd. Flow (perm) | | 2577 | | | 2698 | | | 1474 | | | 1242 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 41 | 729 | 44 | 14 | 900 | 53 | 41 | 99 | 38 | 123 | 74 | 68 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 814 | 0 | 0 | 967 | 0 | 0 | 178 | 0 | 0 | 265 | 0 |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 81.3 | | | 81.3 | | | 28.7 | | | 28.7 | |
| Effective Green, g (s) | | 82.3 | | | 82.3 | | | 29.7 | | | 29.7 | |
| Actuated g/C Ratio | | 0.69 | | | 0.69 | | | 0.25 | | | 0.25 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1767 | | | 1850 | | | 364 | | | 307 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.32 | | | c0.36 | | | 0.12 | | | c0.21 | |
| v/c Ratio | | 0.46 | | | 0.52 | | | 0.49 | | | 0.86 | |
| Uniform Delay, d1 | | 8.7 | | | 9.2 | | | 38.7 | | | 43.2 | |
| Progression Factor | | 1.25 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.8 | | | 1.1 | | | 1.0 | | | 21.3 | |
| Delay (s) | | 11.7 | | | 10.3 | | | 39.7 | | | 64.5 | |
| Level of Service | | B | | | B | | | D | | | E | |
| Approach Delay (s) | | 11.7 | | | 10.3 | | | 39.7 | | | 64.5 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 19.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 89.2% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 845 | 17 | 0 | 939 | 0 | 2 |
| Future Volume (vph) | 845 | 17 | 0 | 939 | 0 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 845 | 17 | 0 | 939 | 0 | 2 |
| Future Vol, veh/h | 845 | 17 | 0 | 939 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 871 | 18 | 0 | 968 | 0 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 889 | 0 | 1371 | 452 |
| Stage 1 | - | - | - | - | 880 | - |
| Stage 2 | - | - | - | - | 491 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 971 | - | *111 | *935 |
| Stage 1 | - | - | - | - | *732 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 971 | - | *110 | *930 |
| Mov Cap-2 Maneuver | - | - | - | - | *110 | - |
| Stage 1 | - | - | - | - | *732 | - |
| Stage 2 | - | - | - | - | *839 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 930 | - | - | 971 | - |
| HCM Lane V/C Ratio | 0.002 | - | - | - | - |
| HCM Control Delay (s) | 8.9 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 846 | 1 | 0 | 938 | 1 | 22 |
| Future Volume (vph) | 846 | 1 | 0 | 938 | 1 | 22 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 846 | 1 | 0 | 938 | 1 | 22 |
| Future Vol, veh/h | 846 | 1 | 0 | 938 | 1 | 22 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 872 | 1 | 0 | 967 | 1 | 23 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 873 | 0 | 1364 | 444 |
| Stage 1 | - | - | - | - | 873 | - |
| Stage 2 | - | - | - | - | 491 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *113 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1029 | - | *112 | *846 |
| Mov Cap-2 Maneuver | - | - | - | - | *112 | - |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *839 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 10.7 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 658 | - | - | * 1029 | - |
| HCM Lane V/C Ratio | 0.036 | - | - | - | - |
| HCM Control Delay (s) | 10.7 | - | - | 0 | - |
| HCM Lane LOS | B | - | - | A | - |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 820 | 47 | 8 | 936 | 2 | 4 |
| Future Volume (vph) | 820 | 47 | 8 | 936 | 2 | 4 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 820 | 47 | 8 | 936 | 2 | 4 |
| Future Vol, veh/h | 820 | 47 | 8 | 936 | 2 | 4 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 845 | 48 | 8 | 965 | 2 | 4 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 893 | 0 | 1375 | 454 |
| Stage 1 | - | - | - | - | 869 | - |
| Stage 2 | - | - | - | - | 506 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *111 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1029 | - | *108 | *846 |
| Mov Cap-2 Maneuver | - | - | - | - | *108 | - |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *826 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 19.3 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 258 | - | - | * 1029 | - |
| HCM Lane V/C Ratio | 0.024 | - | - | 0.008 | - |
| HCM Control Delay (s) | 19.3 | - | - | 8.5 | 0.1 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 820 | 4 | 4 | 941 | 3 | 54 |
| Future Volume (vph) | 820 | 4 | 4 | 941 | 3 | 54 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1647 | 89 | |
| Travel Time (s) | 1.7 | | | 32.1 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 820 | 4 | 4 | 941 | 3 | 54 |
| Future Vol, veh/h | 820 | 4 | 4 | 941 | 3 | 54 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 845 | 4 | 4 | 970 | 3 | 56 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 849 | 0 | 1347 | 432 |
| Stage 1 | - | - | - | - | 847 | - |
| Stage 2 | - | - | - | - | 500 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *116 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1029 | - | *114 | *846 |
| Mov Cap-2 Maneuver | - | - | - | - | *114 | - |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *833 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 11.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 632 | - | - | * 1029 | - |
| HCM Lane V/C Ratio | 0.093 | - | - | 0.004 | - |
| HCM Control Delay (s) | 11.3 | - | - | 8.5 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.3 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

# 6: Aberdeen Avenue & Northern Sunoco Driveway

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 6 | 10 | 162 | 10 | 2 | 127 |
| Future Volume (vph) | 6 | 10 | 162 | 10 | 2 | 127 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | 9 | 9 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 6 | 10 | 162 | 10 | 2 | 127 |
| Future Vol, veh/h | 6 | 10 | 162 | 10 | 2 | 127 |
| Conflicting Peds, #/hr | 9 | 9 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 1 |
| Mvmt Flow | 6 | 10 | 167 | 10 | 2 | 131 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 316 | 181 | 0 | 0 | 177 | 0 |
| Stage 1 | 172 | - | - | - | - | - |
| Stage 2 | 144 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 826 | 917 | - | - | 1045 | - |
| Stage 1 | 994 | - | - | - | - | - |
| Stage 2 | 1075 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 817 | 909 | - | - | 1045 | - |
| Mov Cap-2 Maneuver | 817 | - | - | - | - | - |
| Stage 1 | 994 | - | - | - | - | - |
| Stage 2 | 1063 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 872 | 1045 | - |
| HCM Lane V/C Ratio | - | - | 0.019 | 0.002 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.5 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 2 | 170 | 8 | 0 | 133 |
| Future Volume (vph) | 2 | 2 | 170 | 8 | 0 | 133 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 69 |
| Travel Time (s) | 2.0 | | 8.1 | | | 1.9 |
| Confl. Peds. (#/hr) | 9 | 9 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

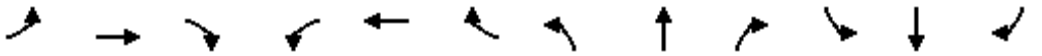
| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 2 | 170 | 8 | 0 | 133 |
| Future Vol, veh/h | 2 | 2 | 170 | 8 | 0 | 133 |
| Conflicting Peds, #/hr | 9 | 9 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 1 |
| Mvmt Flow | 2 | 2 | 175 | 8 | 0 | 137 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 325 | 188 | 0 | 0 | 183 | 0 |
| Stage 1 | 179 | - | - | - | - | - |
| Stage 2 | 146 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 815 | 909 | - | - | 1040 | - |
| Stage 1 | 987 | - | - | - | - | - |
| Stage 2 | 1072 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 808 | 901 | - | - | 1040 | - |
| Mov Cap-2 Maneuver | 808 | - | - | - | - | - |
| Stage 1 | 987 | - | - | - | - | - |
| Stage 2 | 1063 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 0 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 852 | 1040 | - |
| HCM Lane V/C Ratio | - | - | 0.005 | - | - |
| HCM Control Delay (s) | - | - | 9.2 | 0 | - |
| HCM Lane LOS | - | - | A | A | - |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

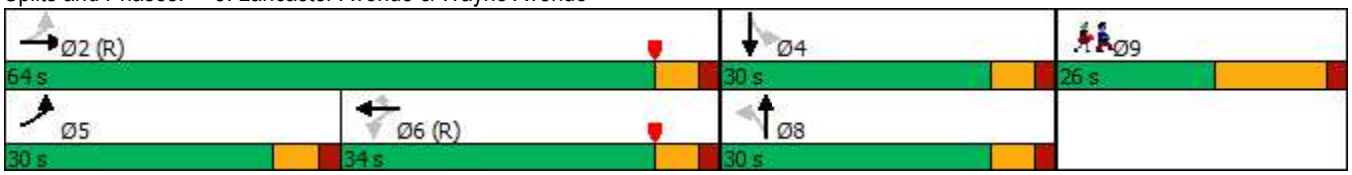


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 708 | 39 | 45 | 790 | 88 | 62 | 82 | 72 | 69 | 81 | 62 |
| Future Volume (vph) | 39 | 708 | 39 | 45 | 790 | 88 | 62 | 82 | 72 | 69 | 81 | 62 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 810 | 0 | 0 | 860 | 91 | 64 | 159 | 0 | 71 | 148 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 64.0 | | 34.0 | 34.0 | 34.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 25.0% | 53.3% | | 28.3% | 28.3% | 28.3% | 25.0% | 25.0% | | 25.0% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.39 | | | 0.42 | 0.09 | 0.52 | 0.66 | | 0.60 | 0.63 | |
| Control Delay | | 5.8 | | | 3.6 | 3.3 | 60.9 | 60.4 | | 66.5 | 58.9 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 5.8 | | | 3.6 | 3.3 | 60.9 | 60.4 | | 66.5 | 58.9 | |
| Queue Length 50th (ft) | | 94 | | | 53 | 11 | 46 | 117 | | 52 | 109 | |
| Queue Length 95th (ft) | | 155 | | | 68 | 19 | 89 | 181 | | 98 | 169 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2069 | | | 2068 | 1007 | 169 | 333 | | 165 | 325 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.39 | | | 0.42 | 0.09 | 0.38 | 0.48 | | 0.43 | 0.46 | |

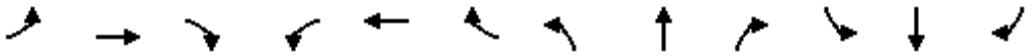
Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 708 | 39 | 45 | 790 | 88 | 62 | 82 | 72 | 69 | 81 | 62 |
| Future Volume (vph) | 39 | 708 | 39 | 45 | 790 | 88 | 62 | 82 | 72 | 69 | 81 | 62 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.97 | | 1.00 | 0.97 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.93 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3124 | | | 3149 | 1378 | 1492 | 1591 | | 1559 | 1549 | |
| Flt Permitted | | 0.86 | | | 0.86 | 1.00 | 0.51 | 1.00 | | 0.48 | 1.00 | |
| Satd. Flow (perm) | | 2705 | | | 2706 | 1378 | 804 | 1591 | | 787 | 1549 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 40 | 730 | 40 | 46 | 814 | 91 | 64 | 85 | 74 | 71 | 84 | 64 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 810 | 0 | 0 | 860 | 91 | 64 | 159 | 0 | 71 | 148 | 0 |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 90.9 | | | 90.9 | 90.9 | 17.1 | 17.1 | | 17.1 | 17.1 | |
| Effective Green, g (s) | | 91.9 | | | 91.9 | 90.9 | 18.1 | 18.1 | | 18.1 | 18.1 | |
| Actuated g/C Ratio | | 0.77 | | | 0.77 | 0.76 | 0.15 | 0.15 | | 0.15 | 0.15 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2071 | | | 2072 | 1043 | 121 | 239 | | 118 | 233 | |
| v/s Ratio Prot | | | | | | | | c0.10 | | | 0.10 | |
| v/s Ratio Perm | | 0.30 | | | c0.32 | 0.07 | 0.08 | | | 0.09 | | |
| v/c Ratio | | 0.39 | | | 0.42 | 0.09 | 0.53 | 0.67 | | 0.60 | 0.64 | |
| Uniform Delay, d1 | | 4.7 | | | 4.8 | 3.8 | 47.0 | 48.1 | | 47.6 | 47.8 | |
| Progression Factor | | 1.00 | | | 0.56 | 0.68 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.6 | 0.1 | 4.1 | 6.8 | | 8.4 | 5.6 | |
| Delay (s) | | 4.8 | | | 3.3 | 2.7 | 51.1 | 54.9 | | 55.9 | 53.4 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 4.8 | | | 3.2 | | | 53.8 | | | 54.2 | |
| Approach LOS | | A | | | A | | | D | | | D | |

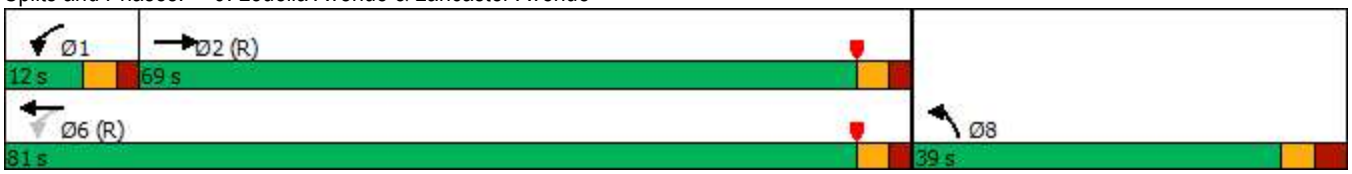
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.54 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 78.8% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 803 | 59 | 49 | 934 | 42 | 67 |
| Future Volume (vph) | 803 | 59 | 49 | 934 | 42 | 67 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 897 | 0 | 0 | 1024 | 114 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.36 | | | 0.48 | 0.56 | |
| Control Delay | 3.1 | | | 2.0 | 59.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 3.1 | | | 2.0 | 59.6 | |
| Queue Length 50th (ft) | 65 | | | 35 | 85 | |
| Queue Length 95th (ft) | 93 | | | 41 | 139 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2526 | | | 2145 | 482 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.36 | | | 0.48 | 0.24 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 803 | 59 | 49 | 934 | 42 | 67 |
| Future Volume (vph) | 803 | 59 | 49 | 934 | 42 | 67 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.97 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3139 | | | 3135 | 1678 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3139 | | | 2666 | 1678 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 836 | 61 | 51 | 973 | 44 | 70 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 897 | 0 | 0 | 1024 | 114 | 0 |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 95.6 | | | 95.6 | 13.4 | |
| Effective Green, g (s) | 96.6 | | | 96.6 | 14.4 | |
| Actuated g/C Ratio | 0.80 | | | 0.80 | 0.12 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2526 | | | 2146 | 201 | |
| v/s Ratio Prot | 0.29 | | | | c0.07 | |
| v/s Ratio Perm | | | | c0.38 | | |
| v/c Ratio | 0.36 | | | 0.48 | 0.57 | |
| Uniform Delay, d1 | 3.2 | | | 3.7 | 49.9 | |
| Progression Factor | 0.77 | | | 0.33 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.1 | 3.6 | |
| Delay (s) | 2.8 | | | 1.4 | 53.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.8 | | | 1.4 | 53.5 | |
| Approach LOS | A | | | A | D | |

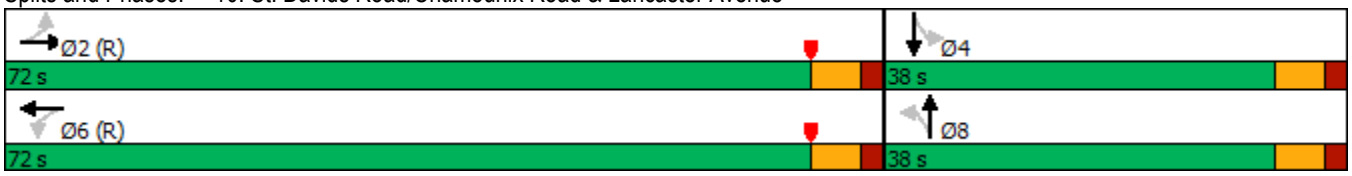
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.9 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.51 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 72.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 31 | 904 | 18 | 37 | 1010 | 65 | 13 | 17 | 42 | 56 | 17 | 39 |
| Future Volume (vph) | 31 | 904 | 18 | 37 | 1010 | 65 | 13 | 17 | 42 | 56 | 17 | 39 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1647 | | | 744 | | | 642 | | | 402 | |
| Travel Time (s) | | 32.1 | | | 14.5 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | 5 | | 2 | 2 | | 5 | | | 4 | 4 | | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 8% | 0% | 0% | 2% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

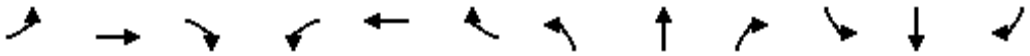
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 31 | 904 | 18 | 37 | 1010 | 65 | 13 | 17 | 42 | 56 | 17 | 39 |
| Future Volume (veh/h) | 31 | 904 | 18 | 37 | 1010 | 65 | 13 | 17 | 42 | 56 | 17 | 39 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1864 | 1891 | 1881 | 1863 | 1881 |
| Adj Flow Rate, veh/h | 32 | 922 | 17 | 38 | 1031 | 63 | 13 | 17 | 43 | 57 | 17 | 35 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 91 | 2486 | 45 | 95 | 2477 | 150 | 56 | 49 | 96 | 123 | 31 | 50 |
| Arrive On Green | 0.80 | 0.81 | 0.80 | 0.80 | 0.81 | 0.80 | 0.09 | 0.10 | 0.09 | 0.09 | 0.10 | 0.09 |
| Sat Flow, veh/h | 69 | 3054 | 56 | 74 | 3043 | 184 | 182 | 518 | 1004 | 770 | 330 | 520 |
| Grp Volume(v), veh/h | 484 | 0 | 487 | 574 | 0 | 558 | 73 | 0 | 0 | 109 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1583 | 0 | 1596 | 1670 | 0 | 1631 | 1704 | 0 | 0 | 1621 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 9.0 | 0.0 | 0.0 | 10.7 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.8 | 0.0 | 9.0 | 9.4 | 0.0 | 10.7 | 4.5 | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.07 | | 0.11 | 0.18 | | 0.59 | 0.52 | | 0.32 |
| Lane Grp Cap(c), veh/h | 1309 | 0 | 1299 | 1379 | 0 | 1327 | 185 | 0 | 0 | 189 | 0 | 0 |
| V/C Ratio(X) | 0.37 | 0.00 | 0.37 | 0.42 | 0.00 | 0.42 | 0.39 | 0.00 | 0.00 | 0.58 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1309 | 0 | 1299 | 1379 | 0 | 1327 | 508 | 0 | 0 | 489 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.6 | 0.0 | 2.7 | 2.8 | 0.0 | 2.9 | 47.5 | 0.0 | 0.0 | 48.4 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.8 | 0.0 | 0.8 | 0.9 | 0.0 | 1.0 | 1.9 | 0.0 | 0.0 | 3.9 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.6 | 0.0 | 7.6 | 8.9 | 0.0 | 8.7 | 4.0 | 0.0 | 0.0 | 6.3 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.4 | 0.0 | 3.6 | 3.7 | 0.0 | 3.9 | 49.4 | 0.0 | 0.0 | 52.3 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 971 | | | 1132 | | | 73 | | | 109 | |
| Approach Delay, s/veh | | 3.5 | | | 3.8 | | | 49.4 | | | 52.3 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 94.5 | | 15.5 | | 94.5 | | 15.5 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 11.0 | | 9.0 | | 12.7 | | 6.5 |
| Green Ext Time (p_c), s | | 4.4 | | 0.5 | | 5.5 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.5 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 7 | 14 | 3 | 4 | 28 | 18 | 3 | 113 | 11 | 6 | 104 | 18 |
| Future Volume (vph) | 7 | 14 | 3 | 4 | 28 | 18 | 3 | 113 | 11 | 6 | 104 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 6 | | 6 | 6 | | 6 | 2 | | 4 | 4 | | 2 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% | 0% | 1% | 11% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.1 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 7 | 14 | 3 | 4 | 28 | 18 | 3 | 113 | 11 | 6 | 104 | 18 |
| Future Vol, veh/h | 7 | 14 | 3 | 4 | 28 | 18 | 3 | 113 | 11 | 6 | 104 | 18 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 11 |
| Mvmt Flow | 9 | 18 | 4 | 5 | 35 | 23 | 4 | 143 | 14 | 8 | 132 | 23 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.9 | 7.8 | 8.2 | 8.2 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 29% | 8% | 5% |
| Vol Thru, % | 89% | 58% | 56% | 81% |
| Vol Right, % | 9% | 12% | 36% | 14% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 127 | 24 | 50 | 128 |
| LT Vol | 3 | 7 | 4 | 6 |
| Through Vol | 113 | 14 | 28 | 104 |
| RT Vol | 11 | 3 | 18 | 18 |
| Lane Flow Rate | 161 | 30 | 63 | 162 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.19 | 0.039 | 0.078 | 0.19 |
| Departure Headway (Hd) | 4.244 | 4.662 | 4.439 | 4.216 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 850 | 769 | 808 | 855 |
| Service Time | 2.248 | 2.684 | 2.459 | 2.22 |
| HCM Lane V/C Ratio | 0.189 | 0.039 | 0.078 | 0.189 |
| HCM Control Delay | 8.2 | 7.9 | 7.8 | 8.2 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.7 | 0.1 | 0.3 | 0.7 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 51 | 76 | 8 | 18 | 37 |
| Future Volume (vph) | 9 | 51 | 76 | 8 | 18 | 37 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | 1 | 13 | | 5 | 5 | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Heavy Vehicles (%) | 11% | 0% | 0% | 0% | 6% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

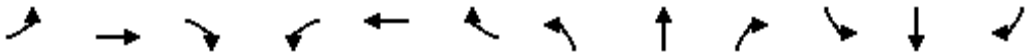
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 51 | 76 | 8 | 18 | 37 |
| Future Vol, veh/h | 9 | 51 | 76 | 8 | 18 | 37 |
| Conflicting Peds, #/hr | 1 | 13 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 72 | 72 | 72 | 72 | 72 | 72 |
| Heavy Vehicles, % | 11 | 0 | 0 | 0 | 6 | 0 |
| Mvmt Flow | 13 | 71 | 106 | 11 | 25 | 51 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 219 | 130 | 0 | 0 | 122 | 0 |
| Stage 1 | 117 | - | - | - | - | - |
| Stage 2 | 102 | - | - | - | - | - |
| Critical Hdwy | 6.51 | 6.2 | - | - | 4.16 | - |
| Critical Hdwy Stg 1 | 5.51 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.51 | - | - | - | - | - |
| Follow-up Hdwy | 3.599 | 3.3 | - | - | 2.254 | - |
| Pot Cap-1 Maneuver | 750 | 925 | - | - | 1441 | - |
| Stage 1 | 886 | - | - | - | - | - |
| Stage 2 | 900 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 732 | 909 | - | - | 1434 | - |
| Mov Cap-2 Maneuver | 732 | - | - | - | - | - |
| Stage 1 | 882 | - | - | - | - | - |
| Stage 2 | 883 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.5 | 0 | 2.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 877 | 1434 | - |
| HCM Lane V/C Ratio | - | - | 0.095 | 0.017 | - |
| HCM Control Delay (s) | - | - | 9.5 | 7.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

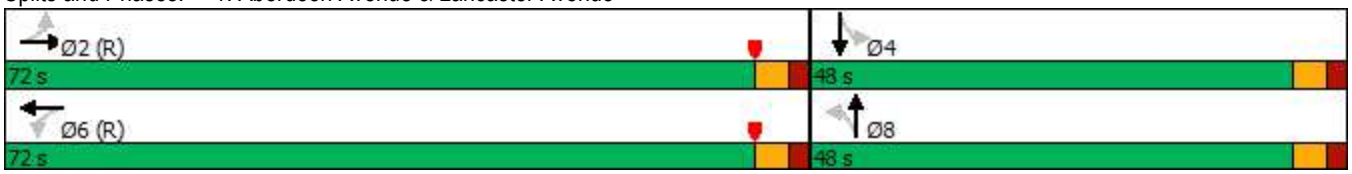


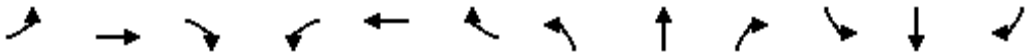
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 561 | 27 | 13 | 602 | 33 | 30 | 50 | 24 | 64 | 50 | 39 |
| Future Volume (vph) | 29 | 561 | 27 | 13 | 602 | 33 | 30 | 50 | 24 | 64 | 50 | 39 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 630 | 0 | 0 | 661 | 0 | 0 | 106 | 0 | 0 | 156 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.30 | | | 0.30 | | | 0.48 | | | 0.72 | |
| Control Delay | | 5.4 | | | 4.6 | | | 52.7 | | | 66.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 5.4 | | | 4.6 | | | 52.7 | | | 66.3 | |
| Queue Length 50th (ft) | | 48 | | | 66 | | | 76 | | | 117 | |
| Queue Length 95th (ft) | | 146 | | | 115 | | | 126 | | | 180 | |
| Internal Link Dist (ft) | | 1062 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2081 | | | 2226 | | | 524 | | | 516 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.30 | | | 0.30 | | | 0.20 | | | 0.30 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 561 | 27 | 13 | 602 | 33 | 30 | 50 | 24 | 64 | 50 | 39 |
| Future Volume (vph) | 29 | 561 | 27 | 13 | 602 | 33 | 30 | 50 | 24 | 64 | 50 | 39 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.90 | | | *0.92 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2970 | | | 3039 | | | 1681 | | | 1819 | |
| Flt Permitted | | 0.90 | | | 0.94 | | | 0.84 | | | 0.76 | |
| Satd. Flow (perm) | | 2669 | | | 2855 | | | 1432 | | | 1409 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 30 | 572 | 28 | 13 | 614 | 34 | 31 | 51 | 24 | 65 | 51 | 40 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 630 | 0 | 0 | 661 | 0 | 0 | 106 | 0 | 0 | 156 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 92.6 | | | 92.6 | | | 17.4 | | | 17.4 | |
| Effective Green, g (s) | | 93.6 | | | 93.6 | | | 18.4 | | | 18.4 | |
| Actuated g/C Ratio | | 0.78 | | | 0.78 | | | 0.15 | | | 0.15 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 2081 | | | 2226 | | | 219 | | | 216 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.24 | | | 0.23 | | | 0.07 | | | c0.11 | |
| v/c Ratio | | 0.30 | | | 0.30 | | | 0.48 | | | 0.72 | |
| Uniform Delay, d1 | | 3.8 | | | 3.8 | | | 46.5 | | | 48.4 | |
| Progression Factor | | 1.17 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 0.3 | | | 1.7 | | | 11.3 | |
| Delay (s) | | 4.8 | | | 4.1 | | | 48.1 | | | 59.7 | |
| Level of Service | | A | | | A | | | D | | | E | |
| Approach Delay (s) | | 4.8 | | | 4.1 | | | 48.1 | | | 59.7 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.37 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 61.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 639 | 9 | 1 | 649 | 0 | 2 |
| Future Volume (vph) | 639 | 9 | 1 | 649 | 0 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 639 | 9 | 1 | 649 | 0 | 2 |
| Future Vol, veh/h | 639 | 9 | 1 | 649 | 0 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 652 | 9 | 1 | 662 | 0 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 661 | 0 | 990 | 331 |
| Stage 1 | - | - | - | - | 657 | - |
| Stage 2 | - | - | - | - | 333 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1117 | - | *222 | *1004 |
| Stage 1 | - | - | - | - | *889 | - |
| Stage 2 | - | - | - | - | *977 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 1117 | - | *222 | *1004 |
| Mov Cap-2 Maneuver | - | - | - | - | *222 | - |
| Stage 1 | - | - | - | - | *889 | - |
| Stage 2 | - | - | - | - | *976 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.6 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 1004 | - | - | 1117 | - |
| HCM Lane V/C Ratio | 0.002 | - | - | 0.001 | - |
| HCM Control Delay (s) | 8.6 | - | - | 8.2 | 0 |
| HCM Lane LOS | A | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 638 | 3 | 2 | 646 | 4 | 14 |
| Future Volume (vph) | 638 | 3 | 2 | 646 | 4 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 638 | 3 | 2 | 646 | 4 | 14 |
| Future Vol, veh/h | 638 | 3 | 2 | 646 | 4 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 651 | 3 | 2 | 659 | 4 | 14 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 654 | 0 | 987 | 327 |
| Stage 1 | - | - | - | - | 653 | - |
| Stage 2 | - | - | - | - | 334 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1135 | - | *223 | *938 |
| Stage 1 | - | - | - | - | *972 | - |
| Stage 2 | - | - | - | - | *977 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1135 | - | *222 | *938 |
| Mov Cap-2 Maneuver | - | - | - | - | *222 | - |
| Stage 1 | - | - | - | - | *972 | - |
| Stage 2 | - | - | - | - | *974 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 11.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 546 | - | - | * 1135 | - |
| HCM Lane V/C Ratio | 0.034 | - | - | 0.002 | - |
| HCM Control Delay (s) | 11.8 | - | - | 8.2 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 630 | 21 | 3 | 647 | 1 | 2 |
| Future Volume (vph) | 630 | 21 | 3 | 647 | 1 | 2 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 630 | 21 | 3 | 647 | 1 | 2 |
| Future Vol, veh/h | 630 | 21 | 3 | 647 | 1 | 2 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 643 | 21 | 3 | 660 | 1 | 2 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 664 | 0 | 990 | 332 |
| Stage 1 | - | - | - | - | 654 | - |
| Stage 2 | - | - | - | - | 336 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1135 | - | *222 | *938 |
| Stage 1 | - | - | - | - | *972 | - |
| Stage 2 | - | - | - | - | *977 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1135 | - | *221 | *938 |
| Mov Cap-2 Maneuver | - | - | - | - | *221 | - |
| Stage 1 | - | - | - | - | *972 | - |
| Stage 2 | - | - | - | - | *973 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 13 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 451 | - | - | * 1135 | - |
| HCM Lane V/C Ratio | 0.007 | - | - | 0.003 | - |
| HCM Control Delay (s) | 13 | - | - | 8.2 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 632 | 0 | 6 | 642 | 8 | 14 |
| Future Volume (vph) | 632 | 0 | 6 | 642 | 8 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1647 | 89 | |
| Travel Time (s) | 1.7 | | | 32.1 | 2.4 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.3 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 632 | 0 | 6 | 642 | 8 | 14 |
| Future Vol, veh/h | 632 | 0 | 6 | 642 | 8 | 14 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 645 | 0 | 6 | 655 | 8 | 14 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 645 | 0 | 985 | 323 |
| Stage 1 | - | - | - | - | 645 | - |
| Stage 2 | - | - | - | - | 340 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1135 | - | *224 | *938 |
| Stage 1 | - | - | - | - | *972 | - |
| Stage 2 | - | - | - | - | *977 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1135 | - | *222 | *938 |
| Mov Cap-2 Maneuver | - | - | - | - | *222 | - |
| Stage 1 | - | - | - | - | *972 | - |
| Stage 2 | - | - | - | - | *969 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.1 | 13.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 432 | - | - | * 1135 | - |
| HCM Lane V/C Ratio | 0.052 | - | - | 0.005 | - |
| HCM Control Delay (s) | 13.8 | - | - | 8.2 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 5 | 98 | 4 | 5 | 85 |
| Future Volume (vph) | 4 | 5 | 98 | 4 | 5 | 85 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | | | | 6 | 6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 5 | 98 | 4 | 5 | 85 |
| Future Vol, veh/h | 4 | 5 | 98 | 4 | 5 | 85 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 6 | 6 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 4 | 5 | 100 | 4 | 5 | 87 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 205 | 108 | 0 | 0 | 110 | 0 |
| Stage 1 | 108 | - | - | - | - | - |
| Stage 2 | 97 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 952 | 1010 | - | - | 1101 | - |
| Stage 1 | 1067 | - | - | - | - | - |
| Stage 2 | 1117 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 942 | 1004 | - | - | 1095 | - |
| Mov Cap-2 Maneuver | 942 | - | - | - | - | - |
| Stage 1 | 1061 | - | - | - | - | - |
| Stage 2 | 1112 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.7 | 0 | 0.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 975 | 1095 | - |
| HCM Lane V/C Ratio | - | - | 0.009 | 0.005 | - |
| HCM Control Delay (s) | - | - | 8.7 | 8.3 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 5 | 97 | 5 | 2 | 87 |
| Future Volume (vph) | 4 | 5 | 97 | 5 | 2 | 87 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 69 |
| Travel Time (s) | 2.0 | | 8.1 | | | 1.9 |
| Confl. Peds. (#/hr) | | | | 6 | 6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

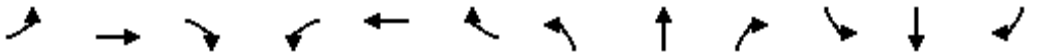
| Intersection | |
|---|---|
| Int Delay, s/veh | 0.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 5 | 97 | 5 | 2 | 87 |
| Future Vol, veh/h | 4 | 5 | 97 | 5 | 2 | 87 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 6 | 6 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 4 | 5 | 99 | 5 | 2 | 89 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 201 | 108 | 0 | 0 | 110 | 0 |
| Stage 1 | 108 | - | - | - | - | - |
| Stage 2 | 93 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 958 | 1010 | - | - | 1101 | - |
| Stage 1 | 1067 | - | - | - | - | - |
| Stage 2 | 1123 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 950 | 1004 | - | - | 1095 | - |
| Mov Cap-2 Maneuver | 950 | - | - | - | - | - |
| Stage 1 | 1061 | - | - | - | - | - |
| Stage 2 | 1121 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.7 | 0 | 0.2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 979 | 1095 | - |
| HCM Lane V/C Ratio | - | - | 0.009 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.7 | 8.3 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 58 | 505 | 28 | 41 | 503 | 97 | 31 | 54 | 60 | 73 | 68 | 55 |
| Future Volume (vph) | 58 | 505 | 28 | 41 | 503 | 97 | 31 | 54 | 60 | 73 | 68 | 55 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 622 | 0 | 0 | 572 | 102 | 33 | 120 | 0 | 77 | 130 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 61.0 | | 31.0 | 31.0 | 31.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 25.0% | 50.8% | | 25.8% | 25.8% | 25.8% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.31 | | | 0.27 | 0.10 | 0.28 | 0.56 | | 0.59 | 0.61 | |
| Control Delay | | 4.6 | | | 3.1 | 3.1 | 50.8 | 57.6 | | 65.8 | 60.5 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 4.6 | | | 3.1 | 3.1 | 50.8 | 57.6 | | 65.8 | 60.5 | |
| Queue Length 50th (ft) | | 60 | | | 38 | 12 | 23 | 88 | | 57 | 96 | |
| Queue Length 95th (ft) | | 103 | | | 49 | 22 | 54 | 144 | | 104 | 155 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2038 | | | 2127 | 1064 | 206 | 374 | | 227 | 369 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.31 | | | 0.27 | 0.10 | 0.16 | 0.32 | | 0.34 | 0.35 | |

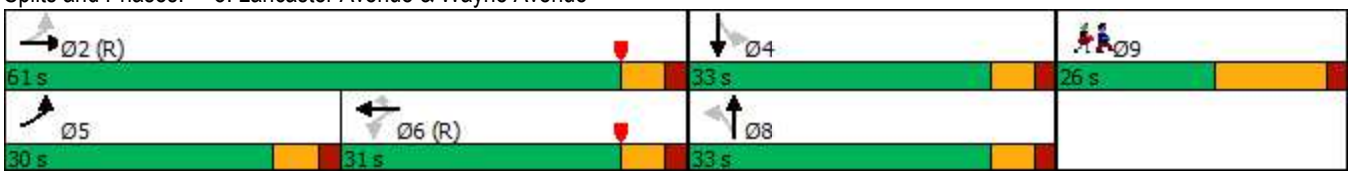
Intersection Summary

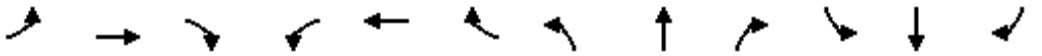
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 58 | 505 | 28 | 41 | 503 | 97 | 31 | 54 | 60 | 73 | 68 | 55 |
| Future Volume (vph) | 58 | 505 | 28 | 41 | 503 | 97 | 31 | 54 | 60 | 73 | 68 | 55 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.98 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.97 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.92 | | 1.00 | 0.93 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3123 | | | 3150 | 1393 | 1522 | 1596 | | 1592 | 1573 | |
| Flt Permitted | | 0.83 | | | 0.86 | 1.00 | 0.55 | 1.00 | | 0.58 | 1.00 | |
| Satd. Flow (perm) | | 2608 | | | 2723 | 1393 | 874 | 1596 | | 969 | 1573 | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 61 | 532 | 29 | 43 | 529 | 102 | 33 | 57 | 63 | 77 | 72 | 58 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 622 | 0 | 0 | 572 | 102 | 33 | 120 | 0 | 77 | 130 | 0 |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 92.8 | | | 92.8 | 92.8 | 15.2 | 15.2 | | 15.2 | 15.2 | |
| Effective Green, g (s) | | 93.8 | | | 93.8 | 92.8 | 16.2 | 16.2 | | 16.2 | 16.2 | |
| Actuated g/C Ratio | | 0.78 | | | 0.78 | 0.77 | 0.13 | 0.13 | | 0.13 | 0.13 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2038 | | | 2128 | 1077 | 117 | 215 | | 130 | 212 | |
| v/s Ratio Prot | | | | | | | | 0.08 | | | c0.08 | |
| v/s Ratio Perm | | c0.24 | | | 0.21 | 0.07 | 0.04 | | | 0.08 | | |
| v/c Ratio | | 0.31 | | | 0.27 | 0.09 | 0.28 | 0.56 | | 0.59 | 0.61 | |
| Uniform Delay, d1 | | 3.8 | | | 3.6 | 3.3 | 46.7 | 48.6 | | 48.8 | 48.9 | |
| Progression Factor | | 1.00 | | | 0.70 | 0.74 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.3 | 0.2 | 1.3 | 3.1 | | 7.1 | 5.2 | |
| Delay (s) | | 3.8 | | | 2.8 | 2.6 | 48.0 | 51.7 | | 55.8 | 54.1 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 3.8 | | | 2.8 | | | 50.9 | | | 54.8 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 61.8% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

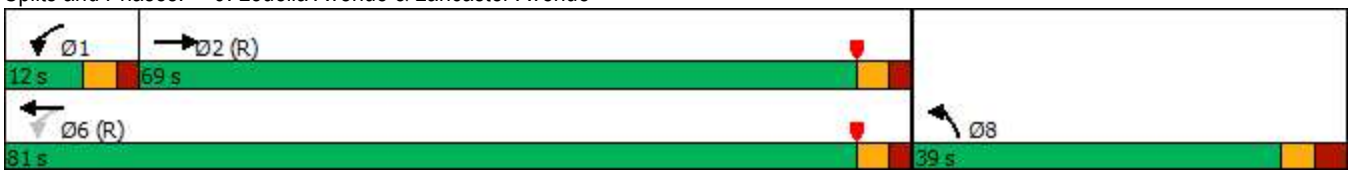
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 595 | 65 | 23 | 630 | 27 | 18 |
| Future Volume (vph) | 595 | 65 | 23 | 630 | 27 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 733 | 0 | 0 | 726 | 50 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.28 | | | 0.30 | 0.35 | |
| Control Delay | 1.9 | | | 1.9 | 58.0 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 1.9 | | | 1.9 | 58.0 | |
| Queue Length 50th (ft) | 28 | | | 19 | 37 | |
| Queue Length 95th (ft) | 46 | | | 30 | 77 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2633 | | | 2409 | 489 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.28 | | | 0.30 | 0.10 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 595 | 65 | 23 | 630 | 27 | 18 |
| Future Volume (vph) | 595 | 65 | 23 | 630 | 27 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.95 | |
| Flt Protected | 1.00 | | | 1.00 | 0.97 | |
| Satd. Flow (prot) | 3126 | | | 3140 | 1722 | |
| Flt Permitted | 1.00 | | | 0.91 | 0.97 | |
| Satd. Flow (perm) | 3126 | | | 2860 | 1722 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 661 | 72 | 26 | 700 | 30 | 20 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 733 | 0 | 0 | 726 | 50 | 0 |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 100.1 | | | 100.1 | 8.9 | |
| Effective Green, g (s) | 101.1 | | | 101.1 | 9.9 | |
| Actuated g/C Ratio | 0.84 | | | 0.84 | 0.08 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2633 | | | 2409 | 142 | |
| v/s Ratio Prot | 0.23 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.25 | | |
| v/c Ratio | 0.28 | | | 0.30 | 0.35 | |
| Uniform Delay, d1 | 1.9 | | | 2.0 | 52.0 | |
| Progression Factor | 0.78 | | | 0.72 | 1.00 | |
| Incremental Delay, d2 | 0.3 | | | 0.1 | 1.5 | |
| Delay (s) | 1.8 | | | 1.5 | 53.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.8 | | | 1.5 | 53.5 | |
| Approach LOS | A | | | A | D | |

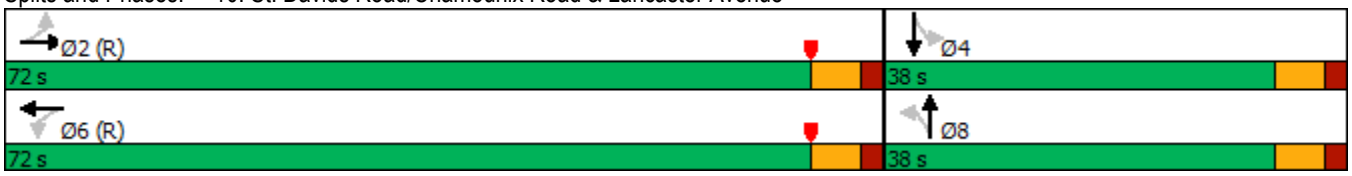
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.4 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.32 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 46.9% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 23 | 628 | 7 | 31 | 660 | 35 | 11 | 6 | 43 | 38 | 13 | 24 |
| Future Volume (vph) | 23 | 628 | 7 | 31 | 660 | 35 | 11 | 6 | 43 | 38 | 13 | 24 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1647 | | | 744 | | | 642 | | | 402 | |
| Travel Time (s) | | 32.1 | | | 14.5 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | | | | | | | | | 1 | 1 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 2% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

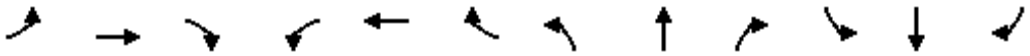
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 23 | 628 | 7 | 31 | 660 | 35 | 11 | 6 | 43 | 38 | 13 | 24 |
| Future Volume (veh/h) | 23 | 628 | 7 | 31 | 660 | 35 | 11 | 6 | 43 | 38 | 13 | 24 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1864 | 1891 | 1881 | 1881 | 1881 |
| Adj Flow Rate, veh/h | 24 | 668 | 6 | 33 | 702 | 35 | 12 | 6 | 46 | 40 | 14 | 20 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 99 | 2635 | 23 | 124 | 2565 | 127 | 54 | 18 | 85 | 109 | 28 | 32 |
| Arrive On Green | 0.83 | 0.84 | 0.83 | 0.83 | 0.84 | 0.83 | 0.06 | 0.07 | 0.06 | 0.06 | 0.07 | 0.06 |
| Sat Flow, veh/h | 77 | 3140 | 28 | 106 | 3056 | 151 | 212 | 261 | 1209 | 837 | 395 | 457 |
| Grp Volume(v), veh/h | 355 | 0 | 343 | 390 | 0 | 380 | 64 | 0 | 0 | 74 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1643 | 0 | 1601 | 1676 | 0 | 1637 | 1682 | 0 | 0 | 1689 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 4.8 | 0.0 | 0.0 | 5.4 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.5 | 0.0 | 4.8 | 4.8 | 0.0 | 5.4 | 4.0 | 0.0 | 0.0 | 4.5 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.02 | 0.08 | | 0.09 | 0.19 | | 0.72 | 0.54 | | 0.27 |
| Lane Grp Cap(c), veh/h | 1399 | 0 | 1344 | 1426 | 0 | 1374 | 141 | 0 | 0 | 153 | 0 | 0 |
| V/C Ratio(X) | 0.25 | 0.00 | 0.26 | 0.27 | 0.00 | 0.28 | 0.45 | 0.00 | 0.00 | 0.48 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1399 | 0 | 1344 | 1426 | 0 | 1374 | 499 | 0 | 0 | 497 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 1.8 | 0.0 | 1.8 | 1.8 | 0.0 | 1.9 | 49.9 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 0.5 | 0.5 | 0.0 | 0.5 | 3.2 | 0.0 | 0.0 | 3.3 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 4.4 | 0.0 | 4.1 | 4.9 | 0.0 | 4.5 | 3.7 | 0.0 | 0.0 | 4.2 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 2.2 | 0.0 | 2.3 | 2.3 | 0.0 | 2.4 | 53.1 | 0.0 | 0.0 | 53.3 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 698 | | | 770 | | | 64 | | | 74 | |
| Approach Delay, s/veh | | 2.2 | | | 2.3 | | | 53.1 | | | 53.3 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 97.3 | | 12.7 | | 97.3 | | 12.7 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 6.8 | | 6.5 | | 7.4 | | 6.0 |
| Green Ext Time (p_c), s | | 2.8 | | 0.3 | | 3.2 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 6.7 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 2 | 2 | 3 | 11 | 9 | 5 | 75 | 2 | 6 | 46 | 12 |
| Future Volume (vph) | 24 | 2 | 2 | 3 | 11 | 9 | 5 | 75 | 2 | 6 | 46 | 12 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 1 | | 2 | 2 | | 1 | 6 | | 3 | 3 | | 6 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 8% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 24 | 2 | 2 | 3 | 11 | 9 | 5 | 75 | 2 | 6 | 46 | 12 |
| Future Vol, veh/h | 24 | 2 | 2 | 3 | 11 | 9 | 5 | 75 | 2 | 6 | 46 | 12 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 33 | 3 | 3 | 4 | 15 | 12 | 7 | 103 | 3 | 8 | 63 | 16 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.7 | 7.3 | 7.7 | 7.5 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 6% | 86% | 13% | 9% |
| Vol Thru, % | 91% | 7% | 48% | 72% |
| Vol Right, % | 2% | 7% | 39% | 19% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 82 | 28 | 23 | 64 |
| LT Vol | 5 | 24 | 3 | 6 |
| Through Vol | 75 | 2 | 11 | 46 |
| RT Vol | 2 | 2 | 9 | 12 |
| Lane Flow Rate | 112 | 38 | 32 | 88 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.127 | 0.047 | 0.036 | 0.098 |
| Departure Headway (Hd) | 4.086 | 4.398 | 4.167 | 4.013 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 871 | 802 | 865 | 884 |
| Service Time | 2.144 | 2.495 | 2.167 | 2.078 |
| HCM Lane V/C Ratio | 0.129 | 0.047 | 0.037 | 0.1 |
| HCM Control Delay | 7.7 | 7.7 | 7.3 | 7.5 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.1 | 0.1 | 0.3 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 37 | 22 | 3 | 10 | 30 |
| Future Volume (vph) | 4 | 37 | 22 | 3 | 10 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | | 5 | | 4 | 4 | |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 4 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 37 | 22 | 3 | 10 | 30 |
| Future Vol, veh/h | 4 | 37 | 22 | 3 | 10 | 30 |
| Conflicting Peds, #/hr | 0 | 5 | 0 | 4 | 4 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 73 | 73 | 73 | 73 | 73 | 73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 5 | 51 | 30 | 4 | 14 | 41 |

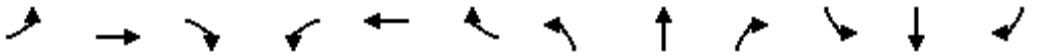
| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 105 | 41 | 0 | 0 | 38 | 0 |
| Stage 1 | 36 | - | - | - | - | - |
| Stage 2 | 69 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1040 | 1101 | - | - | 1165 | - |
| Stage 1 | 1154 | - | - | - | - | - |
| Stage 2 | 1113 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 1023 | 1092 | - | - | 1161 | - |
| Mov Cap-2 Maneuver | 1023 | - | - | - | - | - |
| Stage 1 | 1149 | - | - | - | - | - |
| Stage 2 | 1100 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.5 | 0 | 2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1085 | 1161 | - |
| HCM Lane V/C Ratio | - | - | 0.052 | 0.012 | - |
| HCM Control Delay (s) | - | - | 8.5 | 8.1 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

## 1: Aberdeen Avenue & Lancaster Avenue

Timing Plan: Weekday Midday

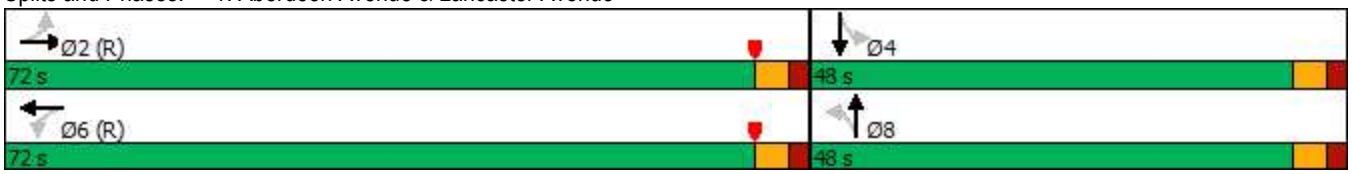


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 713 | 38 | 15 | 828 | 73 | 42 | 66 | 35 | 116 | 63 | 83 |
| Future Volume (vph) | 39 | 713 | 38 | 15 | 828 | 73 | 42 | 66 | 35 | 116 | 63 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 98 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 1.9 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 824 | 0 | 0 | 955 | 0 | 0 | 149 | 0 | 0 | 273 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.60 | | | 0.54 | | | 0.44 | | | 0.84 | |
| Control Delay | | 18.6 | | | 11.8 | | | 40.9 | | | 63.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 18.6 | | | 11.8 | | | 40.9 | | | 63.9 | |
| Queue Length 50th (ft) | | 246 | | | 193 | | | 98 | | | 201 | |
| Queue Length 95th (ft) | | 387 | | | 323 | | | 146 | | | 277 | |
| Internal Link Dist (ft) | | 1072 | | | 18 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1367 | | | 1765 | | | 511 | | | 489 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.60 | | | 0.54 | | | 0.29 | | | 0.56 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

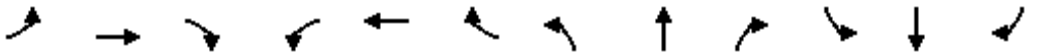
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



## 1: Aberdeen Avenue & Lancaster Avenue

Timing Plan: Weekday Midday



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 713 | 38 | 15 | 828 | 73 | 42 | 66 | 35 | 116 | 63 | 83 |
| Future Volume (vph) | 39 | 713 | 38 | 15 | 828 | 73 | 42 | 66 | 35 | 116 | 63 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.75 | | | *0.86 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.99 | | | 0.98 | |
| Satd. Flow (prot) | | 2359 | | | 2760 | | | 1674 | | | 1795 | |
| Flt Permitted | | 0.84 | | | 0.93 | | | 0.82 | | | 0.73 | |
| Satd. Flow (perm) | | 1987 | | | 2562 | | | 1394 | | | 1337 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 41 | 743 | 40 | 16 | 862 | 76 | 44 | 69 | 36 | 121 | 66 | 86 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 824 | 0 | 0 | 955 | 0 | 0 | 149 | 0 | 0 | 273 | 0 |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 81.6 | | | 81.6 | | | 28.4 | | | 28.4 | |
| Effective Green, g (s) | | 82.6 | | | 82.6 | | | 29.4 | | | 29.4 | |
| Actuated g/C Ratio | | 0.69 | | | 0.69 | | | 0.24 | | | 0.24 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1367 | | | 1763 | | | 341 | | | 327 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.41 | | | 0.37 | | | 0.11 | | | c0.20 | |
| v/c Ratio | | 0.60 | | | 0.54 | | | 0.44 | | | 0.83 | |
| Uniform Delay, d1 | | 10.0 | | | 9.3 | | | 38.3 | | | 43.0 | |
| Progression Factor | | 1.44 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 1.9 | | | 1.2 | | | 0.9 | | | 16.6 | |
| Delay (s) | | 16.2 | | | 10.5 | | | 39.2 | | | 59.6 | |
| Level of Service | | B | | | B | | | D | | | E | |
| Approach Delay (s) | | 16.2 | | | 10.5 | | | 39.2 | | | 59.6 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 20.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.66 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.0% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 851 | 12 | 0 | 917 | 0 | 3 |
| Future Volume (vph) | 851 | 12 | 0 | 917 | 0 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 98 | | | 81 | 96 | |
| Travel Time (s) | 1.9 | | | 1.6 | 2.6 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | 2 | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 3% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 851 | 12 | 0 | 917 | 0 | 3 |
| Future Vol, veh/h | 851 | 12 | 0 | 917 | 0 | 3 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 2 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 3 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 896 | 13 | 0 | 965 | 0 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 911 | 0 | 1390 | 457 |
| Stage 1 | - | - | - | - | 905 | - |
| Stage 2 | - | - | - | - | 485 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 950 | - | *108 | *935 |
| Stage 1 | - | - | - | - | *697 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 948 | - | *108 | *933 |
| Mov Cap-2 Maneuver | - | - | - | - | *108 | - |
| Stage 1 | - | - | - | - | *695 | - |
| Stage 2 | - | - | - | - | *843 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 8.9 |
| HCM LOS | | | A |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 933 | - | - | 948 | - |
| HCM Lane V/C Ratio | 0.003 | - | - | - | - |
| HCM Control Delay (s) | 8.9 | - | - | 0 | - |
| HCM Lane LOS | A | - | - | A | - |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 852 | 2 | 3 | 916 | 1 | 20 |
| Future Volume (vph) | 852 | 2 | 3 | 916 | 1 | 20 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 81 | | | 110 | 94 | |
| Travel Time (s) | 1.6 | | | 2.1 | 2.6 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | 2 | 1 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 852 | 2 | 3 | 916 | 1 | 20 |
| Future Vol, veh/h | 852 | 2 | 3 | 916 | 1 | 20 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 2 | 1 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 3 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 888 | 2 | 3 | 954 | 1 | 21 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 892 | 0 | 1376 | 448 |
| Stage 1 | - | - | - | - | 891 | - |
| Stage 2 | - | - | - | - | 485 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *110 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1027 | - | *109 | *848 |
| Mov Cap-2 Maneuver | - | - | - | - | *109 | - |
| Stage 1 | - | - | - | - | *879 | - |
| Stage 2 | - | - | - | - | *838 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0 | 10.8 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 641 | - | - | * 1027 | - |
| HCM Lane V/C Ratio | 0.034 | - | - | 0.003 | - |
| HCM Control Delay (s) | 10.8 | - | - | 8.5 | 0 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 853 | 18 | 6 | 918 | 1 | 3 |
| Future Volume (vph) | 853 | 18 | 6 | 918 | 1 | 3 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 110 | | | 87 | 76 | |
| Travel Time (s) | 2.1 | | | 1.7 | 2.1 | |
| Confl. Peds. (#/hr) | | 2 | 2 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 853 | 18 | 6 | 918 | 1 | 3 |
| Future Vol, veh/h | 853 | 18 | 6 | 918 | 1 | 3 |
| Conflicting Peds, #/hr | 0 | 2 | 2 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 4 | 0 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 889 | 19 | 6 | 956 | 1 | 3 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 910 | 0 | 1391 | 456 |
| Stage 1 | - | - | - | - | 901 | - |
| Stage 2 | - | - | - | - | 490 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *107 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1027 | - | *106 | *849 |
| Mov Cap-2 Maneuver | - | - | - | - | *106 | - |
| Stage 1 | - | - | - | - | *879 | - |
| Stage 2 | - | - | - | - | *834 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 16.8 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 308 | - | - | * 1027 | - |
| HCM Lane V/C Ratio | 0.014 | - | - | 0.006 | - |
| HCM Control Delay (s) | 16.8 | - | - | 8.5 | 0.1 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 853 | 3 | 15 | 921 | 3 | 35 |
| Future Volume (vph) | 853 | 3 | 15 | 921 | 3 | 35 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 87 | | | 1639 | 89 | |
| Travel Time (s) | 1.7 | | | 31.9 | 2.4 | |
| Confl. Peds. (#/hr) | | 1 | 1 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 33% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.4 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 853 | 3 | 15 | 921 | 3 | 35 |
| Future Vol, veh/h | 853 | 3 | 15 | 921 | 3 | 35 |
| Conflicting Peds, #/hr | 0 | 1 | 1 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 4 | 33 | 0 | 3 | 0 | 0 |
| Mvmt Flow | 889 | 3 | 16 | 959 | 3 | 36 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 893 | 0 | 1404 | 447 |
| Stage 1 | - | - | - | - | 892 | - |
| Stage 2 | - | - | - | - | 512 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *1029 | - | *105 | *850 |
| Stage 1 | - | - | - | - | *881 | - |
| Stage 2 | - | - | - | - | *845 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | *1028 | - | *101 | *849 |
| Mov Cap-2 Maneuver | - | - | - | - | *101 | - |
| Stage 1 | - | - | - | - | *880 | - |
| Stage 2 | - | - | - | - | *817 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.2 | 12.3 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 536 | - | - | * 1028 | - |
| HCM Lane V/C Ratio | 0.074 | - | - | 0.015 | - |
| HCM Control Delay (s) | 12.3 | - | - | 8.6 | 0.1 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.2 | - | - | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 4 | 138 | 9 | 2 | 114 |
| Future Volume (vph) | 2 | 4 | 138 | 9 | 2 | 114 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 102 | | 69 | | | 130 |
| Travel Time (s) | 2.8 | | 1.9 | | | 3.5 |
| Confl. Peds. (#/hr) | | | | 1 | 1 | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 0% | 0% | 4% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 4 | 138 | 9 | 2 | 114 |
| Future Vol, veh/h | 2 | 4 | 138 | 9 | 2 | 114 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 0 | 0 | 2 | 0 | 0 | 4 |
| Mvmt Flow | 2 | 4 | 145 | 9 | 2 | 120 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 275 | 151 | 0 | 0 | 155 | 0 |
| Stage 1 | 151 | - | - | - | - | - |
| Stage 2 | 124 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *880 | 955 | - | - | 1063 | - |
| Stage 1 | *1018 | - | - | - | - | - |
| Stage 2 | *1100 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *877 | 954 | - | - | 1062 | - |
| Mov Cap-2 Maneuver | *877 | - | - | - | - | - |
| Stage 1 | *1017 | - | - | - | - | - |
| Stage 2 | *1097 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 927 | 1062 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 2 | 4 | 134 | 9 | 2 | 114 |
| Future Volume (vph) | 2 | 4 | 134 | 9 | 2 | 114 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 69 |
| Travel Time (s) | 2.0 | | 8.5 | | | 1.9 |
| Confl. Peds. (#/hr) | | | | 1 | 1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 0% | 0% | 5% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 0.2 |

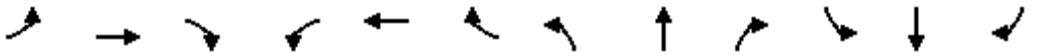
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 2 | 4 | 134 | 9 | 2 | 114 |
| Future Vol, veh/h | 2 | 4 | 134 | 9 | 2 | 114 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 0 | 0 | 2 | 0 | 0 | 5 |
| Mvmt Flow | 2 | 4 | 140 | 9 | 2 | 119 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 269 | 146 | 0 | 0 | 150 | 0 |
| Stage 1 | 146 | - | - | - | - | - |
| Stage 2 | 123 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | *887 | 961 | - | - | 1067 | - |
| Stage 1 | *1024 | - | - | - | - | - |
| Stage 2 | *1100 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | *884 | 960 | - | - | 1066 | - |
| Mov Cap-2 Maneuver | *884 | - | - | - | - | - |
| Stage 1 | *1023 | - | - | - | - | - |
| Stage 2 | *1097 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 0.1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 933 | 1066 | - |
| HCM Lane V/C Ratio | - | - | 0.007 | 0.002 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 69 | 635 | 83 | 29 | 653 | 88 | 44 | 115 | 65 | 103 | 121 | 76 |
| Future Volume (vph) | 69 | 635 | 83 | 29 | 653 | 88 | 44 | 115 | 65 | 103 | 121 | 76 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 855 | 0 | 0 | 742 | 96 | 48 | 196 | 0 | 112 | 215 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 12.0 | 66.0 | | 54.0 | 54.0 | 54.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 10.0% | 55.0% | | 45.0% | 45.0% | 45.0% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.49 | | | 0.37 | 0.10 | 0.40 | 0.65 | | 0.83 | 0.75 | |
| Control Delay | | 8.8 | | | 4.2 | 4.1 | 51.1 | 54.8 | | 88.2 | 61.7 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 8.8 | | | 4.2 | 4.1 | 51.1 | 54.8 | | 88.2 | 61.7 | |
| Queue Length 50th (ft) | | 133 | | | 53 | 12 | 33 | 141 | | 84 | 158 | |
| Queue Length 95th (ft) | | 203 | | | 60 | 22 | 70 | 212 | | #165 | 235 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1730 | | | 1990 | 916 | 148 | 371 | | 167 | 354 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.49 | | | 0.37 | 0.10 | 0.32 | 0.53 | | 0.67 | 0.61 | |

Intersection Summary

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 21.0 |
| Total Split (%) | 18% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

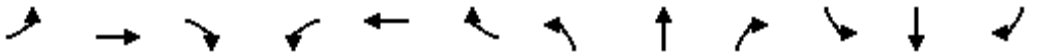
## 8: Lancaster Avenue & Wayne Avenue

Timing Plan: Weekday Midday

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Coordinated | |

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 69 | 635 | 83 | 29 | 653 | 88 | 44 | 115 | 65 | 103 | 121 | 76 |
| Future Volume (vph) | 69 | 635 | 83 | 29 | 653 | 88 | 44 | 115 | 65 | 103 | 121 | 76 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.99 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.98 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 2975 | | | 3096 | 1290 | 1520 | 1586 | | 1534 | 1517 | |
| Flt Permitted | | 0.80 | | | 0.88 | 1.00 | 0.40 | 1.00 | | 0.44 | 1.00 | |
| Satd. Flow (perm) | | 2382 | | | 2737 | 1290 | 637 | 1586 | | 714 | 1517 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 75 | 690 | 90 | 32 | 710 | 96 | 48 | 125 | 71 | 112 | 132 | 83 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 855 | 0 | 0 | 742 | 96 | 48 | 196 | 0 | 112 | 215 | 0 |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 86.3 | | | 86.3 | 86.3 | 21.7 | 21.7 | | 21.7 | 21.7 | |
| Effective Green, g (s) | | 87.3 | | | 87.3 | 86.3 | 22.7 | 22.7 | | 22.7 | 22.7 | |
| Actuated g/C Ratio | | 0.73 | | | 0.73 | 0.72 | 0.19 | 0.19 | | 0.19 | 0.19 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1732 | | | 1991 | 927 | 120 | 300 | | 135 | 286 | |
| v/s Ratio Prot | | | | | | | | 0.12 | | | 0.14 | |
| v/s Ratio Perm | | c0.36 | | | 0.27 | 0.07 | 0.08 | | | c0.16 | | |
| v/c Ratio | | 0.49 | | | 0.37 | 0.10 | 0.40 | 0.65 | | 0.83 | 0.75 | |
| Uniform Delay, d1 | | 7.0 | | | 6.1 | 5.1 | 42.7 | 45.0 | | 46.8 | 46.0 | |
| Progression Factor | | 1.00 | | | 0.55 | 0.64 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.2 | | | 0.5 | 0.2 | 2.2 | 5.0 | | 32.5 | 10.6 | |
| Delay (s) | | 7.2 | | | 3.9 | 3.5 | 44.9 | 50.0 | | 79.3 | 56.6 | |
| Level of Service | | A | | | A | A | D | D | | E | E | |
| Approach Delay (s) | | 7.2 | | | 3.8 | | | 49.0 | | | 64.4 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 77.6% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

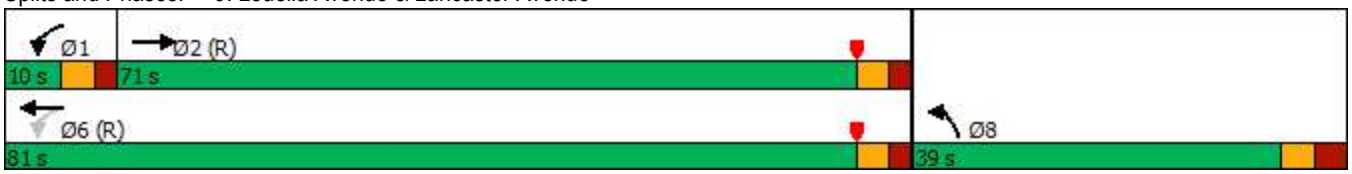
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 769 | 64 | 74 | 847 | 20 | 42 |
| Future Volume (vph) | 769 | 64 | 74 | 847 | 20 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 886 | 0 | 0 | 980 | 66 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 71.0 | | 10.0 | 81.0 | 39.0 | |
| Total Split (%) | 59.2% | | 8.3% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.35 | | | 0.50 | 0.43 | |
| Control Delay | 2.0 | | | 2.1 | 59.0 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.0 | | | 2.1 | 59.0 | |
| Queue Length 50th (ft) | 32 | | | 39 | 49 | |
| Queue Length 95th (ft) | 61 | | | 43 | 93 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2538 | | | 1962 | 474 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.35 | | | 0.50 | 0.14 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 769 | 64 | 74 | 847 | 20 | 42 |
| Future Volume (vph) | 769 | 64 | 74 | 847 | 20 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.96 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3052 | | | 3015 | 1638 | |
| Flt Permitted | 1.00 | | | 0.78 | 0.98 | |
| Satd. Flow (perm) | 3052 | | | 2357 | 1638 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 818 | 68 | 79 | 901 | 21 | 45 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 886 | 0 | 0 | 980 | 66 | 0 |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 98.9 | | | 98.9 | 10.1 | |
| Effective Green, g (s) | 99.9 | | | 99.9 | 11.1 | |
| Actuated g/C Ratio | 0.83 | | | 0.83 | 0.09 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2540 | | | 1962 | 151 | |
| v/s Ratio Prot | 0.29 | | | | c0.04 | |
| v/s Ratio Perm | | | | c0.42 | | |
| v/c Ratio | 0.35 | | | 0.50 | 0.44 | |
| Uniform Delay, d1 | 2.4 | | | 2.9 | 51.5 | |
| Progression Factor | 0.65 | | | 0.40 | 1.00 | |
| Incremental Delay, d2 | 0.3 | | | 0.2 | 2.0 | |
| Delay (s) | 1.9 | | | 1.3 | 53.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.9 | | | 1.3 | 53.5 | |
| Approach LOS | A | | | A | D | |

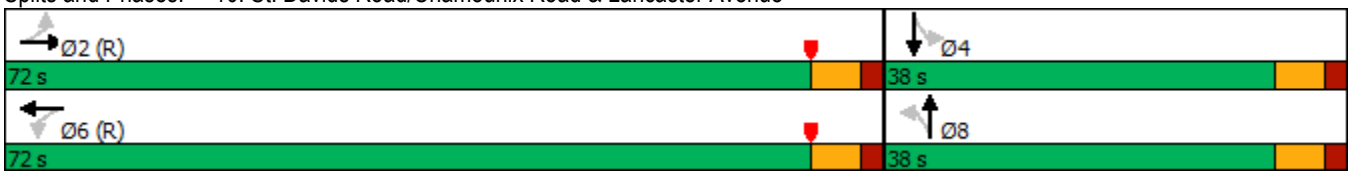
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.4 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 67.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 32 | 894 | 18 | 32 | 1105 | 79 | 10 | 9 | 42 | 59 | 19 | 41 |
| Future Volume (vph) | 32 | 894 | 18 | 32 | 1105 | 79 | 10 | 9 | 42 | 59 | 19 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1639 | | | 1078 | | | 276 | | | 428 | |
| Travel Time (s) | | 31.9 | | | 21.0 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 3 | | 1 | 1 | | 3 | 1 | | | | | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 4% | 11% | 10% | 3% | 0% | 0% | 0% | 2% | 0% | 0% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 32 | 894 | 18 | 32 | 1105 | 79 | 10 | 9 | 42 | 59 | 19 | 41 |
| Future Volume (veh/h) | 32 | 894 | 18 | 32 | 1105 | 79 | 10 | 9 | 42 | 59 | 19 | 41 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1714 | 1782 | 1845 | 1791 | 1845 | 1891 | 1865 | 1891 | 1881 | 1849 | 1881 |
| Adj Flow Rate, veh/h | 33 | 912 | 16 | 33 | 1128 | 80 | 10 | 9 | 41 | 60 | 19 | 40 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 92 | 2374 | 41 | 76 | 2434 | 171 | 54 | 39 | 119 | 125 | 35 | 56 |
| Arrive On Green | 0.80 | 0.81 | 0.80 | 0.80 | 0.81 | 0.80 | 0.09 | 0.10 | 0.09 | 0.09 | 0.10 | 0.09 |
| Sat Flow, veh/h | 70 | 2943 | 51 | 52 | 3018 | 212 | 152 | 385 | 1158 | 736 | 337 | 543 |
| Grp Volume(v), veh/h | 475 | 0 | 486 | 640 | 0 | 601 | 60 | 0 | 0 | 119 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1514 | 0 | 1550 | 1690 | 0 | 1592 | 1695 | 0 | 0 | 1616 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 9.7 | 0.0 | 0.0 | 13.0 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.2 | 0.0 | 9.7 | 11.9 | 0.0 | 13.0 | 3.7 | 0.0 | 0.0 | 7.8 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.05 | | 0.13 | 0.17 | | 0.68 | 0.50 | | 0.34 |
| Lane Grp Cap(c), veh/h | 1243 | 0 | 1250 | 1382 | 0 | 1284 | 197 | 0 | 0 | 200 | 0 | 0 |
| V/C Ratio(X) | 0.38 | 0.00 | 0.39 | 0.46 | 0.00 | 0.47 | 0.30 | 0.00 | 0.00 | 0.59 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1243 | 0 | 1250 | 1382 | 0 | 1284 | 510 | 0 | 0 | 500 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.9 | 0.0 | 3.0 | 3.2 | 0.0 | 3.3 | 46.4 | 0.0 | 0.0 | 48.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.9 | 0.0 | 0.9 | 1.1 | 0.0 | 1.2 | 1.2 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.7 | 0.0 | 7.8 | 10.7 | 0.0 | 10.0 | 3.2 | 0.0 | 0.0 | 6.8 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.8 | 0.0 | 3.9 | 4.3 | 0.0 | 4.6 | 47.6 | 0.0 | 0.0 | 52.0 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 961 | | | 1241 | | | 60 | | | 119 | |
| Approach Delay, s/veh | | 3.8 | | | 4.5 | | | 47.6 | | | 52.0 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 93.7 | | 16.3 | | 93.7 | | 16.3 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 11.7 | | 9.8 | | 15.0 | | 5.7 |
| Green Ext Time (p_c), s | | 4.5 | | 0.6 | | 6.3 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.7 |
| HCM 2010 LOS | A |

## 11: Aberdeen Avenue & Midland Avenue

Timing Plan: Weekday Midday

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 10 | 5 | 2 | 37 | 23 | 2 | 113 | 4 | 3 | 94 | 41 |
| Future Volume (vph) | 14 | 10 | 5 | 2 | 37 | 23 | 2 | 113 | 4 | 3 | 94 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 2 | | 2 | 2 | | 2 | | | 2 | 2 | | |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 4% | 100% | 2% | 0% | 0% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.8 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 14 | 10 | 5 | 2 | 37 | 23 | 2 | 113 | 4 | 3 | 94 | 41 |
| Future Vol, veh/h | 14 | 10 | 5 | 2 | 37 | 23 | 2 | 113 | 4 | 3 | 94 | 41 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 4 | 100 | 2 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 15 | 11 | 5 | 2 | 39 | 24 | 2 | 120 | 4 | 3 | 94 | 41 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.9 | 7.8 | 10.5 | 7.9 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 48% | 3% | 2% |
| Vol Thru, % | 95% | 34% | 60% | 68% |
| Vol Right, % | 3% | 17% | 37% | 30% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 119 | 29 | 62 | 138 |
| LT Vol | 2 | 14 | 2 | 3 |
| Through Vol | 113 | 10 | 37 | 94 |
| RT Vol | 4 | 5 | 23 | 41 |
| Lane Flow Rate | 127 | 31 | 66 | 138 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.21 | 0.04 | 0.081 | 0.158 |
| Departure Headway (Hd) | 5.964 | 4.652 | 4.403 | 4.129 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 605 | 771 | 815 | 871 |
| Service Time | 3.964 | 2.674 | 2.422 | 2.147 |
| HCM Lane V/C Ratio | 0.21 | 0.04 | 0.081 | 0.158 |
| HCM Control Delay | 10.5 | 7.9 | 7.8 | 7.9 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 0.8 | 0.1 | 0.3 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 3 | 44 | 35 | 11 | 12 | 31 |
| Future Volume (vph) | 3 | 44 | 35 | 11 | 12 | 31 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | 1 | 4 | | 2 | 2 | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Heavy Vehicles (%) | 0% | 0% | 3% | 0% | 0% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

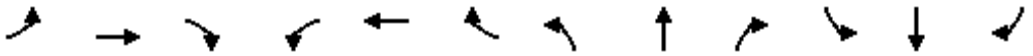
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 44 | 35 | 11 | 12 | 31 |
| Future Vol, veh/h | 3 | 44 | 35 | 11 | 12 | 31 |
| Conflicting Peds, #/hr | 1 | 4 | 0 | 2 | 2 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 3 | 0 | 0 | 3 |
| Mvmt Flow | 4 | 57 | 45 | 14 | 16 | 40 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 127 | 58 | 0 | 0 | 61 | 0 |
| Stage 1 | 54 | - | - | - | - | - |
| Stage 2 | 73 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1009 | 1077 | - | - | 1144 | - |
| Stage 1 | 1132 | - | - | - | - | - |
| Stage 2 | 1109 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 992 | 1071 | - | - | 1142 | - |
| Mov Cap-2 Maneuver | 992 | - | - | - | - | - |
| Stage 1 | 1130 | - | - | - | - | - |
| Stage 2 | 1092 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.6 | 0 | 2.3 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1066 | 1142 | - |
| HCM Lane V/C Ratio | - | - | 0.057 | 0.014 | - |
| HCM Control Delay (s) | - | - | 8.6 | 8.2 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

# *2025 PROJECTED CONDITIONS*

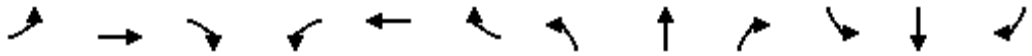


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 804 | 43 | 28 | 931 | 44 | 143 | 113 | 43 | 144 | 85 | 70 |
| Future Volume (vph) | 36 | 804 | 43 | 28 | 931 | 44 | 143 | 113 | 43 | 144 | 85 | 70 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 960 | 0 | 0 | 1090 | 0 | 0 | 325 | 0 | 0 | 325 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 62.0 | 62.0 | | 62.0 | 62.0 | | 43.0 | 43.0 | | 43.0 | 43.0 | |
| Total Split (%) | 59.0% | 59.0% | | 59.0% | 59.0% | | 41.0% | 41.0% | | 41.0% | 41.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.77 | | | 0.72 | | | 0.89 | | | 0.78 | |
| Control Delay | | 29.0 | | | 19.6 | | | 58.8 | | | 45.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 29.0 | | | 19.6 | | | 58.8 | | | 45.0 | |
| Queue Length 50th (ft) | | 342 | | | 289 | | | 196 | | | 187 | |
| Queue Length 95th (ft) | | 470 | | | 396 | | | #341 | | | 291 | |
| Internal Link Dist (ft) | | 1072 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1243 | | | 1519 | | | 411 | | | 466 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.77 | | | 0.72 | | | 0.79 | | | 0.70 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 6 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 804 | 43 | 28 | 931 | 44 | 143 | 113 | 43 | 144 | 85 | 70 |
| Future Volume (vph) | 36 | 804 | 43 | 28 | 931 | 44 | 143 | 113 | 43 | 144 | 85 | 70 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.77 | | | *0.90 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.98 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2455 | | | 2889 | | | 1588 | | | 1812 | |
| Flt Permitted | | 0.85 | | | 0.89 | | | 0.68 | | | 0.68 | |
| Satd. Flow (perm) | | 2099 | | | 2566 | | | 1110 | | | 1257 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 39 | 874 | 47 | 30 | 1012 | 48 | 155 | 123 | 47 | 157 | 92 | 76 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 960 | 0 | 0 | 1090 | 0 | 0 | 325 | 0 | 0 | 325 | 0 |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 61.2 | | | 61.2 | | | 33.8 | | | 33.8 | |
| Effective Green, g (s) | | 62.2 | | | 62.2 | | | 34.8 | | | 34.8 | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | | | 0.33 | | | 0.33 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1243 | | | 1520 | | | 367 | | | 416 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.46 | | | 0.42 | | | c0.29 | | | 0.26 | |
| v/c Ratio | | 0.77 | | | 0.72 | | | 0.89 | | | 0.78 | |
| Uniform Delay, d1 | | 16.1 | | | 15.2 | | | 33.2 | | | 31.7 | |
| Progression Factor | | 1.37 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 4.5 | | | 2.9 | | | 21.6 | | | 9.2 | |
| Delay (s) | | 26.5 | | | 18.1 | | | 54.8 | | | 40.9 | |
| Level of Service | | C | | | B | | | D | | | D | |
| Approach Delay (s) | | 26.5 | | | 18.1 | | | 54.8 | | | 40.9 | |
| Approach LOS | | C | | | B | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 28.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.81 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 913 | 77 | 72 | 983 | 20 | 75 |
| Future Volume (vph) | 913 | 77 | 72 | 983 | 20 | 75 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | -2% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 496 | 89 | |
| Travel Time (s) | 7.3 | | | 9.7 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 4 | 4 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 4% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.7 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 913 | 77 | 72 | 983 | 20 | 75 |
| Future Vol, veh/h | 913 | 77 | 72 | 983 | 20 | 75 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 4 | 4 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | -2 | - |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 4 | 2 | 2 | 4 | 2 | 2 |
| Mvmt Flow | 992 | 84 | 78 | 1068 | 22 | 82 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1076 | 0 | 1728 | 542 |
| Stage 1 | - | - | - | - | 1034 | - |
| Stage 2 | - | - | - | - | 694 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 915 | - | 122 | *828 |
| Stage 1 | - | - | - | - | 788 | - |
| Stage 2 | - | - | - | - | 457 | - |
| Platoon blocked, % | - | - | 1 | - | 1 | 1 |
| Mov Cap-1 Maneuver | - | - | 915 | - | 96 | *826 |
| Mov Cap-2 Maneuver | - | - | - | - | 96 | - |
| Stage 1 | - | - | - | - | 788 | - |
| Stage 2 | - | - | - | - | 360 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.5 | 21.7 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 318 | - | - | 915 | - |
| HCM Lane V/C Ratio | 0.325 | - | - | 0.086 | - |
| HCM Control Delay (s) | 21.7 | - | - | 9.3 | 0.9 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.4 | - | - | 0.3 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 93 | 206 | 15 | 33 | 123 |
| Future Volume (vph) | 9 | 93 | 206 | 15 | 33 | 123 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | -2% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 199 |
| Travel Time (s) | 2.0 | | 8.5 | | | 5.4 |
| Confl. Peds. (#/hr) | 4 | 4 | | | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 2% | 2% | 8% | 2% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

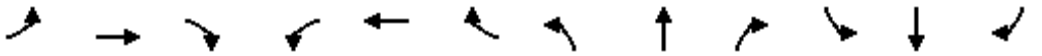
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.7 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 93 | 206 | 15 | 33 | 123 |
| Future Vol, veh/h | 9 | 93 | 206 | 15 | 33 | 123 |
| Conflicting Peds, #/hr | 4 | 4 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | -2 | - | 2 | - | - | -2 |
| Peak Hour Factor | 92 | 92 | 92 | 92 | 92 | 92 |
| Heavy Vehicles, % | 2 | 2 | 8 | 2 | 2 | 2 |
| Mvmt Flow | 10 | 101 | 224 | 16 | 36 | 134 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 442 | 236 | 0 | 0 | 240 | 0 |
| Stage 1 | 232 | - | - | - | - | - |
| Stage 2 | 210 | - | - | - | - | - |
| Critical Hdwy | 6.02 | 6.02 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.02 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.02 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 714 | 865 | - | - | 994 | - |
| Stage 1 | 955 | - | - | - | - | - |
| Stage 2 | 1009 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 684 | 862 | - | - | 994 | - |
| Mov Cap-2 Maneuver | 684 | - | - | - | - | - |
| Stage 1 | 955 | - | - | - | - | - |
| Stage 2 | 966 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.9 | 0 | 1.9 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 843 | 994 | - |
| HCM Lane V/C Ratio | - | - | 0.132 | 0.036 | - |
| HCM Control Delay (s) | - | - | 9.9 | 8.8 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.5 | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 673 | 26 | 37 | 819 | 118 | 41 | 101 | 44 | 96 | 93 | 36 |
| Future Volume (vph) | 30 | 673 | 26 | 37 | 819 | 118 | 41 | 101 | 44 | 96 | 93 | 36 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 802 | 0 | 0 | 941 | 130 | 45 | 159 | 0 | 105 | 142 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 13.0 | 48.0 | | 35.0 | 35.0 | 35.0 | 31.0 | 31.0 | | 31.0 | 31.0 | |
| Total Split (%) | 12.4% | 45.7% | | 33.3% | 33.3% | 33.3% | 29.5% | 29.5% | | 29.5% | 29.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.40 | | | 0.47 | 0.14 | 0.30 | 0.57 | | 0.73 | 0.54 | |
| Control Delay | | 6.9 | | | 6.1 | 6.0 | 40.8 | 46.6 | | 67.8 | 46.0 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 6.9 | | | 6.1 | 6.0 | 40.8 | 46.6 | | 67.8 | 46.0 | |
| Queue Length 50th (ft) | | 93 | | | 67 | 17 | 27 | 99 | | 67 | 88 | |
| Queue Length 95th (ft) | | 165 | | | 145 | m48 | 57 | 152 | | 120 | 138 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1981 | | | 1991 | 950 | 211 | 398 | | 204 | 372 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.40 | | | 0.47 | 0.14 | 0.21 | 0.40 | | 0.51 | 0.38 | |

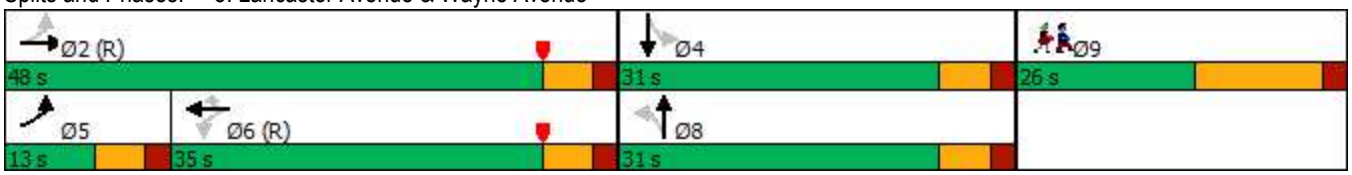
Intersection Summary

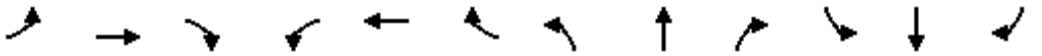
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 25% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 33 (31%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 30 | 673 | 26 | 37 | 819 | 118 | 41 | 101 | 44 | 96 | 93 | 36 |
| Future Volume (vph) | 30 | 673 | 26 | 37 | 819 | 118 | 41 | 101 | 44 | 96 | 93 | 36 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.98 | 1.00 | | 0.97 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.95 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3076 | | | 3088 | 1335 | 1397 | 1601 | | 1456 | 1500 | |
| Flt Permitted | | 0.88 | | | 0.88 | 1.00 | 0.58 | 1.00 | | 0.53 | 1.00 | |
| Satd. Flow (perm) | | 2713 | | | 2727 | 1335 | 850 | 1601 | | 819 | 1500 | |
| Peak-hour factor, PHF | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Adj. Flow (vph) | 33 | 740 | 29 | 41 | 900 | 130 | 45 | 111 | 48 | 105 | 102 | 40 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 802 | 0 | 0 | 941 | 130 | 45 | 159 | 0 | 105 | 142 | 0 |
| Confl. Peds. (#/hr) | 11 | | 7 | 7 | | 11 | 13 | | 24 | 24 | | 13 |
| Heavy Vehicles (%) | 3% | 3% | 0% | 6% | 3% | 4% | 10% | 2% | 7% | 9% | 10% | 6% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 75.7 | | | 75.7 | 75.7 | 17.3 | 17.3 | | 17.3 | 17.3 | |
| Effective Green, g (s) | | 76.7 | | | 76.7 | 75.7 | 18.3 | 18.3 | | 18.3 | 18.3 | |
| Actuated g/C Ratio | | 0.73 | | | 0.73 | 0.72 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1981 | | | 1992 | 962 | 148 | 279 | | 142 | 261 | |
| v/s Ratio Prot | | | | | | | | 0.10 | | | 0.09 | |
| v/s Ratio Perm | | 0.30 | | | c0.35 | 0.10 | 0.05 | | | c0.13 | | |
| v/c Ratio | | 0.40 | | | 0.47 | 0.14 | 0.30 | 0.57 | | 0.74 | 0.54 | |
| Uniform Delay, d1 | | 5.4 | | | 5.8 | 4.5 | 37.8 | 39.7 | | 41.1 | 39.5 | |
| Progression Factor | | 1.00 | | | 0.81 | 1.02 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.6 | 0.2 | 1.2 | 2.7 | | 18.1 | 2.3 | |
| Delay (s) | | 5.6 | | | 5.4 | 4.8 | 39.0 | 42.4 | | 59.2 | 41.9 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 5.6 | | | 5.3 | | | 41.6 | | | 49.2 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 77.9% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

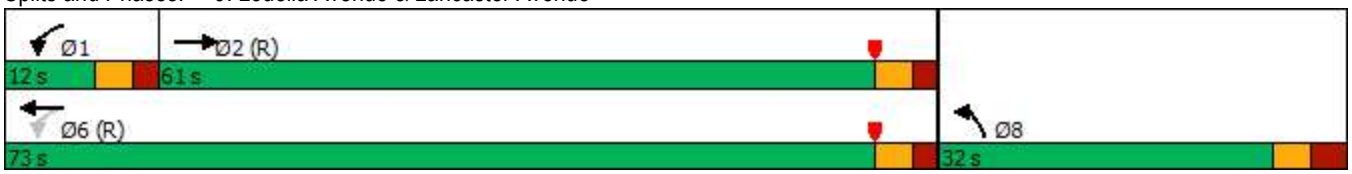
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 800 | 51 | 98 | 986 | 32 | 45 |
| Future Volume (vph) | 800 | 51 | 98 | 986 | 32 | 45 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 946 | 0 | 0 | 1205 | 86 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 61.0 | | 12.0 | 73.0 | 32.0 | |
| Total Split (%) | 58.1% | | 11.4% | 69.5% | 30.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.39 | | | 0.66 | 0.45 | |
| Control Delay | 2.7 | | | 3.2 | 50.5 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.7 | | | 3.2 | 50.5 | |
| Queue Length 50th (ft) | 68 | | | 58 | 55 | |
| Queue Length 95th (ft) | 71 | | | 68 | 101 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2444 | | | 1830 | 441 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.39 | | | 0.66 | 0.20 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 105 | |
| Actuated Cycle Length: 105 | |

Offset: 48 (46%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 800 | 51 | 98 | 986 | 32 | 45 |
| Future Volume (vph) | 800 | 51 | 98 | 986 | 32 | 45 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3042 | | | 3067 | 1714 | |
| Flt Permitted | 1.00 | | | 0.74 | 0.98 | |
| Satd. Flow (perm) | 3042 | | | 2276 | 1714 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 889 | 57 | 109 | 1096 | 36 | 50 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 946 | 0 | 0 | 1205 | 86 | 0 |
| Confl. Peds. (#/hr) | | 6 | 6 | | 4 | 2 |
| Heavy Vehicles (%) | 4% | 10% | 4% | 3% | 0% | 2% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 83.4 | | | 83.4 | 10.6 | |
| Effective Green, g (s) | 84.4 | | | 84.4 | 11.6 | |
| Actuated g/C Ratio | 0.80 | | | 0.80 | 0.11 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2445 | | | 1829 | 189 | |
| v/s Ratio Prot | 0.31 | | | | c0.05 | |
| v/s Ratio Perm | | | | c0.53 | | |
| v/c Ratio | 0.39 | | | 0.66 | 0.46 | |
| Uniform Delay, d1 | 2.9 | | | 4.3 | 43.7 | |
| Progression Factor | 0.69 | | | 0.39 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.6 | 1.7 | |
| Delay (s) | 2.5 | | | 2.3 | 45.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.5 | | | 2.3 | 45.5 | |
| Approach LOS | A | | | A | D | |

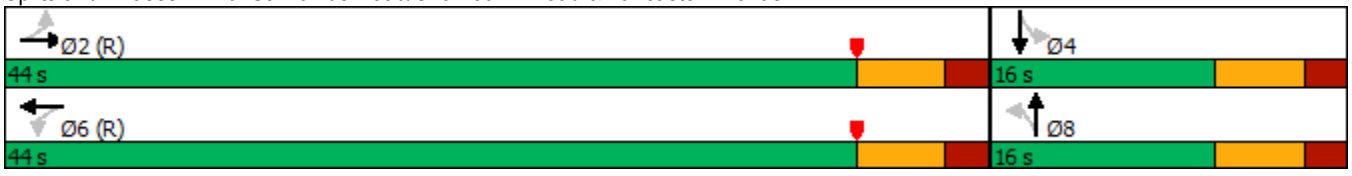
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.0 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 72.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 14 | 883 | 9 | 13 | 1158 | 293 | 21 | 69 | 72 | 94 | 39 | 41 |
| Future Volume (vph) | 14 | 883 | 9 | 13 | 1158 | 293 | 21 | 69 | 72 | 94 | 39 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 420 | | | 540 | | | 276 | | | 428 | |
| Travel Time (s) | | 8.2 | | | 10.5 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 6 | | | | | 6 | 4 | | 5 | 5 | | 4 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 0% | 4% | 1% | 0% | 0% | 4% | 1% | 5% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 44.0 | 44.0 | | 44.0 | 44.0 | | 16.0 | 16.0 | | 16.0 | 16.0 | |
| Total Split (%) | 73.3% | 73.3% | | 73.3% | 73.3% | | 26.7% | 26.7% | | 26.7% | 26.7% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 20 (33%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Coordinated | |

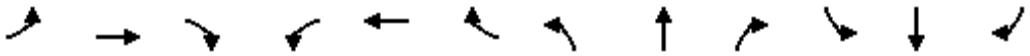
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 14 | 883 | 9 | 13 | 1158 | 293 | 21 | 69 | 72 | 94 | 39 | 41 |
| Future Volume (veh/h) | 14 | 883 | 9 | 13 | 1158 | 293 | 21 | 69 | 72 | 94 | 39 | 41 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1731 | 1782 | 1845 | 1785 | 1845 | 1891 | 1858 | 1891 | 1881 | 1838 | 1881 |
| Adj Flow Rate, veh/h | 15 | 970 | 9 | 14 | 1273 | 301 | 23 | 76 | 76 | 103 | 43 | 45 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 |
| Percent Heavy Veh, % | 3 | 3 | 3 | 4 | 4 | 4 | 0 | 0 | 0 | 5 | 5 | 5 |
| Cap, veh/h | 72 | 2118 | 19 | 67 | 1763 | 407 | 91 | 144 | 129 | 219 | 71 | 61 |
| Arrive On Green | 0.65 | 0.66 | 0.65 | 0.65 | 0.66 | 0.65 | 0.15 | 0.17 | 0.15 | 0.15 | 0.17 | 0.15 |
| Sat Flow, veh/h | 15 | 3192 | 29 | 9 | 2656 | 614 | 138 | 851 | 759 | 747 | 420 | 360 |
| Grp Volume(v), veh/h | 512 | 0 | 482 | 846 | 0 | 742 | 175 | 0 | 0 | 191 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1666 | 0 | 1570 | 1766 | 0 | 1513 | 1748 | 0 | 0 | 1527 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.9 | 0.0 | 0.0 | 19.6 | 0.0 | 0.0 | 0.0 | 1.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.6 | 0.0 | 8.9 | 18.6 | 0.0 | 19.6 | 5.6 | 0.0 | 0.0 | 7.1 | 0.0 | 0.0 |
| Prop In Lane | 0.03 | | 0.02 | 0.02 | | 0.41 | 0.13 | | 0.43 | 0.54 | | 0.24 |
| Lane Grp Cap(c), veh/h | 1140 | 0 | 1042 | 1204 | 0 | 1004 | 335 | 0 | 0 | 326 | 0 | 0 |
| V/C Ratio(X) | 0.45 | 0.00 | 0.46 | 0.70 | 0.00 | 0.74 | 0.52 | 0.00 | 0.00 | 0.59 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1140 | 0 | 1042 | 1204 | 0 | 1004 | 358 | 0 | 0 | 345 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 4.8 | 0.0 | 4.9 | 6.5 | 0.0 | 6.8 | 23.3 | 0.0 | 0.0 | 23.9 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.3 | 0.0 | 1.5 | 3.5 | 0.0 | 4.9 | 1.8 | 0.0 | 0.0 | 2.9 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 8.1 | 0.0 | 7.5 | 15.7 | 0.0 | 14.2 | 5.3 | 0.0 | 0.0 | 6.1 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 6.1 | 0.0 | 6.4 | 10.0 | 0.0 | 11.7 | 25.1 | 0.0 | 0.0 | 26.9 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | B | C | | | C | | |
| Approach Vol, veh/h | | 994 | | | 1588 | | | 175 | | | 191 | |
| Approach Delay, s/veh | | 6.2 | | | 10.8 | | | 25.1 | | | 26.9 | |
| Approach LOS | | A | | | B | | | C | | | C | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 44.8 | | 15.2 | | 44.8 | | 15.2 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 38.0 | | 10.0 | | 38.0 | | 10.0 |
| Max Q Clear Time (g_c+I1), s | | 10.9 | | 9.1 | | 21.6 | | 7.6 |
| Green Ext Time (p_c), s | | 4.4 | | 0.1 | | 7.1 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 11.1 |
| HCM 2010 LOS | B |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 17 | 6 | 5 | 94 | 10 | 29 | 173 | 11 | 5 | 67 | 20 |
| Future Volume (vph) | 5 | 17 | 6 | 5 | 94 | 10 | 29 | 173 | 11 | 5 | 67 | 20 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 7 | | 3 | 3 | | 7 | 10 | | | | | 10 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles (%) | 20% | 0% | 17% | 0% | 2% | 0% | 18% | 6% | 0% | 0% | 2% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 10 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 5 | 17 | 6 | 5 | 94 | 10 | 29 | 173 | 11 | 5 | 67 | 20 |
| Future Vol, veh/h | 5 | 17 | 6 | 5 | 94 | 10 | 29 | 173 | 11 | 5 | 67 | 20 |
| Peak Hour Factor | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |
| Heavy Vehicles, % | 20 | 0 | 17 | 0 | 2 | 0 | 18 | 6 | 0 | 0 | 2 | 5 |
| Mvmt Flow | 7 | 24 | 8 | 7 | 132 | 14 | 41 | 244 | 15 | 7 | 94 | 28 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.8 | 9.3 | 11.1 | 8.6 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 14% | 18% | 5% | 5% |
| Vol Thru, % | 81% | 61% | 86% | 73% |
| Vol Right, % | 5% | 21% | 9% | 22% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 213 | 28 | 109 | 92 |
| LT Vol | 29 | 5 | 5 | 5 |
| Through Vol | 173 | 17 | 94 | 67 |
| RT Vol | 11 | 6 | 10 | 20 |
| Lane Flow Rate | 300 | 39 | 154 | 130 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.403 | 0.059 | 0.211 | 0.167 |
| Departure Headway (Hd) | 4.84 | 5.397 | 4.94 | 4.635 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 741 | 659 | 723 | 770 |
| Service Time | 2.885 | 3.463 | 2.992 | 2.688 |
| HCM Lane V/C Ratio | 0.405 | 0.059 | 0.213 | 0.169 |
| HCM Control Delay | 11.1 | 8.8 | 9.3 | 8.6 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 2 | 0.2 | 0.8 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 5 | 30 | 90 | 32 | 17 | 44 |
| Future Volume (vph) | 5 | 30 | 90 | 32 | 17 | 44 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | | 14 | | 7 | 7 | |
| Peak Hour Factor | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 | 0.54 |
| Heavy Vehicles (%) | 0% | 3% | 0% | 32% | 23% | 9% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

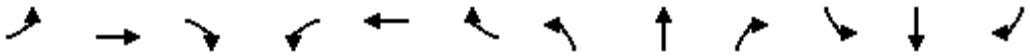
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 5 | 30 | 90 | 32 | 17 | 44 |
| Future Vol, veh/h | 5 | 30 | 90 | 32 | 17 | 44 |
| Conflicting Peds, #/hr | 0 | 14 | 0 | 7 | 7 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 54 | 54 | 54 | 54 | 54 | 54 |
| Heavy Vehicles, % | 0 | 3 | 0 | 32 | 23 | 9 |
| Mvmt Flow | 9 | 56 | 167 | 59 | 31 | 81 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 347 | 218 | 0 | 0 | 233 | 0 |
| Stage 1 | 204 | - | - | - | - | - |
| Stage 2 | 143 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.23 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 746 | 873 | - | - | 1000 | - |
| Stage 1 | 961 | - | - | - | - | - |
| Stage 2 | 1027 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 716 | 856 | - | - | 993 | - |
| Mov Cap-2 Maneuver | 716 | - | - | - | - | - |
| Stage 1 | 954 | - | - | - | - | - |
| Stage 2 | 993 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.7 | 0 | 2.4 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 833 | 993 | - |
| HCM Lane V/C Ratio | - | - | 0.078 | 0.032 | - |
| HCM Control Delay (s) | - | - | 9.7 | 8.7 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

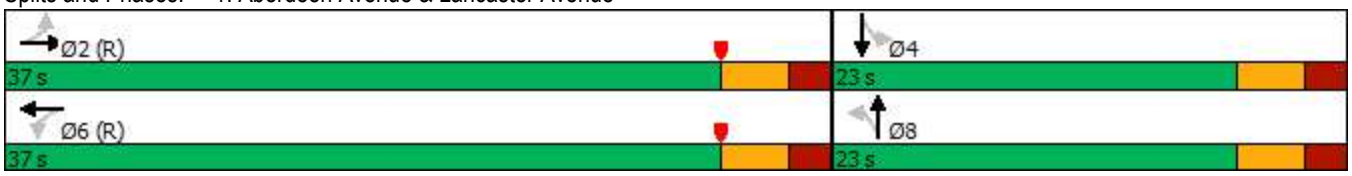


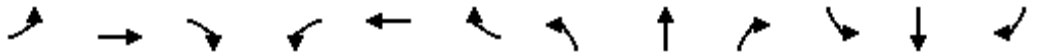
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 841 | 36 | 25 | 940 | 61 | 98 | 68 | 34 | 122 | 114 | 69 |
| Future Volume (vph) | 34 | 841 | 36 | 25 | 940 | 61 | 98 | 68 | 34 | 122 | 114 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1121 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 30.6 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 939 | 0 | 0 | 1058 | 0 | 0 | 206 | 0 | 0 | 315 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 37.0 | 37.0 | | 37.0 | 37.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (%) | 61.7% | 61.7% | | 61.7% | 61.7% | | 38.3% | 38.3% | | 38.3% | 38.3% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.67 | | | 0.75 | | | 0.61 | | | 0.76 | |
| Control Delay | | 11.4 | | | 14.5 | | | 26.8 | | | 32.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 11.4 | | | 14.5 | | | 26.8 | | | 32.6 | |
| Queue Length 50th (ft) | | 238 | | | 169 | | | 61 | | | 98 | |
| Queue Length 95th (ft) | | 308 | | | 267 | | | 120 | | | #198 | |
| Internal Link Dist (ft) | | 1041 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1398 | | | 1410 | | | 376 | | | 464 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.67 | | | 0.75 | | | 0.55 | | | 0.68 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |

Actuated Cycle Length: 60
Offset: 38 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 841 | 36 | 25 | 940 | 61 | 98 | 68 | 34 | 122 | 114 | 69 |
| Future Volume (vph) | 34 | 841 | 36 | 25 | 940 | 61 | 98 | 68 | 34 | 122 | 114 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.83 | | | *0.80 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.98 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2732 | | | 2640 | | | 1694 | | | 1832 | |
| Flt Permitted | | 0.87 | | | 0.91 | | | 0.69 | | | 0.78 | |
| Satd. Flow (perm) | | 2393 | | | 2416 | | | 1191 | | | 1466 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 35 | 867 | 37 | 26 | 969 | 63 | 101 | 70 | 35 | 126 | 118 | 71 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 939 | 0 | 0 | 1058 | 0 | 0 | 206 | 0 | 0 | 315 | 0 |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 34.0 | | | 34.0 | | | 16.0 | | | 16.0 | |
| Effective Green, g (s) | | 35.0 | | | 35.0 | | | 17.0 | | | 17.0 | |
| Actuated g/C Ratio | | 0.58 | | | 0.58 | | | 0.28 | | | 0.28 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1395 | | | 1409 | | | 337 | | | 415 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.39 | | | c0.44 | | | 0.17 | | | c0.21 | |
| v/c Ratio | | 0.67 | | | 0.75 | | | 0.61 | | | 0.76 | |
| Uniform Delay, d1 | | 8.6 | | | 9.3 | | | 18.6 | | | 19.6 | |
| Progression Factor | | 0.97 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 2.4 | | | 3.7 | | | 3.3 | | | 7.8 | |
| Delay (s) | | 10.7 | | | 13.0 | | | 21.9 | | | 27.4 | |
| Level of Service | | B | | | B | | | C | | | C | |
| Approach Delay (s) | | 10.7 | | | 13.0 | | | 21.9 | | | 27.4 | |
| Approach LOS | | B | | | B | | | C | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.75 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 79.9% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 932 | 62 | 60 | 1009 | 17 | 61 |
| Future Volume (vph) | 932 | 62 | 60 | 1009 | 17 | 61 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | -2% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 520 | 89 | |
| Travel Time (s) | 7.3 | | | 10.1 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 3 | 3 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 1% | 2% | 2% | 1% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.2 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 932 | 62 | 60 | 1009 | 17 | 61 |
| Future Vol, veh/h | 932 | 62 | 60 | 1009 | 17 | 61 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 3 | 3 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | -2 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 1 | 2 | 2 | 1 | 2 | 2 |
| Mvmt Flow | 961 | 64 | 62 | 1040 | 18 | 63 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 1025 | 0 | 1640 | 516 |
| Stage 1 | - | - | - | - | 993 | - |
| Stage 2 | - | - | - | - | 647 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | *984 | - | *163 | *814 |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *491 | - |
| Platoon blocked, % | - | - | 1 | - | 1 | 1 |
| Mov Cap-1 Maneuver | - | - | *984 | - | *138 | *812 |
| Mov Cap-2 Maneuver | - | - | - | - | *138 | - |
| Stage 1 | - | - | - | - | *843 | - |
| Stage 2 | - | - | - | - | *417 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.1 | 16.5 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 393 | - | - | * 984 | - |
| HCM Lane V/C Ratio | 0.205 | - | - | 0.063 | - |
| HCM Control Delay (s) | 16.5 | - | - | 8.9 | 0.6 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.8 | - | - | 0.2 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 11 | 75 | 125 | 12 | 30 | 145 |
| Future Volume (vph) | 11 | 75 | 125 | 12 | 30 | 145 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | -2% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 279 | | | 199 |
| Travel Time (s) | 2.0 | | 7.6 | | | 5.4 |
| Confl. Peds. (#/hr) | 6 | 6 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 0% | 2% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

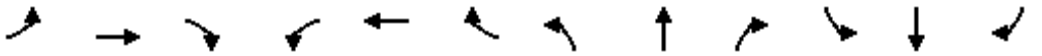
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.6 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 75 | 125 | 12 | 30 | 145 |
| Future Vol, veh/h | 11 | 75 | 125 | 12 | 30 | 145 |
| Conflicting Peds, #/hr | 6 | 6 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | -2 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 0 | 2 | 2 | 3 |
| Mvmt Flow | 11 | 77 | 129 | 12 | 31 | 149 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 352 | 141 | 0 | 0 | 141 | 0 |
| Stage 1 | 135 | - | - | - | - | - |
| Stage 2 | 217 | - | - | - | - | - |
| Critical Hdwy | 6.02 | 6.02 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.02 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.02 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 796 | 974 | - | - | 1075 | - |
| Stage 1 | 1051 | - | - | - | - | - |
| Stage 2 | 991 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 767 | 968 | - | - | 1075 | - |
| Mov Cap-2 Maneuver | 767 | - | - | - | - | - |
| Stage 1 | 1051 | - | - | - | - | - |
| Stage 2 | 954 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 1.4 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 937 | 1075 | - |
| HCM Lane V/C Ratio | - | - | 0.095 | 0.029 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 41 | 743 | 54 | 34 | 696 | 95 | 23 | 90 | 37 | 105 | 148 | 47 |
| Future Volume (vph) | 41 | 743 | 54 | 34 | 696 | 95 | 23 | 90 | 37 | 105 | 148 | 47 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 533 | | | 714 | | | 348 | | | 368 | |
| Travel Time (s) | | 14.5 | | | 19.5 | | | 9.5 | | | 10.0 | |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 855 | 0 | 0 | 745 | 97 | 23 | 130 | 0 | 107 | 199 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 61.0 | | 31.0 | 31.0 | 31.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 25.0% | 50.8% | | 25.8% | 25.8% | 25.8% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | -2.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.43 | | | 0.36 | 0.10 | 0.20 | 0.47 | | 0.64 | 0.71 | |
| Control Delay | | 7.2 | | | 3.7 | 2.8 | 44.2 | 49.1 | | 62.4 | 59.7 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 7.2 | | | 3.7 | 2.8 | 44.2 | 49.1 | | 62.4 | 59.7 | |
| Queue Length 50th (ft) | | 114 | | | 46 | 8 | 15 | 92 | | 78 | 147 | |
| Queue Length 95th (ft) | | 187 | | | 112 | 26 | 39 | 145 | | 132 | 214 | |
| Internal Link Dist (ft) | | 453 | | | 634 | | | 268 | | | 288 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2007 | | | 2045 | 996 | 153 | 369 | | 224 | 377 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.43 | | | 0.36 | 0.10 | 0.15 | 0.35 | | 0.48 | 0.53 | |

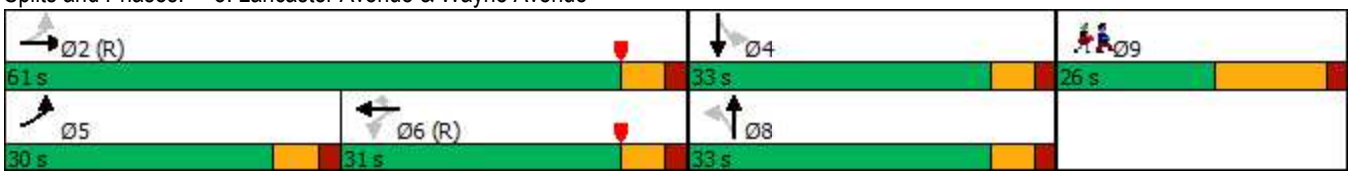
Intersection Summary

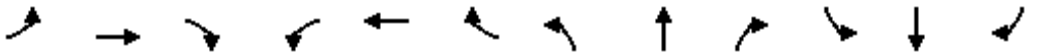
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 19 (16%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 41 | 743 | 54 | 34 | 696 | 95 | 23 | 90 | 37 | 105 | 148 | 47 |
| Future Volume (vph) | 41 | 743 | 54 | 34 | 696 | 95 | 23 | 90 | 37 | 105 | 148 | 47 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.96 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.97 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.96 | | 1.00 | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3085 | | | 3150 | 1378 | 1510 | 1578 | | 1543 | 1613 | |
| Flt Permitted | | 0.87 | | | 0.87 | 1.00 | 0.41 | 1.00 | | 0.59 | 1.00 | |
| Satd. Flow (perm) | | 2705 | | | 2757 | 1378 | 654 | 1578 | | 952 | 1613 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 42 | 758 | 55 | 35 | 710 | 97 | 23 | 92 | 38 | 107 | 151 | 48 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 855 | 0 | 0 | 745 | 97 | 23 | 130 | 0 | 107 | 199 | 0 |
| Confl. Peds. (#/hr) | 23 | | 11 | 11 | | 23 | 32 | | 28 | 28 | | 32 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 3% | 1% | 0% | 0% | 3% | 10% | 2% | 1% | 2% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 88.1 | | | 88.1 | 88.1 | 19.9 | 19.9 | | 19.9 | 19.9 | |
| Effective Green, g (s) | | 89.1 | | | 89.1 | 90.1 | 20.9 | 20.9 | | 20.9 | 20.9 | |
| Actuated g/C Ratio | | 0.74 | | | 0.74 | 0.75 | 0.17 | 0.17 | | 0.17 | 0.17 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2008 | | | 2047 | 1034 | 113 | 274 | | 165 | 280 | |
| v/s Ratio Prot | | | | | | | | 0.08 | | | c0.12 | |
| v/s Ratio Perm | | c0.32 | | | 0.27 | 0.07 | 0.04 | | | 0.11 | | |
| v/c Ratio | | 0.43 | | | 0.36 | 0.09 | 0.20 | 0.47 | | 0.65 | 0.71 | |
| Uniform Delay, d1 | | 5.8 | | | 5.5 | 4.0 | 42.4 | 44.6 | | 46.1 | 46.7 | |
| Progression Factor | | 1.00 | | | 0.54 | 0.53 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.4 | 0.2 | 0.9 | 1.3 | | 8.5 | 8.2 | |
| Delay (s) | | 6.0 | | | 3.4 | 2.3 | 43.3 | 45.9 | | 54.6 | 54.9 | |
| Level of Service | | A | | | A | A | D | D | | D | D | |
| Approach Delay (s) | | 6.0 | | | 3.2 | | | 45.5 | | | 54.8 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.56 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 26.0 |
| Intersection Capacity Utilization | 78.1% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

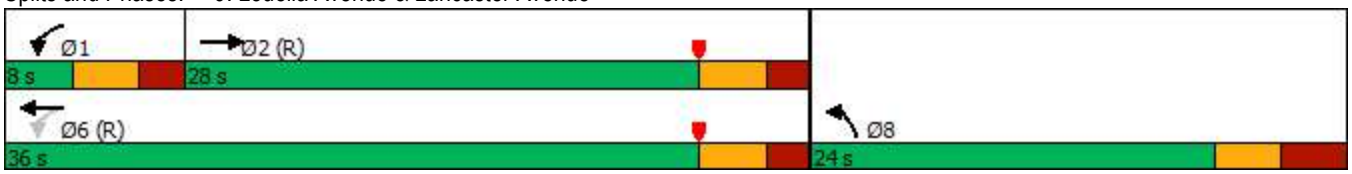
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 894 | 33 | 54 | 874 | 15 | 30 |
| Future Volume (vph) | 894 | 33 | 54 | 874 | 15 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 714 | | | 1121 | 430 | |
| Travel Time (s) | 19.5 | | | 30.6 | 11.7 | |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 965 | 0 | 0 | 966 | 47 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 28.0 | | 8.0 | 36.0 | 24.0 | |
| Total Split (%) | 46.7% | | 13.3% | 60.0% | 40.0% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.43 | | | 0.51 | 0.21 | |
| Control Delay | 5.8 | | | 2.5 | 24.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 5.8 | | | 2.5 | 24.6 | |
| Queue Length 50th (ft) | 148 | | | 29 | 15 | |
| Queue Length 95th (ft) | 123 | | | 43 | 39 | |
| Internal Link Dist (ft) | 634 | | | 1041 | 350 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2228 | | | 1909 | 520 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.43 | | | 0.51 | 0.09 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |

Offset: 6 (10%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 894 | 33 | 54 | 874 | 15 | 30 |
| Future Volume (vph) | 894 | 33 | 54 | 874 | 15 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.98 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3128 | | | 3130 | 1634 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3128 | | | 2681 | 1634 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 931 | 34 | 56 | 910 | 16 | 31 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 965 | 0 | 0 | 966 | 47 | 0 |
| Confl. Peds. (#/hr) | | 7 | 7 | | 29 | 8 |
| Heavy Vehicles (%) | 2% | 0% | 4% | 1% | 7% | 3% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 41.7 | | | 41.7 | 7.3 | |
| Effective Green, g (s) | 42.7 | | | 42.7 | 8.3 | |
| Actuated g/C Ratio | 0.71 | | | 0.71 | 0.14 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2226 | | | 1907 | 226 | |
| v/s Ratio Prot | 0.31 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.36 | | |
| v/c Ratio | 0.43 | | | 0.51 | 0.21 | |
| Uniform Delay, d1 | 3.6 | | | 3.9 | 22.9 | |
| Progression Factor | 1.37 | | | 0.43 | 1.00 | |
| Incremental Delay, d2 | 0.6 | | | 0.1 | 0.5 | |
| Delay (s) | 5.5 | | | 1.8 | 23.4 | |
| Level of Service | A | | | A | C | |
| Approach Delay (s) | 5.5 | | | 1.8 | 23.4 | |
| Approach LOS | A | | | A | C | |

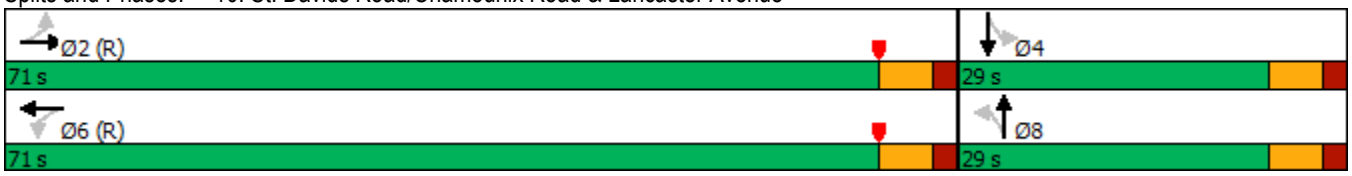
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 4.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 13.0 |
| Intersection Capacity Utilization | 68.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 987 | 16 | 40 | 1042 | 145 | 4 | 26 | 33 | 76 | 23 | 44 |
| Future Volume (vph) | 35 | 987 | 16 | 40 | 1042 | 145 | 4 | 26 | 33 | 76 | 23 | 44 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 486 | | | 565 | | | 295 | | | 258 | |
| Travel Time (s) | | 9.5 | | | 11.0 | | | 8.0 | | | 7.0 | |
| Confl. Peds. (#/hr) | 5 | | 3 | 3 | | 5 | | | 8 | 8 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 1% | 25% | 0% | 3% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 71.0 | 71.0 | | 71.0 | 71.0 | | 29.0 | 29.0 | | 29.0 | 29.0 | |
| Total Split (%) | 71.0% | 71.0% | | 71.0% | 71.0% | | 29.0% | 29.0% | | 29.0% | 29.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 100 | |
| Actuated Cycle Length: 100 | |
| Offset: 66 (66%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 50 | |
| Control Type: Actuated-Coordinated | |

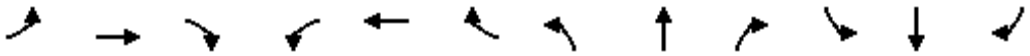
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 35 | 987 | 16 | 40 | 1042 | 145 | 4 | 26 | 33 | 76 | 23 | 44 |
| Future Volume (veh/h) | 35 | 987 | 16 | 40 | 1042 | 145 | 4 | 26 | 33 | 76 | 23 | 44 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.98 | 0.99 | | 0.98 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1827 | 1845 | 1891 | 1835 | 1891 | 1881 | 1870 | 1881 |
| Adj Flow Rate, veh/h | 37 | 1050 | 16 | 43 | 1109 | 148 | 4 | 28 | 35 | 81 | 24 | 47 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 90 | 2349 | 35 | 91 | 2174 | 287 | 44 | 95 | 111 | 153 | 38 | 61 |
| Arrive On Green | 0.78 | 0.77 | 0.76 | 0.78 | 0.77 | 0.76 | 0.14 | 0.13 | 0.12 | 0.14 | 0.13 | 0.12 |
| Sat Flow, veh/h | 66 | 3037 | 46 | 68 | 2812 | 372 | 46 | 751 | 872 | 771 | 298 | 479 |
| Grp Volume(v), veh/h | 544 | 0 | 559 | 664 | 0 | 636 | 67 | 0 | 0 | 152 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1551 | 0 | 1598 | 1655 | 0 | 1596 | 1669 | 0 | 0 | 1548 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 12.2 | 0.0 | 0.0 | 15.1 | 0.0 | 0.0 | 0.0 | 5.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 10.0 | 0.0 | 12.2 | 12.8 | 0.0 | 15.1 | 3.7 | 0.0 | 0.0 | 9.1 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.06 | | 0.23 | 0.06 | | 0.52 | 0.53 | | 0.31 |
| Lane Grp Cap(c), veh/h | 1253 | 0 | 1236 | 1335 | 0 | 1234 | 266 | 0 | 0 | 267 | 0 | 0 |
| V/C Ratio(X) | 0.43 | 0.00 | 0.45 | 0.50 | 0.00 | 0.52 | 0.25 | 0.00 | 0.00 | 0.57 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1253 | 0 | 1236 | 1335 | 0 | 1234 | 450 | 0 | 0 | 432 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 3.7 | 0.0 | 4.0 | 4.0 | 0.0 | 4.3 | 39.9 | 0.0 | 0.0 | 41.8 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 1.1 | 0.0 | 1.2 | 1.3 | 0.0 | 1.5 | 0.7 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 8.5 | 0.0 | 9.6 | 10.7 | 0.0 | 11.5 | 3.1 | 0.0 | 0.0 | 7.5 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 4.8 | 0.0 | 5.2 | 5.3 | 0.0 | 5.9 | 40.6 | 0.0 | 0.0 | 44.5 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 1103 | | | 1300 | | | 67 | | | 152 | |
| Approach Delay, s/veh | | 5.0 | | | 5.6 | | | 40.6 | | | 44.5 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 82.3 | | 17.7 | | 82.3 | | 17.7 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 65.0 | | 23.0 | | 65.0 | | 23.0 |
| Max Q Clear Time (g_c+I1), s | | 14.2 | | 11.1 | | 17.1 | | 5.7 |
| Green Ext Time (p_c), s | | 5.5 | | 0.6 | | 7.0 | | 0.2 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 8.5 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 15 | 9 | 5 | 7 | 72 | 10 | 9 | 119 | 6 | 5 | 101 | 14 |
| Future Volume (vph) | 15 | 9 | 5 | 7 | 72 | 10 | 9 | 119 | 6 | 5 | 101 | 14 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1097 | | | 652 | | | 218 | | | 279 | |
| Travel Time (s) | | 29.9 | | | 17.8 | | | 5.9 | | | 7.6 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 7 | | 5 | 5 | | 7 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles (%) | 7% | 0% | 40% | 0% | 1% | 0% | 11% | 11% | 0% | 0% | 3% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 15 | 9 | 5 | 7 | 72 | 10 | 9 | 119 | 6 | 5 | 101 | 14 |
| Future Vol, veh/h | 15 | 9 | 5 | 7 | 72 | 10 | 9 | 119 | 6 | 5 | 101 | 14 |
| Peak Hour Factor | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 | 0.80 |
| Heavy Vehicles, % | 7 | 0 | 40 | 0 | 1 | 0 | 11 | 11 | 0 | 0 | 3 | 0 |
| Mvmt Flow | 19 | 11 | 6 | 9 | 90 | 13 | 11 | 149 | 8 | 6 | 126 | 18 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 8.2 | 8.4 | 8.9 | 8.4 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 7% | 52% | 8% | 4% |
| Vol Thru, % | 89% | 31% | 81% | 84% |
| Vol Right, % | 4% | 17% | 11% | 12% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 134 | 29 | 89 | 120 |
| LT Vol | 9 | 15 | 7 | 5 |
| Through Vol | 119 | 9 | 72 | 101 |
| RT Vol | 6 | 5 | 10 | 14 |
| Lane Flow Rate | 168 | 36 | 111 | 150 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.214 | 0.049 | 0.143 | 0.183 |
| Departure Headway (Hd) | 4.592 | 4.887 | 4.622 | 4.384 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 782 | 732 | 775 | 819 |
| Service Time | 2.615 | 2.92 | 2.65 | 2.407 |
| HCM Lane V/C Ratio | 0.215 | 0.049 | 0.143 | 0.183 |
| HCM Control Delay | 8.9 | 8.2 | 8.4 | 8.4 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.8 | 0.2 | 0.5 | 0.7 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 45 | 86 | 11 | 16 | 62 |
| Future Volume (vph) | 9 | 45 | 86 | 11 | 16 | 62 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1097 | | 261 | | | 430 |
| Travel Time (s) | 29.9 | | 7.1 | | | 11.7 |
| Confl. Peds. (#/hr) | 1 | 24 | | 10 | 10 | |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 0% | 19% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

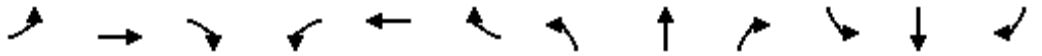
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.8 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 45 | 86 | 11 | 16 | 62 |
| Future Vol, veh/h | 9 | 45 | 86 | 11 | 16 | 62 |
| Conflicting Peds, #/hr | 1 | 24 | 0 | 10 | 10 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 87 | 87 | 87 | 87 | 87 | 87 |
| Heavy Vehicles, % | 0 | 2 | 2 | 0 | 19 | 2 |
| Mvmt Flow | 10 | 52 | 99 | 13 | 18 | 71 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 224 | 140 | 0 | 0 | 122 | 0 |
| Stage 1 | 116 | - | - | - | - | - |
| Stage 2 | 108 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.22 | - | - | 4.5 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3.2 | - |
| Pot Cap-1 Maneuver | 883 | 968 | - | - | 1019 | - |
| Stage 1 | 1058 | - | - | - | - | - |
| Stage 2 | 1067 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 857 | 937 | - | - | 1009 | - |
| Mov Cap-2 Maneuver | 857 | - | - | - | - | - |
| Stage 1 | 1047 | - | - | - | - | - |
| Stage 2 | 1046 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 1.8 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 923 | 1009 | - |
| HCM Lane V/C Ratio | - | - | 0.067 | 0.018 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0.1 | - |

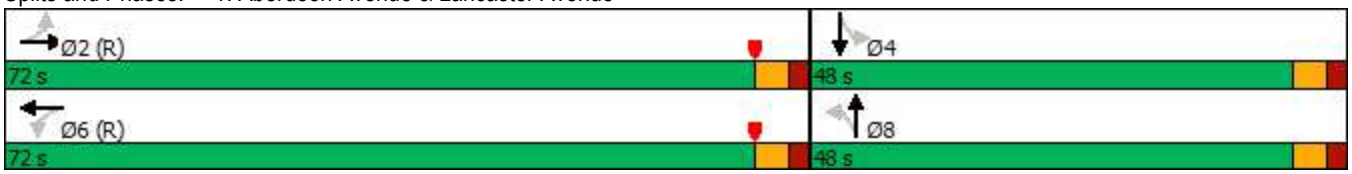


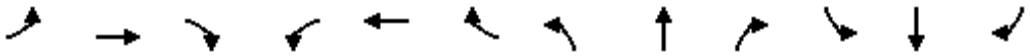
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 690 | 50 | 26 | 843 | 51 | 91 | 98 | 44 | 116 | 73 | 66 |
| Future Volume (vph) | 40 | 690 | 50 | 26 | 843 | 51 | 91 | 98 | 44 | 116 | 73 | 66 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 804 | 0 | 0 | 949 | 0 | 0 | 240 | 0 | 0 | 263 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.46 | | | 0.53 | | | 0.76 | | | 0.84 | |
| Control Delay | | 13.3 | | | 12.0 | | | 56.3 | | | 64.5 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 13.3 | | | 12.0 | | | 56.3 | | | 64.5 | |
| Queue Length 50th (ft) | | 127 | | | 189 | | | 172 | | | 194 | |
| Queue Length 95th (ft) | | 278 | | | 317 | | | 241 | | | 268 | |
| Internal Link Dist (ft) | | 1062 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1756 | | | 1784 | | | 460 | | | 457 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.46 | | | 0.53 | | | 0.52 | | | 0.58 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |

Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 50
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 690 | 50 | 26 | 843 | 51 | 91 | 98 | 44 | 116 | 73 | 66 |
| Future Volume (vph) | 40 | 690 | 50 | 26 | 843 | 51 | 91 | 98 | 44 | 116 | 73 | 66 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.94 | | | *0.88 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 3051 | | | 2867 | | | 1680 | | | 1807 | |
| Flt Permitted | | 0.84 | | | 0.91 | | | 0.73 | | | 0.68 | |
| Satd. Flow (perm) | | 2575 | | | 2617 | | | 1257 | | | 1249 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 41 | 711 | 52 | 27 | 869 | 53 | 94 | 101 | 45 | 120 | 75 | 68 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 804 | 0 | 0 | 949 | 0 | 0 | 240 | 0 | 0 | 263 | 0 |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 80.8 | | | 80.8 | | | 29.2 | | | 29.2 | |
| Effective Green, g (s) | | 81.8 | | | 81.8 | | | 30.2 | | | 30.2 | |
| Actuated g/C Ratio | | 0.68 | | | 0.68 | | | 0.25 | | | 0.25 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1755 | | | 1783 | | | 316 | | | 314 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.31 | | | c0.36 | | | 0.19 | | | c0.21 | |
| v/c Ratio | | 0.46 | | | 0.53 | | | 0.76 | | | 0.84 | |
| Uniform Delay, d1 | | 8.8 | | | 9.5 | | | 41.5 | | | 42.6 | |
| Progression Factor | | 1.24 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.8 | | | 1.1 | | | 10.0 | | | 17.4 | |
| Delay (s) | | 11.8 | | | 10.7 | | | 51.6 | | | 60.0 | |
| Level of Service | | B | | | B | | | D | | | E | |
| Approach Delay (s) | | 11.8 | | | 10.7 | | | 51.6 | | | 60.0 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 21.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.61 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 81.3% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 789 | 58 | 55 | 906 | 15 | 57 |
| Future Volume (vph) | 789 | 58 | 55 | 906 | 15 | 57 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | -2% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 515 | 89 | |
| Travel Time (s) | 7.3 | | | 10.0 | 2.4 | |
| Confl. Peds. (#/hr) | | | | | 7 | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 789 | 58 | 55 | 906 | 15 | 57 |
| Future Vol, veh/h | 789 | 58 | 55 | 906 | 15 | 57 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 7 | 7 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | -2 | - |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 813 | 60 | 57 | 934 | 15 | 59 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 873 | 0 | 1431 | 444 |
| Stage 1 | - | - | - | - | 843 | - |
| Stage 2 | - | - | - | - | 588 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1061 | - | *226 | *880 |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *536 | - |
| Platoon blocked, % | - | - | 1 | - | 1 | 1 |
| Mov Cap-1 Maneuver | - | - | 1061 | - | *199 | *875 |
| Mov Cap-2 Maneuver | - | - | - | - | *199 | - |
| Stage 1 | - | - | - | - | *912 | - |
| Stage 2 | - | - | - | - | *473 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.9 | 13.2 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 512 | - | - | 1061 | - |
| HCM Lane V/C Ratio | 0.145 | - | - | 0.053 | - |
| HCM Control Delay (s) | 13.2 | - | - | 8.6 | 0.4 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 0.2 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 70 | 161 | 11 | 27 | 122 |
| Future Volume (vph) | 9 | 70 | 161 | 11 | 27 | 122 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 199 |
| Travel Time (s) | 2.0 | | 8.1 | | | 5.4 |
| Confl. Peds. (#/hr) | 9 | 9 | | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

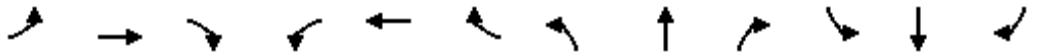
| Intersection | |
|---|---|
| Int Delay, s/veh | 2.4 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 70 | 161 | 11 | 27 | 122 |
| Future Vol, veh/h | 9 | 70 | 161 | 11 | 27 | 122 |
| Conflicting Peds, #/hr | 9 | 9 | 0 | 0 | 0 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 97 | 97 | 97 | 97 | 97 | 97 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 1 |
| Mvmt Flow | 9 | 72 | 166 | 11 | 28 | 126 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 363 | 181 | 0 | 0 | 177 | 0 |
| Stage 1 | 172 | - | - | - | - | - |
| Stage 2 | 191 | - | - | - | - | - |
| Critical Hdwy | 6.42 | 6.22 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 770 | 917 | - | - | 1045 | - |
| Stage 1 | 994 | - | - | - | - | - |
| Stage 2 | 1016 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 740 | 909 | - | - | 1045 | - |
| Mov Cap-2 Maneuver | 740 | - | - | - | - | - |
| Stage 1 | 994 | - | - | - | - | - |
| Stage 2 | 979 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.5 | 0 | 1.5 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 886 | 1045 | - |
| HCM Lane V/C Ratio | - | - | 0.092 | 0.027 | - |
| HCM Control Delay (s) | - | - | 9.5 | 8.5 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

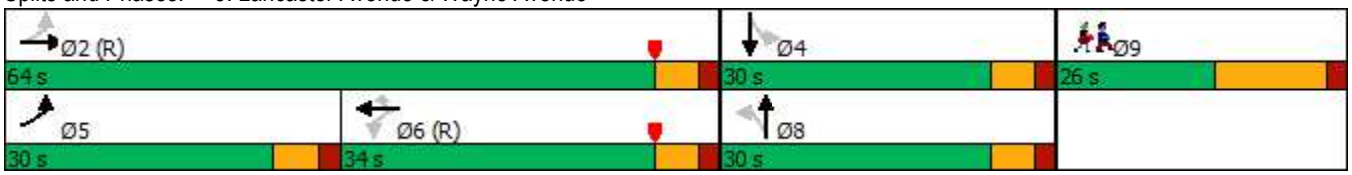


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 702 | 39 | 48 | 803 | 92 | 62 | 82 | 71 | 67 | 81 | 62 |
| Future Volume (vph) | 39 | 702 | 39 | 48 | 803 | 92 | 62 | 82 | 71 | 67 | 81 | 62 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 804 | 0 | 0 | 877 | 95 | 64 | 158 | 0 | 69 | 148 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 64.0 | | 34.0 | 34.0 | 34.0 | 30.0 | 30.0 | | 30.0 | 30.0 | |
| Total Split (%) | 25.0% | 53.3% | | 28.3% | 28.3% | 28.3% | 25.0% | 25.0% | | 25.0% | 25.0% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | -2.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.39 | | | 0.43 | 0.09 | 0.53 | 0.66 | | 0.57 | 0.63 | |
| Control Delay | | 5.8 | | | 3.5 | 2.7 | 61.5 | 60.4 | | 65.3 | 59.3 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 5.8 | | | 3.5 | 2.7 | 61.5 | 60.4 | | 65.3 | 59.3 | |
| Queue Length 50th (ft) | | 92 | | | 54 | 10 | 46 | 117 | | 50 | 109 | |
| Queue Length 95th (ft) | | 153 | | | 68 | 18 | 89 | 179 | | 97 | 170 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2065 | | | 2058 | 1034 | 168 | 334 | | 166 | 325 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.39 | | | 0.43 | 0.09 | 0.38 | 0.47 | | 0.42 | 0.46 | |

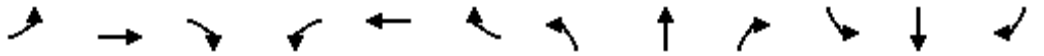
Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 75 | |
| Control Type: Actuated-Coordinated | |

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 702 | 39 | 48 | 803 | 92 | 62 | 82 | 71 | 67 | 81 | 62 |
| Future Volume (vph) | 39 | 702 | 39 | 48 | 803 | 92 | 62 | 82 | 71 | 67 | 81 | 62 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 4.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.97 | | 1.00 | 0.97 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.96 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.93 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3124 | | | 3148 | 1379 | 1492 | 1593 | | 1559 | 1549 | |
| Flt Permitted | | 0.86 | | | 0.85 | 1.00 | 0.51 | 1.00 | | 0.48 | 1.00 | |
| Satd. Flow (perm) | | 2697 | | | 2689 | 1379 | 802 | 1593 | | 789 | 1549 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 40 | 724 | 40 | 49 | 828 | 95 | 64 | 85 | 73 | 69 | 84 | 64 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 804 | 0 | 0 | 877 | 95 | 64 | 158 | 0 | 69 | 148 | 0 |
| Confl. Peds. (#/hr) | 23 | | 47 | 47 | | 23 | 32 | | 27 | 27 | | 32 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 2% | 1% | 0% | 0% | 0% | 0% | 1% | 1% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 91.0 | | | 91.0 | 91.0 | 17.0 | 17.0 | | 17.0 | 17.0 | |
| Effective Green, g (s) | | 92.0 | | | 92.0 | 93.0 | 18.0 | 18.0 | | 18.0 | 18.0 | |
| Actuated g/C Ratio | | 0.77 | | | 0.77 | 0.78 | 0.15 | 0.15 | | 0.15 | 0.15 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2067 | | | 2061 | 1068 | 120 | 238 | | 118 | 232 | |
| v/s Ratio Prot | | | | | | | | c0.10 | | | 0.10 | |
| v/s Ratio Perm | | 0.30 | | | c0.33 | 0.07 | 0.08 | | | 0.09 | | |
| v/c Ratio | | 0.39 | | | 0.43 | 0.09 | 0.53 | 0.66 | | 0.58 | 0.64 | |
| Uniform Delay, d1 | | 4.7 | | | 4.8 | 3.3 | 47.1 | 48.1 | | 47.5 | 47.9 | |
| Progression Factor | | 1.00 | | | 0.54 | 0.64 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.6 | 0.1 | 4.5 | 6.8 | | 7.2 | 5.7 | |
| Delay (s) | | 4.8 | | | 3.2 | 2.2 | 51.6 | 54.9 | | 54.7 | 53.6 | |
| Level of Service | | A | | | A | A | D | D | | D | D | |
| Approach Delay (s) | | 4.8 | | | 3.1 | | | 54.0 | | | 53.9 | |
| Approach LOS | | A | | | A | | | D | | | D | |

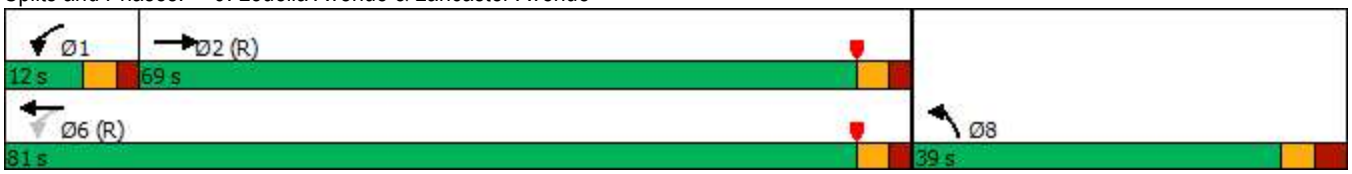
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 13.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.54 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 26.0 |
| Intersection Capacity Utilization | 79.0% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 794 | 59 | 50 | 954 | 42 | 66 |
| Future Volume (vph) | 794 | 59 | 50 | 954 | 42 | 66 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 888 | 0 | 0 | 1046 | 113 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.35 | | | 0.49 | 0.56 | |
| Control Delay | 3.1 | | | 2.9 | 59.6 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 3.1 | | | 2.9 | 59.6 | |
| Queue Length 50th (ft) | 64 | | | 56 | 84 | |
| Queue Length 95th (ft) | 93 | | | 68 | 139 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2528 | | | 2149 | 483 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.35 | | | 0.49 | 0.23 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 794 | 59 | 50 | 954 | 42 | 66 |
| Future Volume (vph) | 794 | 59 | 50 | 954 | 42 | 66 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.97 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.92 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3139 | | | 3135 | 1679 | |
| Flt Permitted | 1.00 | | | 0.85 | 0.98 | |
| Satd. Flow (perm) | 3139 | | | 2667 | 1679 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 827 | 61 | 52 | 994 | 44 | 69 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 888 | 0 | 0 | 1046 | 113 | 0 |
| Confl. Peds. (#/hr) | | 17 | 17 | | 30 | 17 |
| Heavy Vehicles (%) | 1% | 0% | 2% | 1% | 0% | 1% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 95.7 | | | 95.7 | 13.3 | |
| Effective Green, g (s) | 96.7 | | | 96.7 | 14.3 | |
| Actuated g/C Ratio | 0.81 | | | 0.81 | 0.12 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2529 | | | 2149 | 200 | |
| v/s Ratio Prot | 0.28 | | | | c0.07 | |
| v/s Ratio Perm | | | | c0.39 | | |
| v/c Ratio | 0.35 | | | 0.49 | 0.56 | |
| Uniform Delay, d1 | 3.2 | | | 3.7 | 49.9 | |
| Progression Factor | 0.77 | | | 0.52 | 1.00 | |
| Incremental Delay, d2 | 0.4 | | | 0.2 | 3.6 | |
| Delay (s) | 2.8 | | | 2.1 | 53.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 2.8 | | | 2.1 | 53.5 | |
| Approach LOS | A | | | A | D | |

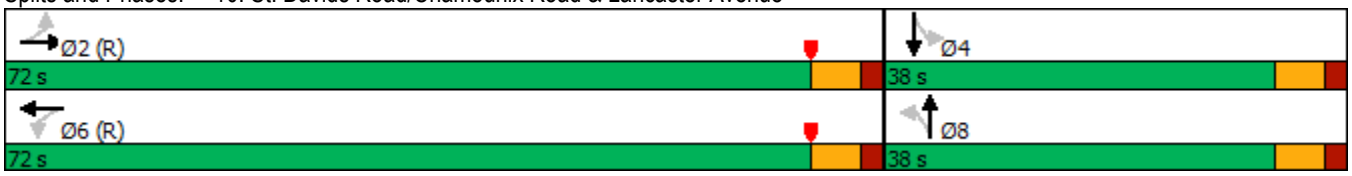
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 5.2 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 13.0 |
| Intersection Capacity Utilization | 73.2% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 28 | 880 | 17 | 37 | 1024 | 65 | 14 | 17 | 42 | 56 | 17 | 41 |
| Future Volume (vph) | 28 | 880 | 17 | 37 | 1024 | 65 | 14 | 17 | 42 | 56 | 17 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 457 | | | 496 | | | 642 | | | 402 | |
| Travel Time (s) | | 8.9 | | | 9.7 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | 5 | | 2 | 2 | | 5 | | | 4 | 4 | | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 8% | 0% | 0% | 2% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

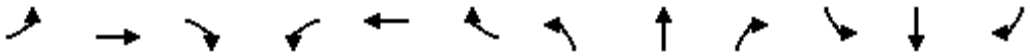
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 28 | 880 | 17 | 37 | 1024 | 65 | 14 | 17 | 42 | 56 | 17 | 41 |
| Future Volume (veh/h) | 28 | 880 | 17 | 37 | 1024 | 65 | 14 | 17 | 42 | 56 | 17 | 41 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 0.99 | 0.99 | | 0.99 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1863 | 1891 | 1881 | 1863 | 1881 |
| Adj Flow Rate, veh/h | 29 | 898 | 16 | 38 | 1045 | 63 | 14 | 17 | 43 | 57 | 17 | 37 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 86 | 2501 | 44 | 95 | 2483 | 148 | 59 | 47 | 93 | 122 | 29 | 51 |
| Arrive On Green | 0.82 | 0.81 | 0.80 | 0.82 | 0.81 | 0.80 | 0.10 | 0.10 | 0.09 | 0.10 | 0.10 | 0.09 |
| Sat Flow, veh/h | 64 | 3074 | 54 | 73 | 3052 | 182 | 215 | 489 | 977 | 756 | 307 | 532 |
| Grp Volume(v), veh/h | 472 | 0 | 471 | 582 | 0 | 564 | 74 | 0 | 0 | 111 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1595 | 0 | 1597 | 1677 | 0 | 1631 | 1681 | 0 | 0 | 1595 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 8.6 | 0.0 | 0.0 | 10.9 | 0.0 | 0.0 | 0.0 | 2.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 7.4 | 0.0 | 8.6 | 9.5 | 0.0 | 10.9 | 4.5 | 0.0 | 0.0 | 7.0 | 0.0 | 0.0 |
| Prop In Lane | 0.06 | | 0.03 | 0.07 | | 0.11 | 0.19 | | 0.58 | 0.51 | | 0.33 |
| Lane Grp Cap(c), veh/h | 1347 | 0 | 1299 | 1414 | 0 | 1327 | 215 | 0 | 0 | 216 | 0 | 0 |
| V/C Ratio(X) | 0.35 | 0.00 | 0.36 | 0.41 | 0.00 | 0.43 | 0.34 | 0.00 | 0.00 | 0.51 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1347 | 0 | 1299 | 1414 | 0 | 1327 | 536 | 0 | 0 | 516 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.6 | 0.0 | 2.7 | 2.8 | 0.0 | 2.9 | 47.3 | 0.0 | 0.0 | 47.9 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.7 | 0.0 | 0.8 | 0.9 | 0.0 | 1.0 | 1.4 | 0.0 | 0.0 | 2.7 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 6.6 | 0.0 | 7.1 | 8.5 | 0.0 | 9.0 | 3.9 | 0.0 | 0.0 | 6.1 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.3 | 0.0 | 3.5 | 3.7 | 0.0 | 3.9 | 48.6 | 0.0 | 0.0 | 50.6 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 943 | | | 1146 | | | 74 | | | 111 | |
| Approach Delay, s/veh | | 3.4 | | | 3.8 | | | 48.6 | | | 50.6 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 94.5 | | 15.5 | | 94.5 | | 15.5 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 10.6 | | 9.0 | | 12.9 | | 6.5 |
| Green Ext Time (p_c), s | | 4.2 | | 0.5 | | 5.6 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.4 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 7 | 14 | 3 | 4 | 28 | 16 | 3 | 109 | 11 | 5 | 101 | 18 |
| Future Volume (vph) | 7 | 14 | 3 | 4 | 28 | 16 | 3 | 109 | 11 | 5 | 101 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 6 | | 6 | 6 | | 6 | 2 | | 4 | 4 | | 2 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 6% | 0% | 0% | 0% | 0% | 1% | 11% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.1 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 7 | 14 | 3 | 4 | 28 | 16 | 3 | 109 | 11 | 5 | 101 | 18 |
| Future Vol, veh/h | 7 | 14 | 3 | 4 | 28 | 16 | 3 | 109 | 11 | 5 | 101 | 18 |
| Peak Hour Factor | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 1 | 11 |
| Mvmt Flow | 9 | 18 | 4 | 5 | 35 | 20 | 4 | 138 | 14 | 6 | 128 | 23 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.8 | 7.8 | 8.2 | 8.1 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 29% | 8% | 4% |
| Vol Thru, % | 89% | 58% | 58% | 81% |
| Vol Right, % | 9% | 12% | 33% | 15% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 123 | 24 | 48 | 124 |
| LT Vol | 3 | 7 | 4 | 5 |
| Through Vol | 109 | 14 | 28 | 101 |
| RT Vol | 11 | 3 | 16 | 18 |
| Lane Flow Rate | 156 | 30 | 61 | 157 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.179 | 0.039 | 0.075 | 0.183 |
| Departure Headway (Hd) | 4.234 | 4.636 | 4.434 | 4.201 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 853 | 775 | 811 | 859 |
| Service Time | 2.234 | 2.647 | 2.442 | 2.201 |
| HCM Lane V/C Ratio | 0.183 | 0.039 | 0.075 | 0.183 |
| HCM Control Delay | 8.2 | 7.8 | 7.8 | 8.1 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.6 | 0.1 | 0.2 | 0.7 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 9 | 51 | 75 | 8 | 18 | 38 |
| Future Volume (vph) | 9 | 51 | 75 | 8 | 18 | 38 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | 1 | 13 | | 5 | 5 | |
| Peak Hour Factor | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |
| Heavy Vehicles (%) | 11% | 0% | 0% | 0% | 6% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

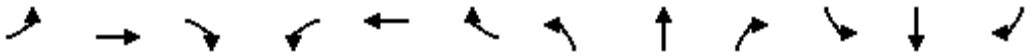
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.5 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 9 | 51 | 75 | 8 | 18 | 38 |
| Future Vol, veh/h | 9 | 51 | 75 | 8 | 18 | 38 |
| Conflicting Peds, #/hr | 1 | 13 | 0 | 5 | 5 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 72 | 72 | 72 | 72 | 72 | 72 |
| Heavy Vehicles, % | 11 | 0 | 0 | 0 | 6 | 0 |
| Mvmt Flow | 13 | 71 | 104 | 11 | 25 | 53 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 219 | 128 | 0 | 0 | 120 | 0 |
| Stage 1 | 115 | - | - | - | - | - |
| Stage 2 | 104 | - | - | - | - | - |
| Critical Hdwy | 6.51 | 6.2 | - | - | 4.16 | - |
| Critical Hdwy Stg 1 | 5.51 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.51 | - | - | - | - | - |
| Follow-up Hdwy | 3.599 | 3.3 | - | - | 2.254 | - |
| Pot Cap-1 Maneuver | 750 | 927 | - | - | 1443 | - |
| Stage 1 | 888 | - | - | - | - | - |
| Stage 2 | 898 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 732 | 911 | - | - | 1436 | - |
| Mov Cap-2 Maneuver | 732 | - | - | - | - | - |
| Stage 1 | 884 | - | - | - | - | - |
| Stage 2 | 881 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.5 | 0 | 2.4 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 879 | 1436 | - |
| HCM Lane V/C Ratio | - | - | 0.095 | 0.017 | - |
| HCM Control Delay (s) | - | - | 9.5 | 7.6 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |

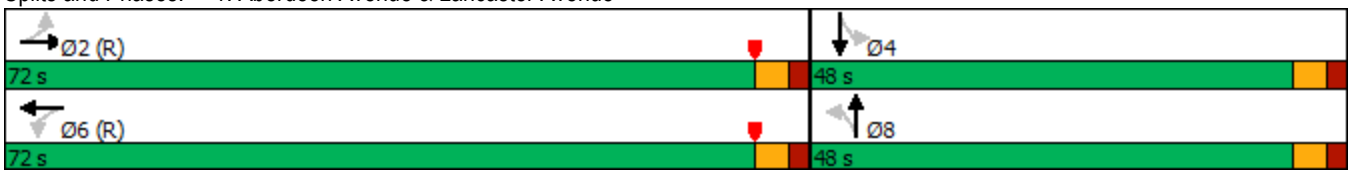


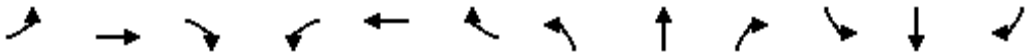
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 558 | 33 | 25 | 565 | 33 | 78 | 51 | 31 | 66 | 49 | 39 |
| Future Volume (vph) | 29 | 558 | 33 | 25 | 565 | 33 | 78 | 51 | 31 | 66 | 49 | 39 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 633 | 0 | 0 | 637 | 0 | 0 | 164 | 0 | 0 | 157 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.31 | | | 0.31 | | | 0.79 | | | 0.64 | |
| Control Delay | | 6.3 | | | 5.6 | | | 72.1 | | | 57.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 6.3 | | | 5.6 | | | 72.1 | | | 57.1 | |
| Queue Length 50th (ft) | | 53 | | | 71 | | | 123 | | | 114 | |
| Queue Length 95th (ft) | | 158 | | | 127 | | | 188 | | | 174 | |
| Internal Link Dist (ft) | | 1062 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 2028 | | | 2088 | | | 437 | | | 515 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.31 | | | 0.31 | | | 0.38 | | | 0.30 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 558 | 33 | 25 | 565 | 33 | 78 | 51 | 31 | 66 | 49 | 39 |
| Future Volume (vph) | 29 | 558 | 33 | 25 | 565 | 33 | 78 | 51 | 31 | 66 | 49 | 39 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.90 | | | *0.92 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.99 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2966 | | | 3026 | | | 1665 | | | 1820 | |
| Flt Permitted | | 0.90 | | | 0.91 | | | 0.70 | | | 0.76 | |
| Satd. Flow (perm) | | 2672 | | | 2754 | | | 1194 | | | 1406 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 30 | 569 | 34 | 26 | 577 | 34 | 80 | 52 | 32 | 67 | 50 | 40 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 633 | 0 | 0 | 637 | 0 | 0 | 164 | 0 | 0 | 157 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 90.1 | | | 90.1 | | | 19.9 | | | 19.9 | |
| Effective Green, g (s) | | 91.1 | | | 91.1 | | | 20.9 | | | 20.9 | |
| Actuated g/C Ratio | | 0.76 | | | 0.76 | | | 0.17 | | | 0.17 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 2028 | | | 2090 | | | 207 | | | 244 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.24 | | | 0.23 | | | c0.14 | | | 0.11 | |
| v/c Ratio | | 0.31 | | | 0.30 | | | 0.79 | | | 0.64 | |
| Uniform Delay, d1 | | 4.6 | | | 4.5 | | | 47.5 | | | 46.1 | |
| Progression Factor | | 1.13 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 0.4 | | | 18.4 | | | 5.7 | |
| Delay (s) | | 5.6 | | | 4.9 | | | 65.9 | | | 51.8 | |
| Level of Service | | A | | | A | | | E | | | D | |
| Approach Delay (s) | | 5.6 | | | 4.9 | | | 65.9 | | | 51.8 | |
| Approach LOS | | A | | | A | | | E | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 16.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.40 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 59.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 592 | 61 | 54 | 609 | 15 | 60 |
| Future Volume (vph) | 592 | 61 | 54 | 609 | 15 | 60 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | -2% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 1647 | 89 | |
| Travel Time (s) | 7.3 | | | 32.1 | 2.4 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.1 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 592 | 61 | 54 | 609 | 15 | 60 |
| Future Vol, veh/h | 592 | 61 | 54 | 609 | 15 | 60 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | -2 | - |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 1 | 0 | 0 | 1 | 0 | 0 |
| Mvmt Flow | 604 | 62 | 55 | 621 | 15 | 61 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 666 | 0 | 1056 | 333 |
| Stage 1 | - | - | - | - | 635 | - |
| Stage 2 | - | - | - | - | 421 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1161 | - | *197 | *968 |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *1010 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 1161 | - | *183 | *968 |
| Mov Cap-2 Maneuver | - | - | - | - | *183 | - |
| Stage 1 | - | - | - | - | *1003 | - |
| Stage 2 | - | - | - | - | *938 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 0.9 | 13.1 |
| HCM LOS | | | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 521 | - | - | 1161 | - |
| HCM Lane V/C Ratio | 0.147 | - | - | 0.047 | - |
| HCM Control Delay (s) | 13.1 | - | - | 8.3 | 0.3 |
| HCM Lane LOS | B | - | - | A | A |
| HCM 95th %tile Q(veh) | 0.5 | - | - | 0.1 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 8 | 69 | 90 | 10 | 26 | 81 |
| Future Volume (vph) | 8 | 69 | 90 | 10 | 26 | 81 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | -2% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 296 | | | 199 |
| Travel Time (s) | 2.0 | | 8.1 | | | 5.4 |
| Confl. Peds. (#/hr) | | | | 6 | 6 | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

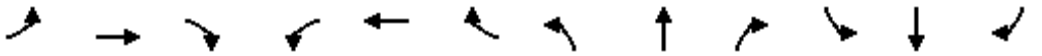
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 8 | 69 | 90 | 10 | 26 | 81 |
| Future Vol, veh/h | 8 | 69 | 90 | 10 | 26 | 81 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 6 | 6 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | -2 | - | 2 | - | - | -2 |
| Peak Hour Factor | 98 | 98 | 98 | 98 | 98 | 98 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 2 |
| Mvmt Flow | 8 | 70 | 92 | 10 | 27 | 83 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 240 | 103 | 0 | 0 | 108 | 0 |
| Stage 1 | 103 | - | - | - | - | - |
| Stage 2 | 137 | - | - | - | - | - |
| Critical Hdwy | 6 | 6 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 922 | 1022 | - | - | 1103 | - |
| Stage 1 | 1085 | - | - | - | - | - |
| Stage 2 | 1074 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 893 | 1016 | - | - | 1097 | - |
| Mov Cap-2 Maneuver | 893 | - | - | - | - | - |
| Stage 1 | 1078 | - | - | - | - | - |
| Stage 2 | 1046 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.9 | 0 | 2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1002 | 1097 | - |
| HCM Lane V/C Ratio | - | - | 0.078 | 0.024 | - |
| HCM Control Delay (s) | - | - | 8.9 | 8.4 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.3 | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 58 | 506 | 28 | 43 | 510 | 99 | 31 | 54 | 61 | 74 | 68 | 55 |
| Future Volume (vph) | 58 | 506 | 28 | 43 | 510 | 99 | 31 | 54 | 61 | 74 | 68 | 55 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1132 | | | 702 | | | 532 | | | 488 | |
| Travel Time (s) | | 30.9 | | | 19.1 | | | 14.5 | | | 13.3 | |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 623 | 0 | 0 | 582 | 104 | 33 | 121 | 0 | 78 | 130 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 30.0 | 61.0 | | 31.0 | 31.0 | 31.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 25.0% | 50.8% | | 25.8% | 25.8% | 25.8% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.31 | | | 0.27 | 0.10 | 0.28 | 0.56 | | 0.60 | 0.61 | |
| Control Delay | | 4.6 | | | 3.0 | 3.0 | 50.8 | 57.8 | | 66.8 | 60.5 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 4.6 | | | 3.0 | 3.0 | 50.8 | 57.8 | | 66.8 | 60.5 | |
| Queue Length 50th (ft) | | 60 | | | 38 | 11 | 23 | 89 | | 58 | 96 | |
| Queue Length 95th (ft) | | 103 | | | 49 | 22 | 54 | 144 | | 106 | 155 | |
| Internal Link Dist (ft) | | 1052 | | | 622 | | | 452 | | | 408 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 2034 | | | 2117 | 1064 | 206 | 374 | | 226 | 369 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.31 | | | 0.27 | 0.10 | 0.16 | 0.32 | | 0.35 | 0.35 | |

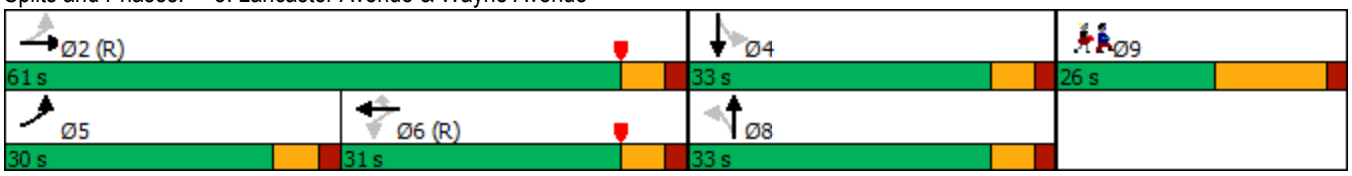
Intersection Summary

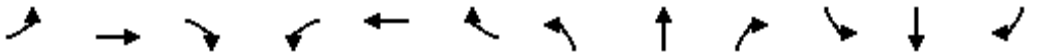
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 26.0 |
| Total Split (%) | 22% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 58 | 506 | 28 | 43 | 510 | 99 | 31 | 54 | 61 | 74 | 68 | 55 |
| Future Volume (vph) | 58 | 506 | 28 | 43 | 510 | 99 | 31 | 54 | 61 | 74 | 68 | 55 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.98 | 1.00 | 0.98 | | 1.00 | 0.98 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.97 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.99 | | | 1.00 | 0.85 | 1.00 | 0.92 | | 1.00 | 0.93 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 3123 | | | 3150 | 1393 | 1522 | 1595 | | 1592 | 1573 | |
| Flt Permitted | | 0.83 | | | 0.86 | 1.00 | 0.55 | 1.00 | | 0.58 | 1.00 | |
| Satd. Flow (perm) | | 2603 | | | 2709 | 1393 | 874 | 1595 | | 964 | 1573 | |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 61 | 533 | 29 | 45 | 537 | 104 | 33 | 57 | 64 | 78 | 72 | 58 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 623 | 0 | 0 | 582 | 104 | 33 | 121 | 0 | 78 | 130 | 0 |
| Confl. Peds. (#/hr) | 7 | | 11 | 11 | | 7 | 16 | | 10 | 10 | | 16 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 0% | 1% | 0% | 0% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 92.8 | | | 92.8 | 92.8 | 15.2 | 15.2 | | 15.2 | 15.2 | |
| Effective Green, g (s) | | 93.8 | | | 93.8 | 92.8 | 16.2 | 16.2 | | 16.2 | 16.2 | |
| Actuated g/C Ratio | | 0.78 | | | 0.78 | 0.77 | 0.13 | 0.13 | | 0.13 | 0.13 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 2034 | | | 2117 | 1077 | 117 | 215 | | 130 | 212 | |
| v/s Ratio Prot | | | | | | | | 0.08 | | | c0.08 | |
| v/s Ratio Perm | | c0.24 | | | 0.21 | 0.07 | 0.04 | | | 0.08 | | |
| v/c Ratio | | 0.31 | | | 0.27 | 0.10 | 0.28 | 0.56 | | 0.60 | 0.61 | |
| Uniform Delay, d1 | | 3.8 | | | 3.6 | 3.3 | 46.7 | 48.6 | | 48.9 | 48.9 | |
| Progression Factor | | 1.00 | | | 0.66 | 0.70 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.1 | | | 0.3 | 0.2 | 1.3 | 3.3 | | 7.3 | 5.2 | |
| Delay (s) | | 3.8 | | | 2.7 | 2.5 | 48.0 | 51.9 | | 56.1 | 54.1 | |
| Level of Service | | A | | | A | A | D | D | | E | D | |
| Approach Delay (s) | | 3.8 | | | 2.7 | | | 51.1 | | | 54.9 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.1 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.42 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 62.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 598 | 65 | 23 | 641 | 27 | 18 |
| Future Volume (vph) | 598 | 65 | 23 | 641 | 27 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 702 | | | 1142 | 450 | |
| Travel Time (s) | 19.1 | | | 31.1 | 12.3 | |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 736 | 0 | 0 | 738 | 50 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 69.0 | | 12.0 | 81.0 | 39.0 | |
| Total Split (%) | 57.5% | | 10.0% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.28 | | | 0.31 | 0.35 | |
| Control Delay | 1.9 | | | 2.4 | 58.0 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 1.9 | | | 2.4 | 58.0 | |
| Queue Length 50th (ft) | 28 | | | 38 | 37 | |
| Queue Length 95th (ft) | 47 | | | 52 | 77 | |
| Internal Link Dist (ft) | 622 | | | 1062 | 370 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2633 | | | 2412 | 489 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.28 | | | 0.31 | 0.10 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 598 | 65 | 23 | 641 | 27 | 18 |
| Future Volume (vph) | 598 | 65 | 23 | 641 | 27 | 18 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 15 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.99 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.95 | |
| Flt Protected | 1.00 | | | 1.00 | 0.97 | |
| Satd. Flow (prot) | 3126 | | | 3140 | 1722 | |
| Flt Permitted | 1.00 | | | 0.91 | 0.97 | |
| Satd. Flow (perm) | 3126 | | | 2862 | 1722 | |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 664 | 72 | 26 | 712 | 30 | 20 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 736 | 0 | 0 | 738 | 50 | 0 |
| Confl. Peds. (#/hr) | | 3 | 3 | | 18 | 4 |
| Heavy Vehicles (%) | 1% | 0% | 0% | 1% | 0% | 6% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 100.1 | | | 100.1 | 8.9 | |
| Effective Green, g (s) | 101.1 | | | 101.1 | 9.9 | |
| Actuated g/C Ratio | 0.84 | | | 0.84 | 0.08 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2633 | | | 2411 | 142 | |
| v/s Ratio Prot | 0.24 | | | | c0.03 | |
| v/s Ratio Perm | | | | c0.26 | | |
| v/c Ratio | 0.28 | | | 0.31 | 0.35 | |
| Uniform Delay, d1 | 1.9 | | | 2.0 | 52.0 | |
| Progression Factor | 0.78 | | | 0.96 | 1.00 | |
| Incremental Delay, d2 | 0.3 | | | 0.1 | 1.5 | |
| Delay (s) | 1.8 | | | 2.0 | 53.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.8 | | | 2.0 | 53.5 | |
| Approach LOS | A | | | A | D | |

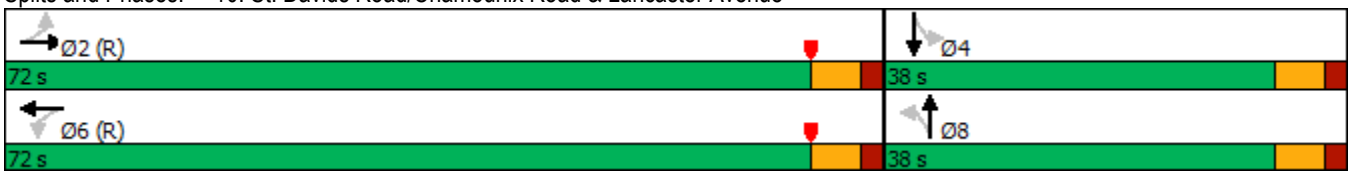
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.6 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.32 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 47.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 22 | 636 | 6 | 31 | 674 | 35 | 12 | 6 | 43 | 38 | 13 | 25 |
| Future Volume (vph) | 22 | 636 | 6 | 31 | 674 | 35 | 12 | 6 | 43 | 38 | 13 | 25 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | Yes |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1647 | | | 744 | | | 642 | | | 402 | |
| Travel Time (s) | | 32.1 | | | 14.5 | | | 17.5 | | | 11.0 | |
| Confl. Peds. (#/hr) | | | | | | | | | 1 | 1 | | |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 0% | 1% | 0% | 0% | 0% | 2% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

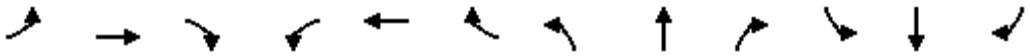
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 22 | 636 | 6 | 31 | 674 | 35 | 12 | 6 | 43 | 38 | 13 | 25 |
| Future Volume (veh/h) | 22 | 636 | 6 | 31 | 674 | 35 | 12 | 6 | 43 | 38 | 13 | 25 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1765 | 1782 | 1845 | 1828 | 1845 | 1891 | 1864 | 1891 | 1881 | 1881 | 1881 |
| Adj Flow Rate, veh/h | 23 | 677 | 5 | 33 | 717 | 35 | 13 | 6 | 46 | 40 | 14 | 21 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Percent Heavy Veh, % | 1 | 1 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 95 | 2647 | 19 | 122 | 2569 | 124 | 56 | 18 | 84 | 108 | 28 | 33 |
| Arrive On Green | 0.83 | 0.84 | 0.83 | 0.83 | 0.84 | 0.83 | 0.06 | 0.07 | 0.06 | 0.06 | 0.07 | 0.06 |
| Sat Flow, veh/h | 71 | 3157 | 23 | 103 | 3064 | 148 | 230 | 262 | 1192 | 824 | 393 | 473 |
| Grp Volume(v), veh/h | 359 | 0 | 346 | 398 | 0 | 387 | 65 | 0 | 0 | 75 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1649 | 0 | 1602 | 1677 | 0 | 1638 | 1685 | 0 | 0 | 1690 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 4.9 | 0.0 | 0.0 | 5.5 | 0.0 | 0.0 | 0.0 | 0.5 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 4.6 | 0.0 | 4.9 | 5.0 | 0.0 | 5.5 | 4.0 | 0.0 | 0.0 | 4.5 | 0.0 | 0.0 |
| Prop In Lane | 0.06 | | 0.01 | 0.08 | | 0.09 | 0.20 | | 0.71 | 0.53 | | 0.28 |
| Lane Grp Cap(c), veh/h | 1402 | 0 | 1343 | 1427 | 0 | 1373 | 143 | 0 | 0 | 154 | 0 | 0 |
| V/C Ratio(X) | 0.26 | 0.00 | 0.26 | 0.28 | 0.00 | 0.28 | 0.45 | 0.00 | 0.00 | 0.49 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1402 | 0 | 1343 | 1427 | 0 | 1373 | 499 | 0 | 0 | 497 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 1.8 | 0.0 | 1.8 | 1.8 | 0.0 | 1.9 | 49.9 | 0.0 | 0.0 | 50.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.4 | 0.0 | 0.5 | 0.5 | 0.0 | 0.5 | 3.2 | 0.0 | 0.0 | 3.4 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 4.5 | 0.0 | 4.1 | 5.0 | 0.0 | 4.8 | 3.7 | 0.0 | 0.0 | 4.3 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 2.2 | 0.0 | 2.3 | 2.3 | 0.0 | 2.4 | 53.1 | 0.0 | 0.0 | 53.3 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 705 | | | 785 | | | 65 | | | 75 | |
| Approach Delay, s/veh | | 2.3 | | | 2.4 | | | 53.1 | | | 53.3 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 97.2 | | 12.8 | | 97.2 | | 12.8 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 6.9 | | 6.5 | | 7.5 | | 6.0 |
| Green Ext Time (p_c), s | | 2.8 | | 0.3 | | 3.3 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 6.7 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 24 | 2 | 2 | 3 | 11 | 8 | 5 | 74 | 2 | 5 | 45 | 12 |
| Future Volume (vph) | 24 | 2 | 2 | 3 | 11 | 8 | 5 | 74 | 2 | 5 | 45 | 12 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1096 | | | 898 | | | 201 | | | 296 | |
| Travel Time (s) | | 29.9 | | | 24.5 | | | 5.5 | | | 8.1 | |
| Confl. Peds. (#/hr) | 1 | | 2 | 2 | | 1 | 6 | | 3 | 3 | | 6 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 1% | 0% | 0% | 0% | 8% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 7.6 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Vol, veh/h | 24 | 2 | 2 | 3 | 11 | 8 | 5 | 74 | 2 | 5 | 45 | 12 |
| Future Vol, veh/h | 24 | 2 | 2 | 3 | 11 | 8 | 5 | 74 | 2 | 5 | 45 | 12 |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 8 |
| Mvmt Flow | 33 | 3 | 3 | 4 | 15 | 11 | 7 | 101 | 3 | 7 | 62 | 16 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.7 | 7.3 | 7.7 | 7.5 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 6% | 86% | 14% | 8% |
| Vol Thru, % | 91% | 7% | 50% | 73% |
| Vol Right, % | 2% | 7% | 36% | 19% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 81 | 28 | 22 | 62 |
| LT Vol | 5 | 24 | 3 | 5 |
| Through Vol | 74 | 2 | 11 | 45 |
| RT Vol | 2 | 2 | 8 | 12 |
| Lane Flow Rate | 111 | 38 | 30 | 85 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.126 | 0.047 | 0.034 | 0.094 |
| Departure Headway (Hd) | 4.081 | 4.39 | 4.075 | 4.004 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 872 | 804 | 863 | 887 |
| Service Time | 2.137 | 2.484 | 2.175 | 2.067 |
| HCM Lane V/C Ratio | 0.127 | 0.047 | 0.035 | 0.096 |
| HCM Control Delay | 7.7 | 7.7 | 7.3 | 7.5 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0.4 | 0.1 | 0.1 | 0.3 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 4 | 37 | 22 | 3 | 10 | 30 |
| Future Volume (vph) | 4 | 37 | 22 | 3 | 10 | 30 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1096 | | 590 | | | 450 |
| Travel Time (s) | 29.9 | | 16.1 | | | 12.3 |
| Confl. Peds. (#/hr) | | 5 | | 4 | 4 | |
| Peak Hour Factor | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

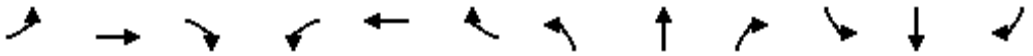
| Intersection | |
|---|---|
| Int Delay, s/veh | 4 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 4 | 37 | 22 | 3 | 10 | 30 |
| Future Vol, veh/h | 4 | 37 | 22 | 3 | 10 | 30 |
| Conflicting Peds, #/hr | 0 | 5 | 0 | 4 | 4 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 73 | 73 | 73 | 73 | 73 | 73 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 0 |
| Mvmt Flow | 5 | 51 | 30 | 4 | 14 | 41 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 105 | 41 | 0 | 0 | 38 | 0 |
| Stage 1 | 36 | - | - | - | - | - |
| Stage 2 | 69 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1040 | 1101 | - | - | 1165 | - |
| Stage 1 | 1154 | - | - | - | - | - |
| Stage 2 | 1113 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 1023 | 1092 | - | - | 1161 | - |
| Mov Cap-2 Maneuver | 1023 | - | - | - | - | - |
| Stage 1 | 1149 | - | - | - | - | - |
| Stage 2 | 1100 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.5 | 0 | 2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1085 | 1161 | - |
| HCM Lane V/C Ratio | - | - | 0.052 | 0.012 | - |
| HCM Control Delay (s) | - | - | 8.5 | 8.1 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

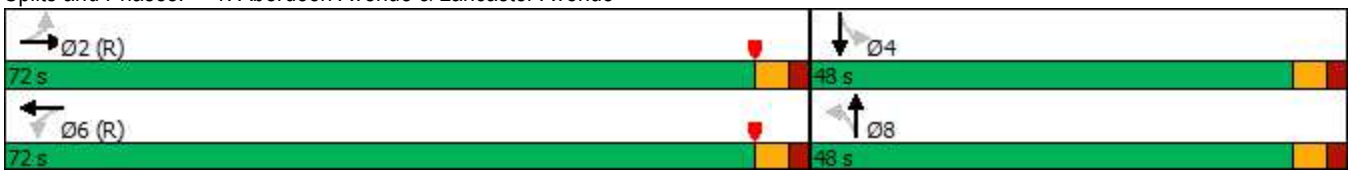


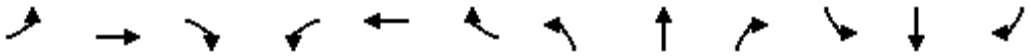
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 724 | 46 | 32 | 779 | 74 | 107 | 67 | 44 | 118 | 63 | 83 |
| Future Volume (vph) | 39 | 724 | 46 | 32 | 779 | 74 | 107 | 67 | 44 | 118 | 63 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 376 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 7.3 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 843 | 0 | 0 | 921 | 0 | 0 | 227 | 0 | 0 | 275 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |
| v/c Ratio | | 0.62 | | | 0.56 | | | 0.77 | | | 0.81 | |
| Control Delay | | 19.7 | | | 13.0 | | | 58.5 | | | 59.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | | 0.0 | |
| Total Delay | | 19.7 | | | 13.0 | | | 58.5 | | | 59.9 | |
| Queue Length 50th (ft) | | 269 | | | 197 | | | 163 | | | 200 | |
| Queue Length 95th (ft) | | 396 | | | 333 | | | 234 | | | 274 | |
| Internal Link Dist (ft) | | 1072 | | | 296 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | | | | |
| Base Capacity (vph) | | 1354 | | | 1635 | | | 421 | | | 486 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | | | 0 | |
| Reduced v/c Ratio | | 0.62 | | | 0.56 | | | 0.54 | | | 0.57 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 724 | 46 | 32 | 779 | 74 | 107 | 67 | 44 | 118 | 63 | 83 |
| Future Volume (vph) | 39 | 724 | 46 | 32 | 779 | 74 | 107 | 67 | 44 | 118 | 63 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | | | 4.0 | |
| Lane Util. Factor | | *0.75 | | | *0.86 | | | 1.00 | | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 0.97 | | | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | | | 0.98 | |
| Satd. Flow (prot) | | 2356 | | | 2758 | | | 1673 | | | 1796 | |
| Flt Permitted | | 0.85 | | | 0.87 | | | 0.67 | | | 0.72 | |
| Satd. Flow (perm) | | 1999 | | | 2413 | | | 1149 | | | 1328 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 41 | 754 | 48 | 33 | 811 | 77 | 111 | 70 | 46 | 123 | 66 | 86 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 843 | 0 | 0 | 921 | 0 | 0 | 227 | 0 | 0 | 275 | 0 |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Actuated Green, G (s) | | 80.4 | | | 80.4 | | | 29.6 | | | 29.6 | |
| Effective Green, g (s) | | 81.4 | | | 81.4 | | | 30.6 | | | 30.6 | |
| Actuated g/C Ratio | | 0.68 | | | 0.68 | | | 0.26 | | | 0.26 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | | | 3.0 | |
| Lane Grp Cap (vph) | | 1355 | | | 1636 | | | 292 | | | 338 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.42 | | | 0.38 | | | 0.20 | | | c0.21 | |
| v/c Ratio | | 0.62 | | | 0.56 | | | 0.78 | | | 0.81 | |
| Uniform Delay, d1 | | 10.7 | | | 10.0 | | | 41.5 | | | 42.0 | |
| Progression Factor | | 1.40 | | | 1.00 | | | 1.00 | | | 1.00 | |
| Incremental Delay, d2 | | 2.1 | | | 1.4 | | | 12.2 | | | 13.9 | |
| Delay (s) | | 17.1 | | | 11.5 | | | 53.8 | | | 55.9 | |
| Level of Service | | B | | | B | | | D | | | E | |
| Approach Delay (s) | | 17.1 | | | 11.5 | | | 53.8 | | | 55.9 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 23.2 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.67 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 79.4% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 796 | 79 | 70 | 870 | 20 | 77 |
| Future Volume (vph) | 796 | 79 | 70 | 870 | 20 | 77 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 12 | 12 | 10 | 12 | 12 |
| Grade (%) | 1% | | | -1% | 0% | |
| Link Speed (mph) | 35 | | | 35 | 25 | |
| Link Distance (ft) | 376 | | | 1639 | 89 | |
| Travel Time (s) | 7.3 | | | 31.9 | 2.4 | |
| Confl. Peds. (#/hr) | | 1 | 1 | | | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 4% | 2% | 2% | 3% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Free | | | Free | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 1.8 |

| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 796 | 79 | 70 | 870 | 20 | 77 |
| Future Vol, veh/h | 796 | 79 | 70 | 870 | 20 | 77 |
| Conflicting Peds, #/hr | 0 | 1 | 1 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | - | - | - | - | 0 | - |
| Veh in Median Storage, # | 0 | - | - | 0 | 0 | - |
| Grade, % | 1 | - | - | -1 | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 4 | 2 | 2 | 3 | 2 | 2 |
| Mvmt Flow | 829 | 82 | 73 | 906 | 21 | 80 |

| Major/Minor | Major1 | | Major2 | | Minor1 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 0 | 0 | 912 | 0 | 1470 | 457 |
| Stage 1 | - | - | - | - | 871 | - |
| Stage 2 | - | - | - | - | 599 | - |
| Critical Hdwy | - | - | 3.9 | - | 7.7 | 7.2 |
| Critical Hdwy Stg 1 | - | - | - | - | 6.7 | - |
| Critical Hdwy Stg 2 | - | - | - | - | 6.7 | - |
| Follow-up Hdwy | - | - | 2.4 | - | 2.8 | 2.9 |
| Pot Cap-1 Maneuver | - | - | 1019 | - | *93 | *880 |
| Stage 1 | - | - | - | - | *911 | - |
| Stage 2 | - | - | - | - | *878 | - |
| Platoon blocked, % | - | - | 1 | - | | 1 |
| Mov Cap-1 Maneuver | - | - | 1018 | - | *80 | *879 |
| Mov Cap-2 Maneuver | - | - | - | - | *80 | - |
| Stage 1 | - | - | - | - | *910 | - |
| Stage 2 | - | - | - | - | *751 | - |

| Approach | EB | WB | NB |
|---|---|---|---|
| HCM Control Delay, s | 0 | 1.1 | 24.2 |
| HCM LOS | | | C |

| Minor Lane/Major Mvmt | NBLn1 | EBT | EBR | WBL | WBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | 287 | - | - | 1018 | - |
| HCM Lane V/C Ratio | 0.352 | - | - | 0.072 | - |
| HCM Control Delay (s) | 24.2 | - | - | 8.8 | 0.5 |
| HCM Lane LOS | C | - | - | A | A |
| HCM 95th %tile Q(veh) | 1.5 | - | - | 0.2 | - |

| Notes | | | |
|---|---|---|---|
| ~: Volume exceeds capacity | $: Delay exceeds 300s | +: Computation Not Defined | *: All major volume in platoon |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 11 | 89 | 117 | 14 | 34 | 107 |
| Future Volume (vph) | 11 | 89 | 117 | 14 | 34 | 107 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | 0% | | 2% | | | -2% |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 74 | | 311 | | | 199 |
| Travel Time (s) | 2.0 | | 8.5 | | | 5.4 |
| Confl. Peds. (#/hr) | | | | 1 | 1 | |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 0% | 0% | 2% | 2% | 2% | 5% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Control Type: Unsignalized | |

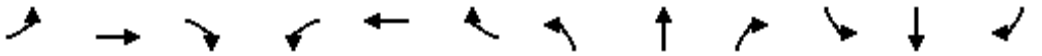
| Intersection | |
|---|---|
| Int Delay, s/veh | 3.2 |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 11 | 89 | 117 | 14 | 34 | 107 |
| Future Vol, veh/h | 11 | 89 | 117 | 14 | 34 | 107 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 1 | 1 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 2 | - | - | -2 |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 0 | 0 | 2 | 2 | 2 | 5 |
| Mvmt Flow | 11 | 93 | 122 | 15 | 35 | 111 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 312 | 131 | 0 | 0 | 138 | 0 |
| Stage 1 | 131 | - | - | - | - | - |
| Stage 2 | 181 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 832 | 980 | - | - | 1077 | - |
| Stage 1 | 1041 | - | - | - | - | - |
| Stage 2 | 1029 | - | - | - | - | - |
| Platoon blocked, % | 1 | | - | - | | - |
| Mov Cap-1 Maneuver | 802 | 979 | - | - | 1076 | - |
| Mov Cap-2 Maneuver | 802 | - | - | - | - | - |
| Stage 1 | 1040 | - | - | - | - | - |
| Stage 2 | 993 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 9.2 | 0 | 2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 956 | 1076 | - |
| HCM Lane V/C Ratio | - | - | 0.109 | 0.033 | - |
| HCM Control Delay (s) | - | - | 9.2 | 8.5 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.4 | 0.1 | - |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 69 | 647 | 83 | 32 | 664 | 92 | 44 | 115 | 68 | 107 | 121 | 76 |
| Future Volume (vph) | 69 | 647 | 83 | 32 | 664 | 92 | 44 | 115 | 68 | 107 | 121 | 76 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 160 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 1 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 465 | | | 678 | | | 709 | | | 514 | |
| Travel Time (s) | | 12.7 | | | 18.5 | | | 19.3 | | | 14.0 | |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 868 | 0 | 0 | 757 | 100 | 48 | 199 | 0 | 116 | 215 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Detector Phase | 5 | 2 | | 6 | 6 | 6 | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 3.0 | 10.0 | | 10.0 | 10.0 | 10.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Split (s) | 9.0 | 16.0 | | 16.0 | 16.0 | 16.0 | 9.0 | 9.0 | | 9.0 | 9.0 | |
| Total Split (s) | 12.0 | 66.0 | | 54.0 | 54.0 | 54.0 | 33.0 | 33.0 | | 33.0 | 33.0 | |
| Total Split (%) | 10.0% | 55.0% | | 45.0% | 45.0% | 45.0% | 27.5% | 27.5% | | 27.5% | 27.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | 0.0 | -1.0 | -1.0 | | -1.0 | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lead/Lag | Lead | | | Lag | Lag | Lag | | | | | | |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | Yes | | | | | | |
| Recall Mode | None | C-Max | | C-Max | C-Max | C-Max | None | None | | None | None | |
| v/c Ratio | | 0.50 | | | 0.39 | 0.11 | 0.39 | 0.65 | | 0.85 | 0.74 | |
| Control Delay | | 9.1 | | | 4.1 | 4.0 | 50.2 | 54.5 | | 91.5 | 60.4 | |
| Queue Delay | | 0.0 | | | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 9.1 | | | 4.1 | 4.0 | 50.2 | 54.5 | | 91.5 | 60.4 | |
| Queue Length 50th (ft) | | 140 | | | 54 | 13 | 32 | 142 | | 87 | 156 | |
| Queue Length 95th (ft) | | 208 | | | 60 | 22 | 70 | 215 | | #176 | 235 | |
| Internal Link Dist (ft) | | 385 | | | 598 | | | 629 | | | 434 | |
| Turn Bay Length (ft) | | | | | | 160 | | | | | | |
| Base Capacity (vph) | | 1721 | | | 1962 | 913 | 150 | 370 | | 166 | 354 | |
| Starvation Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | 0 | 0 | 0 | | 0 | 0 | |
| Reduced v/c Ratio | | 0.50 | | | 0.39 | 0.11 | 0.32 | 0.54 | | 0.70 | 0.61 | |

Intersection Summary

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Right Turn on Red | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Peak Hour Factor | |
| Heavy Vehicles (%) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |
| Minimum Initial (s) | 9.0 |
| Minimum Split (s) | 21.0 |
| Total Split (s) | 21.0 |
| Total Split (%) | 18% |
| Yellow Time (s) | 10.0 |
| All-Red Time (s) | 2.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Recall Mode | None |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| Queue Length 50th (ft) | |
| Queue Length 95th (ft) | |
| Internal Link Dist (ft) | |
| Turn Bay Length (ft) | |
| Base Capacity (vph) | |
| Starvation Cap Reductn | |
| Spillback Cap Reductn | |
| Storage Cap Reductn | |
| Reduced v/c Ratio | |

| Intersection Summary |
|---|

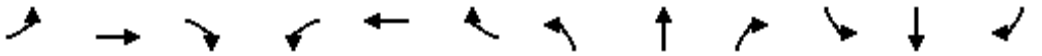
## 8: Lancaster Avenue & Wayne Avenue

Timing Plan: Weekday Midday

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 48 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Coordinated | |

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Lancaster Avenue & Wayne Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 69 | 647 | 83 | 32 | 664 | 92 | 44 | 115 | 68 | 107 | 121 | 76 |
| Future Volume (vph) | 69 | 647 | 83 | 32 | 664 | 92 | 44 | 115 | 68 | 107 | 121 | 76 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 12 | 12 | 10 | 10 | 10 |
| Grade (%) | | 0% | | | 0% | | | 4% | | | -5% | |
| Total Lost time (s) | | 5.0 | | | 5.0 | 6.0 | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | | 0.95 | | | 0.95 | 1.00 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | 0.97 | 1.00 | 0.98 | | 1.00 | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | 1.00 | 0.99 | 1.00 | | 0.98 | 1.00 | |
| Frt | | 0.98 | | | 1.00 | 0.85 | 1.00 | 0.94 | | 1.00 | 0.94 | |
| Flt Protected | | 1.00 | | | 1.00 | 1.00 | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | | 2976 | | | 3096 | 1290 | 1520 | 1584 | | 1535 | 1517 | |
| Flt Permitted | | 0.80 | | | 0.87 | 1.00 | 0.40 | 1.00 | | 0.44 | 1.00 | |
| Satd. Flow (perm) | | 2378 | | | 2708 | 1290 | 644 | 1584 | | 709 | 1517 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 75 | 703 | 90 | 35 | 722 | 100 | 48 | 125 | 74 | 116 | 132 | 83 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 868 | 0 | 0 | 757 | 100 | 48 | 199 | 0 | 116 | 215 | 0 |
| Confl. Peds. (#/hr) | 20 | | 18 | 18 | | 20 | 9 | | 24 | 24 | | 9 |
| Heavy Vehicles (%) | 7% | 5% | 1% | 0% | 3% | 7% | 2% | 4% | 2% | 4% | 7% | 4% |
| Turn Type | pm+pt | NA | | Perm | NA | Perm | Perm | NA | | Perm | NA | |
| Protected Phases | 5 | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | 6 | 8 | | | 4 | | |
| Actuated Green, G (s) | | 86.0 | | | 86.0 | 86.0 | 22.0 | 22.0 | | 22.0 | 22.0 | |
| Effective Green, g (s) | | 87.0 | | | 87.0 | 86.0 | 23.0 | 23.0 | | 23.0 | 23.0 | |
| Actuated g/C Ratio | | 0.72 | | | 0.72 | 0.72 | 0.19 | 0.19 | | 0.19 | 0.19 | |
| Clearance Time (s) | | 6.0 | | | 6.0 | 6.0 | 6.0 | 6.0 | | 6.0 | 6.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | | 1724 | | | 1963 | 924 | 123 | 303 | | 135 | 290 | |
| v/s Ratio Prot | | | | | | | | 0.13 | | | 0.14 | |
| v/s Ratio Perm | | c0.37 | | | 0.28 | 0.08 | 0.07 | | | c0.16 | | |
| v/c Ratio | | 0.50 | | | 0.39 | 0.11 | 0.39 | 0.66 | | 0.86 | 0.74 | |
| Uniform Delay, d1 | | 7.1 | | | 6.3 | 5.2 | 42.4 | 44.8 | | 46.9 | 45.7 | |
| Progression Factor | | 1.00 | | | 0.52 | 0.61 | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | | 0.2 | | | 0.5 | 0.2 | 2.0 | 5.1 | | 38.5 | 9.8 | |
| Delay (s) | | 7.4 | | | 3.8 | 3.4 | 44.4 | 49.9 | | 85.4 | 55.5 | |
| Level of Service | | A | | | A | A | D | D | | F | E | |
| Approach Delay (s) | | 7.4 | | | 3.7 | | | 48.8 | | | 66.0 | |
| Approach LOS | | A | | | A | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 18.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 28.0 |
| Intersection Capacity Utilization | 78.9% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

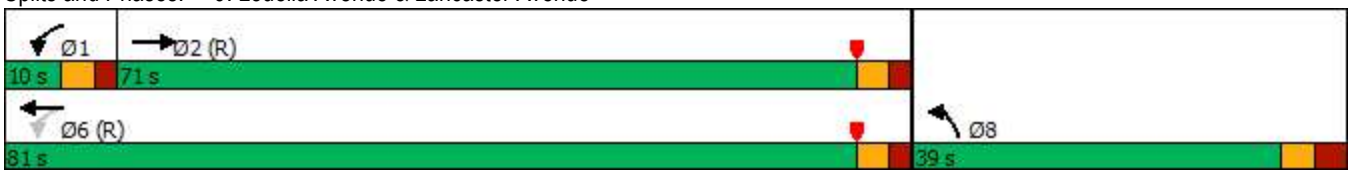
c Critical Lane Group

| Lane Group | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 787 | 64 | 75 | 864 | 20 | 43 |
| Future Volume (vph) | 787 | 64 | 75 | 864 | 20 | 43 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Right Turn on Red | | No | | | | No |
| Link Speed (mph) | 25 | | | 25 | 25 | |
| Link Distance (ft) | 678 | | | 1152 | 490 | |
| Travel Time (s) | 18.5 | | | 31.4 | 13.4 | |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Shared Lane Traffic (%) | | | | | | |
| Lane Group Flow (vph) | 905 | 0 | 0 | 999 | 67 | 0 |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Detector Phase | 2 | | 1 | 6 | 8 | |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 10.0 | | 3.0 | 10.0 | 3.0 | |
| Minimum Split (s) | 15.0 | | 8.0 | 15.0 | 9.0 | |
| Total Split (s) | 71.0 | | 10.0 | 81.0 | 39.0 | |
| Total Split (%) | 59.2% | | 8.3% | 67.5% | 32.5% | |
| Yellow Time (s) | 3.0 | | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | | 2.0 | 2.0 | 3.0 | |
| Lost Time Adjust (s) | -1.0 | | | -1.0 | -1.0 | |
| Total Lost Time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lead/Lag | Lag | | Lead | | | |
| Lead-Lag Optimize? | Yes | | Yes | | | |
| Recall Mode | C-Max | | None | C-Max | Min | |
| v/c Ratio | 0.36 | | | 0.51 | 0.43 | |
| Control Delay | 2.0 | | | 3.1 | 59.0 | |
| Queue Delay | 0.0 | | | 0.0 | 0.0 | |
| Total Delay | 2.0 | | | 3.1 | 59.0 | |
| Queue Length 50th (ft) | 33 | | | 66 | 50 | |
| Queue Length 95th (ft) | 63 | | | 77 | 94 | |
| Internal Link Dist (ft) | 598 | | | 1072 | 410 | |
| Turn Bay Length (ft) | | | | | | |
| Base Capacity (vph) | 2539 | | | 1951 | 474 | |
| Starvation Cap Reductn | 0 | | | 0 | 0 | |
| Spillback Cap Reductn | 0 | | | 0 | 0 | |
| Storage Cap Reductn | 0 | | | 0 | 0 | |
| Reduced v/c Ratio | 0.36 | | | 0.51 | 0.14 | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |

Offset: 54 (45%), Referenced to phase 2:EBT and 6:WBTL, Start of Yellow
Natural Cycle: 40
Control Type: Actuated-Coordinated

Splits and Phases: 9: Louella Avenue & Lancaster Avenue



| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 787 | 64 | 75 | 864 | 20 | 43 |
| Future Volume (vph) | 787 | 64 | 75 | 864 | 20 | 43 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 10 | 10 | 10 | 10 | 15 | 12 |
| Grade (%) | -1% | | | 1% | 4% | |
| Total Lost time (s) | 4.0 | | | 4.0 | 5.0 | |
| Lane Util. Factor | 0.95 | | | 0.95 | 1.00 | |
| Frpb, ped/bikes | 1.00 | | | 1.00 | 0.96 | |
| Flpb, ped/bikes | 1.00 | | | 1.00 | 1.00 | |
| Frt | 0.99 | | | 1.00 | 0.91 | |
| Flt Protected | 1.00 | | | 1.00 | 0.98 | |
| Satd. Flow (prot) | 3053 | | | 3015 | 1637 | |
| Flt Permitted | 1.00 | | | 0.77 | 0.98 | |
| Satd. Flow (perm) | 3053 | | | 2345 | 1637 | |
| Peak-hour factor, PHF | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Adj. Flow (vph) | 837 | 68 | 80 | 919 | 21 | 46 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 905 | 0 | 0 | 999 | 67 | 0 |
| Confl. Peds. (#/hr) | | 11 | 11 | | 18 | 15 |
| Heavy Vehicles (%) | 4% | 0% | 4% | 5% | 5% | 0% |
| Turn Type | NA | | pm+pt | NA | Prot | |
| Protected Phases | 2 | | 1 | 6 | 8 | |
| Permitted Phases | | | 6 | | | |
| Actuated Green, G (s) | 98.8 | | | 98.8 | 10.2 | |
| Effective Green, g (s) | 99.8 | | | 99.8 | 11.2 | |
| Actuated g/C Ratio | 0.83 | | | 0.83 | 0.09 | |
| Clearance Time (s) | 5.0 | | | 5.0 | 6.0 | |
| Vehicle Extension (s) | 3.0 | | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 2539 | | | 1950 | 152 | |
| v/s Ratio Prot | 0.30 | | | | c0.04 | |
| v/s Ratio Perm | | | | c0.43 | | |
| v/c Ratio | 0.36 | | | 0.51 | 0.44 | |
| Uniform Delay, d1 | 2.4 | | | 3.0 | 51.4 | |
| Progression Factor | 0.65 | | | 0.68 | 1.00 | |
| Incremental Delay, d2 | 0.3 | | | 0.2 | 2.0 | |
| Delay (s) | 1.9 | | | 2.2 | 53.5 | |
| Level of Service | A | | | A | D | |
| Approach Delay (s) | 1.9 | | | 2.2 | 53.5 | |
| Approach LOS | A | | | A | D | |

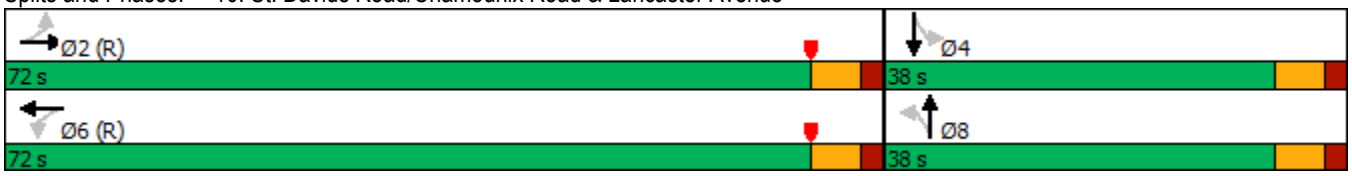
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 3.8 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.53 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 14.0 |
| Intersection Capacity Utilization | 68.5% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 33 | 878 | 18 | 32 | 1106 | 79 | 11 | 9 | 42 | 59 | 19 | 42 |
| Future Volume (vph) | 33 | 878 | 18 | 32 | 1106 | 79 | 11 | 9 | 42 | 59 | 19 | 42 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 10 | 10 | 10 | 10 | 10 | 10 | 13 | 13 | 13 | 15 | 15 | 15 |
| Grade (%) | | 2% | | | -5% | | | -2% | | | -1% | |
| Right Turn on Red | | | Yes | | | Yes | | | No | | | No |
| Link Speed (mph) | | 35 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1639 | | | 1078 | | | 276 | | | 428 | |
| Travel Time (s) | | 31.9 | | | 21.0 | | | 7.5 | | | 11.7 | |
| Confl. Peds. (#/hr) | 3 | | 1 | 1 | | 3 | 1 | | | | | 1 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 4% | 11% | 10% | 3% | 0% | 0% | 0% | 2% | 0% | 0% | 5% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Minimum Split (s) | 16.0 | 16.0 | | 16.0 | 16.0 | | 10.0 | 10.0 | | 10.0 | 10.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 38.0 | 38.0 | | 38.0 | 38.0 | |
| Total Split (%) | 65.5% | 65.5% | | 65.5% | 65.5% | | 34.5% | 34.5% | | 34.5% | 34.5% | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | | | -1.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | | 5.0 | | | 5.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | | None | None | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 110 | |
| Actuated Cycle Length: 110 | |
| Offset: 15 (14%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 40 | |
| Control Type: Actuated-Coordinated | |

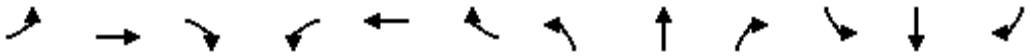
Splits and Phases: 10: St. Davids Road/Chamounix Road & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 33 | 878 | 18 | 32 | 1106 | 79 | 11 | 9 | 42 | 59 | 19 | 42 |
| Future Volume (veh/h) | 33 | 878 | 18 | 32 | 1106 | 79 | 11 | 9 | 42 | 59 | 19 | 42 |
| Number | 5 | 2 | 12 | 1 | 6 | 16 | 3 | 8 | 18 | 7 | 4 | 14 |
| Initial Q (Qb), veh | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Parking Bus, Adj | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Adj Sat Flow, veh/h/ln | 1782 | 1714 | 1782 | 1845 | 1791 | 1845 | 1891 | 1865 | 1891 | 1881 | 1849 | 1881 |
| Adj Flow Rate, veh/h | 34 | 896 | 16 | 33 | 1129 | 80 | 11 | 9 | 41 | 60 | 19 | 41 |
| Adj No. of Lanes | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Percent Heavy Veh, % | 4 | 4 | 4 | 3 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cap, veh/h | 95 | 2358 | 42 | 76 | 2434 | 171 | 56 | 40 | 118 | 124 | 35 | 57 |
| Arrive On Green | 0.80 | 0.81 | 0.80 | 0.80 | 0.81 | 0.80 | 0.09 | 0.10 | 0.09 | 0.09 | 0.10 | 0.09 |
| Sat Flow, veh/h | 75 | 2926 | 52 | 52 | 3021 | 212 | 170 | 387 | 1142 | 729 | 335 | 552 |
| Grp Volume(v), veh/h | 466 | 0 | 480 | 641 | 0 | 601 | 61 | 0 | 0 | 120 | 0 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1502 | 0 | 1550 | 1692 | 0 | 1592 | 1699 | 0 | 0 | 1617 | 0 | 0 |
| Q Serve(g_s), s | 0.0 | 0.0 | 9.6 | 0.0 | 0.0 | 13.0 | 0.0 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 |
| Cycle Q Clear(g_c), s | 8.0 | 0.0 | 9.6 | 12.0 | 0.0 | 13.0 | 3.8 | 0.0 | 0.0 | 7.8 | 0.0 | 0.0 |
| Prop In Lane | 0.07 | | 0.03 | 0.05 | | 0.13 | 0.18 | | 0.67 | 0.50 | | 0.34 |
| Lane Grp Cap(c), veh/h | 1232 | 0 | 1249 | 1383 | 0 | 1283 | 199 | 0 | 0 | 201 | 0 | 0 |
| V/C Ratio(X) | 0.38 | 0.00 | 0.38 | 0.46 | 0.00 | 0.47 | 0.31 | 0.00 | 0.00 | 0.60 | 0.00 | 0.00 |
| Avail Cap(c_a), veh/h | 1232 | 0 | 1249 | 1383 | 0 | 1283 | 510 | 0 | 0 | 500 | 0 | 0 |
| HCM Platoon Ratio | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 1.00 | 1.00 | 0.00 | 0.00 | 1.00 | 0.00 | 0.00 |
| Uniform Delay (d), s/veh | 2.9 | 0.0 | 3.0 | 3.2 | 0.0 | 3.4 | 46.3 | 0.0 | 0.0 | 48.0 | 0.0 | 0.0 |
| Incr Delay (d2), s/veh | 0.9 | 0.0 | 0.9 | 1.1 | 0.0 | 1.2 | 1.2 | 0.0 | 0.0 | 4.0 | 0.0 | 0.0 |
| Initial Q Delay(d3),s/veh | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(95%),veh/ln | 7.6 | 0.0 | 7.7 | 10.7 | 0.0 | 10.0 | 3.3 | 0.0 | 0.0 | 6.9 | 0.0 | 0.0 |
| LnGrp Delay(d),s/veh | 3.8 | 0.0 | 3.9 | 4.4 | 0.0 | 4.6 | 47.5 | 0.0 | 0.0 | 52.0 | 0.0 | 0.0 |
| LnGrp LOS | A | | A | A | | A | D | | | D | | |
| Approach Vol, veh/h | | 946 | | | 1242 | | | 61 | | | 120 | |
| Approach Delay, s/veh | | 3.8 | | | 4.5 | | | 47.5 | | | 52.0 | |
| Approach LOS | | A | | | A | | | D | | | D | |

| Timer | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| Assigned Phs | | 2 | | 4 | | 6 | | 8 |
| Phs Duration (G+Y+Rc), s | | 93.6 | | 16.4 | | 93.6 | | 16.4 |
| Change Period (Y+Rc), s | | 6.0 | | 6.0 | | 6.0 | | 6.0 |
| Max Green Setting (Gmax), s | | 66.0 | | 32.0 | | 66.0 | | 32.0 |
| Max Q Clear Time (g_c+I1), s | | 11.6 | | 9.8 | | 15.0 | | 5.8 |
| Green Ext Time (p_c), s | | 4.4 | | 0.6 | | 6.3 | | 0.3 |

| Intersection Summary | |
|---|---|
| HCM 2010 Ctrl Delay | 7.7 |
| HCM 2010 LOS | A |



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 13 | 10 | 5 | 2 | 37 | 21 | 2 | 104 | 4 | 4 | 95 | 41 |
| Future Volume (vph) | 13 | 10 | 5 | 2 | 37 | 21 | 2 | 104 | 4 | 4 | 95 | 41 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Grade (%) | | 0% | | | 0% | | | 2% | | | 0% | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1128 | | | 434 | | | 186 | | | 311 | |
| Travel Time (s) | | 30.8 | | | 11.8 | | | 5.1 | | | 8.5 | |
| Confl. Peds. (#/hr) | 2 | | 2 | 2 | | 2 | | | 2 | 2 | | |
| Confl. Bikes (#/hr) | | | | | | | | | 1 | | | 1 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 4% | 100% | 2% | 0% | 0% | 2% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Intersection Delay, s/veh | 8.7 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 13 | 10 | 5 | 2 | 37 | 21 | 2 | 104 | 4 | 4 | 95 | 41 |
| Future Vol, veh/h | 13 | 10 | 5 | 2 | 37 | 21 | 2 | 104 | 4 | 4 | 95 | 41 |
| Peak Hour Factor | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 | 1.00 | 1.00 |
| Heavy Vehicles, % | 0 | 0 | 0 | 0 | 0 | 4 | 100 | 2 | 0 | 0 | 2 | 2 |
| Mvmt Flow | 14 | 11 | 5 | 2 | 39 | 22 | 2 | 111 | 4 | 4 | 95 | 41 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|---|---|---|---|---|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7.8 | 7.8 | 10.3 | 7.9 |
| HCM LOS | A | A | B | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|---|---|---|---|---|
| Vol Left, % | 2% | 46% | 3% | 3% |
| Vol Thru, % | 95% | 36% | 62% | 68% |
| Vol Right, % | 4% | 18% | 35% | 29% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 110 | 28 | 60 | 140 |
| LT Vol | 2 | 13 | 2 | 4 |
| Through Vol | 104 | 10 | 37 | 95 |
| RT Vol | 4 | 5 | 21 | 41 |
| Lane Flow Rate | 117 | 30 | 64 | 140 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.19 | 0.038 | 0.078 | 0.16 |
| Departure Headway (Hd) | 5.857 | 4.616 | 4.388 | 4.111 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 606 | 778 | 820 | 875 |
| Service Time | 3.955 | 2.63 | 2.399 | 2.123 |
| HCM Lane V/C Ratio | 0.193 | 0.039 | 0.078 | 0.16 |
| HCM Control Delay | 10.3 | 7.8 | 7.8 | 7.9 |
| HCM Lane LOS | B | A | A | A |
| HCM 95th-tile Q | 0.7 | 0.1 | 0.3 | 0.6 |

| Lane Group | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 3 | 44 | 36 | 10 | 12 | 32 |
| Future Volume (vph) | 3 | 44 | 36 | 10 | 12 | 32 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Link Speed (mph) | 25 | | 25 | | | 25 |
| Link Distance (ft) | 1128 | | 186 | | | 490 |
| Travel Time (s) | 30.8 | | 5.1 | | | 13.4 |
| Confl. Peds. (#/hr) | 1 | 4 | | 2 | 2 | |
| Peak Hour Factor | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 |
| Heavy Vehicles (%) | 0% | 0% | 3% | 0% | 0% | 3% |
| Shared Lane Traffic (%) | | | | | | |
| Sign Control | Stop | | Free | | | Free |

| Intersection Summary | |
|---|---|
| Area Type: | Other |

Control Type: Unsignalized

| Intersection | |
|---|---|
| Int Delay, s/veh | 3.7 |

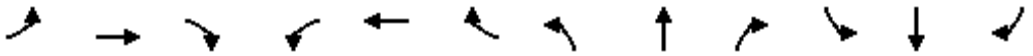
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Vol, veh/h | 3 | 44 | 36 | 10 | 12 | 32 |
| Future Vol, veh/h | 3 | 44 | 36 | 10 | 12 | 32 |
| Conflicting Peds, #/hr | 1 | 4 | 0 | 2 | 2 | 0 |
| Sign Control | Stop | Stop | Free | Free | Free | Free |
| RT Channelized | - | None | - | None | - | None |
| Storage Length | 0 | - | - | - | - | - |
| Veh in Median Storage, # | 0 | - | 0 | - | - | 0 |
| Grade, % | 0 | - | 0 | - | - | 0 |
| Peak Hour Factor | 77 | 77 | 77 | 77 | 77 | 77 |
| Heavy Vehicles, % | 0 | 0 | 3 | 0 | 0 | 3 |
| Mvmt Flow | 4 | 57 | 47 | 13 | 16 | 42 |

| Major/Minor | Minor1 | | Major1 | | Major2 | |
|---|---|---|---|---|---|---|
| Conflicting Flow All | 131 | 60 | 0 | 0 | 62 | 0 |
| Stage 1 | 56 | - | - | - | - | - |
| Stage 2 | 75 | - | - | - | - | - |
| Critical Hdwy | 6.4 | 6.2 | - | - | 4.3 | - |
| Critical Hdwy Stg 1 | 5.4 | - | - | - | - | - |
| Critical Hdwy Stg 2 | 5.4 | - | - | - | - | - |
| Follow-up Hdwy | 3 | 3.1 | - | - | 3 | - |
| Pot Cap-1 Maneuver | 1004 | 1075 | - | - | 1143 | - |
| Stage 1 | 1129 | - | - | - | - | - |
| Stage 2 | 1106 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 987 | 1069 | - | - | 1141 | - |
| Mov Cap-2 Maneuver | 987 | - | - | - | - | - |
| Stage 1 | 1127 | - | - | - | - | - |
| Stage 2 | 1089 | - | - | - | - | - |

| Approach | WB | NB | SB |
|---|---|---|---|
| HCM Control Delay, s | 8.6 | 0 | 2.2 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBR | WBLn1 | SBL | SBT |
|---|---|---|---|---|---|
| Capacity (veh/h) | - | - | 1063 | 1141 | - |
| HCM Lane V/C Ratio | - | - | 0.057 | 0.014 | - |
| HCM Control Delay (s) | - | - | 8.6 | 8.2 | 0 |
| HCM Lane LOS | - | - | A | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.2 | 0 | - |

# *2025 PROJECTED CONDITIONS WITH PENNDOT-REQUESTED IMPROVEMENTS*

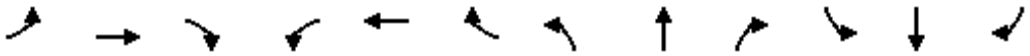


| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 804 | 43 | 28 | 931 | 44 | 143 | 113 | 43 | 144 | 85 | 70 |
| Future Volume (vph) | 36 | 804 | 43 | 28 | 931 | 44 | 143 | 113 | 43 | 144 | 85 | 70 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 179 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 3.5 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 960 | 0 | 0 | 1090 | 0 | 0 | 278 | 47 | 0 | 325 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 62.0 | 62.0 | | 62.0 | 62.0 | | 43.0 | 43.0 | 43.0 | 43.0 | 43.0 | |
| Total Split (%) | 59.0% | 59.0% | | 59.0% | 59.0% | | 41.0% | 41.0% | 41.0% | 41.0% | 41.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.79 | | | 0.73 | | | 0.75 | 0.10 | | 0.95 | |
| Control Delay | | 30.1 | | | 20.5 | | | 43.9 | 23.3 | | 71.2 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 30.1 | | | 20.5 | | | 43.9 | 23.3 | | 71.2 | |
| Queue Length 50th (ft) | | 342 | | | 300 | | | 156 | 21 | | 201 | |
| Queue Length 95th (ft) | | 470 | | | 396 | | | 260 | 47 | | #369 | |
| Internal Link Dist (ft) | | 1072 | | | 99 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 1220 | | | 1491 | | | 401 | 493 | | 372 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.79 | | | 0.73 | | | 0.69 | 0.10 | | 0.87 | |

Intersection Summary

Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Offset: 6 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 55
Control Type: Actuated-Coordinated
# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

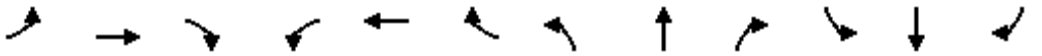
Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 36 | 804 | 43 | 28 | 931 | 44 | 143 | 113 | 43 | 144 | 85 | 70 |
| Future Volume (vph) | 36 | 804 | 43 | 28 | 931 | 44 | 143 | 113 | 43 | 144 | 85 | 70 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.77 | | | *0.90 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 0.98 | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 2455 | | | 2889 | | | 1623 | 1363 | | 1812 | |
| Flt Permitted | | 0.85 | | | 0.89 | | | 0.65 | 1.00 | | 0.54 | |
| Satd. Flow (perm) | | 2099 | | | 2565 | | | 1081 | 1363 | | 1003 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 39 | 874 | 47 | 30 | 1012 | 48 | 155 | 123 | 47 | 157 | 92 | 76 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 960 | 0 | 0 | 1090 | 0 | 0 | 278 | 47 | 0 | 325 | 0 |
| Confl. Peds. (#/hr) | 21 | | 21 | 4 | | 4 | 4 | | 4 | 2 | | 2 |
| Heavy Vehicles (%) | 3% | 4% | 3% | 18% | 4% | 0% | 8% | 5% | 9% | 1% | 2% | 3% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 60.1 | | | 60.1 | | | 34.9 | 34.9 | | 34.9 | |
| Effective Green, g (s) | | 61.1 | | | 61.1 | | | 35.9 | 34.9 | | 35.9 | |
| Actuated g/C Ratio | | 0.58 | | | 0.58 | | | 0.34 | 0.33 | | 0.34 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1221 | | | 1492 | | | 369 | 453 | | 342 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.46 | | | 0.42 | | | 0.26 | 0.03 | | c0.32 | |
| v/c Ratio | | 0.79 | | | 0.73 | | | 0.75 | 0.10 | | 0.95 | |
| Uniform Delay, d1 | | 16.9 | | | 16.0 | | | 30.6 | 24.2 | | 33.7 | |
| Progression Factor | | 1.35 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 4.9 | | | 3.2 | | | 8.4 | 0.1 | | 35.7 | |
| Delay (s) | | 27.8 | | | 19.2 | | | 39.1 | 24.3 | | 69.4 | |
| Level of Service | | C | | | B | | | D | C | | E | |
| Approach Delay (s) | | 27.8 | | | 19.2 | | | 36.9 | | | 69.4 | |
| Approach LOS | | C | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 30.4 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.85 | | |
| Actuated Cycle Length (s) | 105.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 84.1% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

c Critical Lane Group



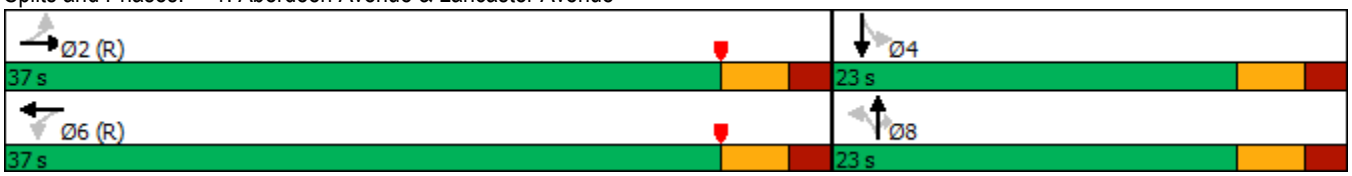
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 841 | 36 | 25 | 940 | 61 | 98 | 68 | 34 | 122 | 114 | 69 |
| Future Volume (vph) | 34 | 841 | 36 | 25 | 940 | 61 | 98 | 68 | 34 | 122 | 114 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1121 | | | 179 | | | 199 | | | 464 | |
| Travel Time (s) | | 30.6 | | | 3.5 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 939 | 0 | 0 | 1058 | 0 | 0 | 171 | 35 | 0 | 315 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 37.0 | 37.0 | | 37.0 | 37.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (%) | 61.7% | 61.7% | | 61.7% | 61.7% | | 38.3% | 38.3% | 38.3% | 38.3% | 38.3% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.67 | | | 0.75 | | | 0.53 | 0.09 | | 0.77 | |
| Control Delay | | 11.3 | | | 14.5 | | | 24.1 | 16.0 | | 33.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 11.3 | | | 14.5 | | | 24.1 | 16.0 | | 33.9 | |
| Queue Length 50th (ft) | | 238 | | | 169 | | | 49 | 9 | | 99 | |
| Queue Length 95th (ft) | | 308 | | | 267 | | | 101 | 27 | | #201 | |
| Internal Link Dist (ft) | | 1041 | | | 99 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 1398 | | | 1411 | | | 363 | 447 | | 456 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.67 | | | 0.75 | | | 0.47 | 0.08 | | 0.69 | |

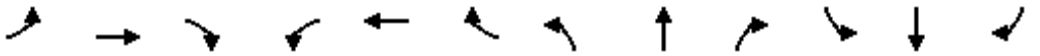
Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 60 | |
| Actuated Cycle Length: 60 | |
| Offset: 38 (63%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 60 | |
| Control Type: Actuated-Coordinated | |

# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

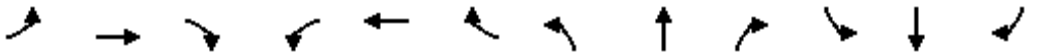
Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 841 | 36 | 25 | 940 | 61 | 98 | 68 | 34 | 122 | 114 | 69 |
| Future Volume (vph) | 34 | 841 | 36 | 25 | 940 | 61 | 98 | 68 | 34 | 122 | 114 | 69 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.83 | | | *0.80 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 0.99 | | 1.00 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 2732 | | | 2640 | | | 1729 | 1492 | | 1831 | |
| Flt Permitted | | 0.87 | | | 0.91 | | | 0.64 | 1.00 | | 0.77 | |
| Satd. Flow (perm) | | 2393 | | | 2416 | | | 1148 | 1492 | | 1441 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 35 | 867 | 37 | 26 | 969 | 63 | 101 | 70 | 35 | 126 | 118 | 71 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 939 | 0 | 0 | 1058 | 0 | 0 | 171 | 35 | 0 | 315 | 0 |
| Confl. Peds. (#/hr) | 8 | | 8 | 6 | | 6 | 3 | | 3 | 3 | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 3% | 1% | 3% | 0% | 1% | 3% | 0% | 0% | 0% | 3% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 34.1 | | | 34.1 | | | 15.9 | 15.9 | | 15.9 | |
| Effective Green, g (s) | | 35.1 | | | 35.1 | | | 16.9 | 15.9 | | 16.9 | |
| Actuated g/C Ratio | | 0.59 | | | 0.59 | | | 0.28 | 0.27 | | 0.28 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1399 | | | 1413 | | | 323 | 395 | | 405 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.39 | | | c0.44 | | | 0.15 | 0.02 | | c0.22 | |
| v/c Ratio | | 0.67 | | | 0.75 | | | 0.53 | 0.09 | | 0.78 | |
| Uniform Delay, d1 | | 8.5 | | | 9.2 | | | 18.2 | 16.6 | | 19.8 | |
| Progression Factor | | 0.97 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 2.4 | | | 3.7 | | | 1.6 | 0.1 | | 9.1 | |
| Delay (s) | | 10.6 | | | 12.9 | | | 19.8 | 16.7 | | 28.9 | |
| Level of Service | | B | | | B | | | B | B | | C | |
| Approach Delay (s) | | 10.6 | | | 12.9 | | | 19.2 | | | 28.9 | |
| Approach LOS | | B | | | B | | | B | | | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.76 | | |
| Actuated Cycle Length (s) | 60.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 83.4% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

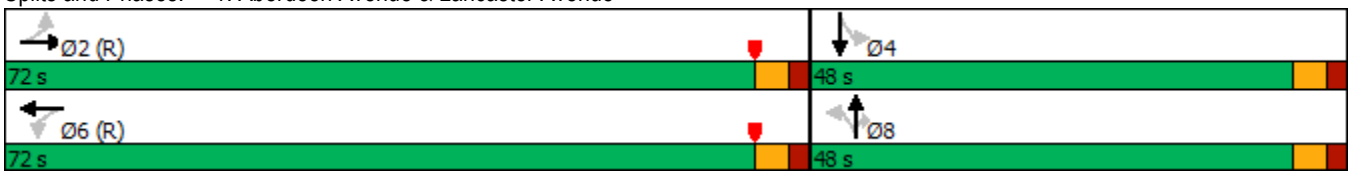


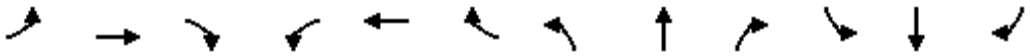
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 690 | 50 | 26 | 843 | 51 | 91 | 98 | 44 | 116 | 73 | 66 |
| Future Volume (vph) | 40 | 690 | 50 | 26 | 843 | 51 | 91 | 98 | 44 | 116 | 73 | 66 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 179 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 3.5 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 804 | 0 | 0 | 949 | 0 | 0 | 195 | 45 | 0 | 263 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | 48.0 | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.46 | | | 0.54 | | | 0.62 | 0.12 | | 0.94 | |
| Control Delay | | 13.7 | | | 12.5 | | | 47.0 | 32.5 | | 82.7 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 13.7 | | | 12.5 | | | 47.0 | 32.5 | | 82.7 | |
| Queue Length 50th (ft) | | 129 | | | 193 | | | 134 | 27 | | 200 | |
| Queue Length 95th (ft) | | 278 | | | 323 | | | 192 | 52 | | 282 | |
| Internal Link Dist (ft) | | 1062 | | | 99 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 1742 | | | 1769 | | | 448 | 526 | | 400 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.46 | | | 0.54 | | | 0.44 | 0.09 | | 0.66 | |

Intersection Summary

| | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow | |
| Natural Cycle: 50 | |
| Control Type: Actuated-Coordinated | |

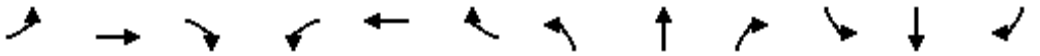
Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 690 | 50 | 26 | 843 | 51 | 91 | 98 | 44 | 116 | 73 | 66 |
| Future Volume (vph) | 40 | 690 | 50 | 26 | 843 | 51 | 91 | 98 | 44 | 116 | 73 | 66 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.94 | | | *0.88 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 0.97 | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 0.99 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.98 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 3051 | | | 2867 | | | 1723 | 1468 | | 1804 | |
| Flt Permitted | | 0.84 | | | 0.91 | | | 0.69 | 1.00 | | 0.59 | |
| Satd. Flow (perm) | | 2575 | | | 2617 | | | 1225 | 1468 | | 1092 | |
| Peak-hour factor, PHF | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Adj. Flow (vph) | 41 | 711 | 52 | 27 | 869 | 53 | 94 | 101 | 45 | 120 | 75 | 68 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 804 | 0 | 0 | 949 | 0 | 0 | 195 | 45 | 0 | 263 | 0 |
| Confl. Peds. (#/hr) | 15 | | 7 | 7 | | 15 | 12 | | 9 | 9 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 3 | | | 1 | | | |
| Heavy Vehicles (%) | 0% | 2% | 2% | 7% | 2% | 2% | 0% | 1% | 0% | 1% | 0% | 2% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 80.2 | | | 80.2 | | | 29.8 | 29.8 | | 29.8 | |
| Effective Green, g (s) | | 81.2 | | | 81.2 | | | 30.8 | 29.8 | | 30.8 | |
| Actuated g/C Ratio | | 0.68 | | | 0.68 | | | 0.26 | 0.25 | | 0.26 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1742 | | | 1770 | | | 314 | 364 | | 280 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | 0.31 | | | c0.36 | | | 0.16 | 0.03 | | c0.24 | |
| v/c Ratio | | 0.46 | | | 0.54 | | | 0.62 | 0.12 | | 0.94 | |
| Uniform Delay, d1 | | 9.1 | | | 9.8 | | | 39.4 | 35.0 | | 43.7 | |
| Progression Factor | | 1.23 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.8 | | | 1.2 | | | 3.8 | 0.2 | | 37.3 | |
| Delay (s) | | 12.0 | | | 11.0 | | | 43.2 | 35.1 | | 81.0 | |
| Level of Service | | B | | | B | | | D | D | | F | |
| Approach Delay (s) | | 12.0 | | | 11.0 | | | 41.7 | | | 81.0 | |
| Approach LOS | | B | | | B | | | D | | | F | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.8 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.65 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.3% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

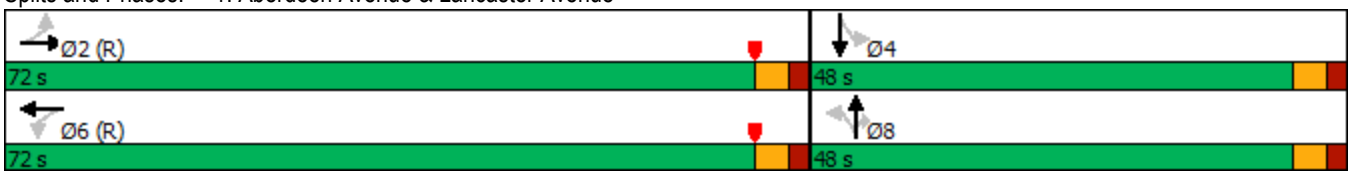


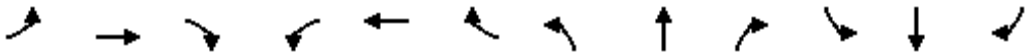
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 558 | 33 | 25 | 565 | 33 | 78 | 51 | 31 | 66 | 49 | 39 |
| Future Volume (vph) | 29 | 558 | 33 | 25 | 565 | 33 | 78 | 51 | 31 | 66 | 49 | 39 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1142 | | | 179 | | | 199 | | | 464 | |
| Travel Time (s) | | 31.1 | | | 3.5 | | | 5.4 | | | 12.7 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 633 | 0 | 0 | 637 | 0 | 0 | 132 | 32 | 0 | 157 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | 48.0 | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.30 | | | 0.30 | | | 0.76 | 0.15 | | 0.84 | |
| Control Delay | | 5.5 | | | 4.7 | | | 73.6 | 43.5 | | 83.5 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 5.5 | | | 4.7 | | | 73.6 | 43.5 | | 83.5 | |
| Queue Length 50th (ft) | | 48 | | | 64 | | | 99 | 22 | | 120 | |
| Queue Length 95th (ft) | | 148 | | | 113 | | | 160 | 49 | | 187 | |
| Internal Link Dist (ft) | | 1062 | | | 99 | | | 119 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 2077 | | | 2139 | | | 411 | 529 | | 438 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.30 | | | 0.30 | | | 0.32 | 0.06 | | 0.36 | |

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 45
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue

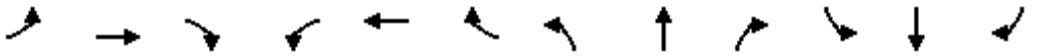




| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 558 | 33 | 25 | 565 | 33 | 78 | 51 | 31 | 66 | 49 | 39 |
| Future Volume (vph) | 29 | 558 | 33 | 25 | 565 | 33 | 78 | 51 | 31 | 66 | 49 | 39 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.90 | | | *0.92 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 0.98 | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 0.98 | 1.00 | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.97 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 2966 | | | 3026 | | | 1703 | 1479 | | 1819 | |
| Flt Permitted | | 0.90 | | | 0.91 | | | 0.64 | 1.00 | | 0.64 | |
| Satd. Flow (perm) | | 2672 | | | 2754 | | | 1124 | 1479 | | 1194 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 30 | 569 | 34 | 26 | 577 | 34 | 80 | 52 | 32 | 67 | 50 | 40 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 633 | 0 | 0 | 637 | 0 | 0 | 132 | 32 | 0 | 157 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 22 | | 6 | 6 | | 22 |
| Heavy Vehicles (%) | 0% | 1% | 0% | 15% | 1% | 0% | 0% | 0% | 0% | 0% | 0% | 0% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 92.3 | | | 92.3 | | | 17.7 | 17.7 | | 17.7 | |
| Effective Green, g (s) | | 93.3 | | | 93.3 | | | 18.7 | 17.7 | | 18.7 | |
| Actuated g/C Ratio | | 0.78 | | | 0.78 | | | 0.16 | 0.15 | | 0.16 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 2077 | | | 2141 | | | 175 | 218 | | 186 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.24 | | | 0.23 | | | 0.12 | 0.02 | | c0.13 | |
| v/c Ratio | | 0.30 | | | 0.30 | | | 0.75 | 0.15 | | 0.84 | |
| Uniform Delay, d1 | | 3.9 | | | 3.9 | | | 48.5 | 44.6 | | 49.2 | |
| Progression Factor | | 1.16 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 0.4 | | | 0.4 | | | 16.7 | 0.3 | | 27.9 | |
| Delay (s) | | 4.9 | | | 4.2 | | | 65.2 | 44.9 | | 77.1 | |
| Level of Service | | A | | | A | | | E | D | | E | |
| Approach Delay (s) | | 4.9 | | | 4.2 | | | 61.2 | | | 77.1 | |
| Approach LOS | | A | | | A | | | E | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 17.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.39 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 62.9% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

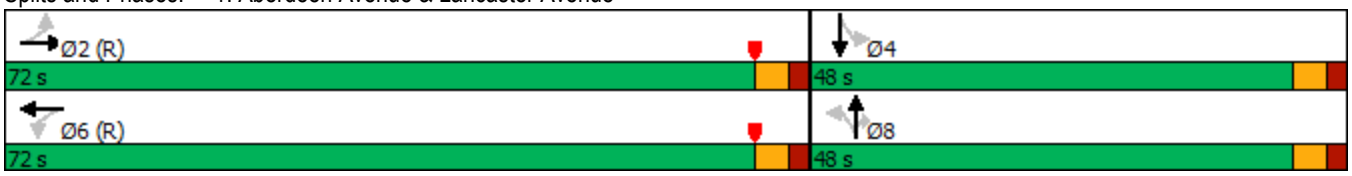


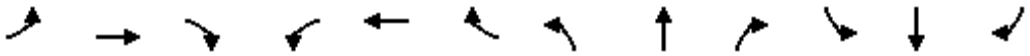
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 724 | 46 | 32 | 779 | 74 | 107 | 67 | 44 | 118 | 63 | 83 |
| Future Volume (vph) | 39 | 724 | 46 | 32 | 779 | 74 | 107 | 67 | 44 | 118 | 63 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width (ft) | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 75 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Link Speed (mph) | | 25 | | | 35 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1152 | | | 179 | | | 130 | | | 464 | |
| Travel Time (s) | | 31.4 | | | 3.5 | | | 3.5 | | | 12.7 | |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Peak Hour Factor | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 843 | 0 | 0 | 921 | 0 | 0 | 181 | 46 | 0 | 275 | 0 |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Detector Phase | 2 | 2 | | 6 | 6 | | 8 | 8 | 8 | 4 | 4 | |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Split (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | |
| Total Split (s) | 72.0 | 72.0 | | 72.0 | 72.0 | | 48.0 | 48.0 | 48.0 | 48.0 | 48.0 | |
| Total Split (%) | 60.0% | 60.0% | | 60.0% | 60.0% | | 40.0% | 40.0% | 40.0% | 40.0% | 40.0% | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | -1.0 | | | -1.0 | | | -1.0 | 0.0 | | -1.0 | |
| Total Lost Time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lead/Lag | | | | | | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Recall Mode | C-Max | C-Max | | C-Max | C-Max | | None | None | None | None | None | |
| v/c Ratio | | 0.63 | | | 0.57 | | | 0.63 | 0.12 | | 0.92 | |
| Control Delay | | 20.6 | | | 13.5 | | | 48.1 | 32.0 | | 76.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 20.6 | | | 13.5 | | | 48.1 | 32.0 | | 76.3 | |
| Queue Length 50th (ft) | | 282 | | | 202 | | | 124 | 27 | | 207 | |
| Queue Length 95th (ft) | | 388 | | | 341 | | | 182 | 52 | | 288 | |
| Internal Link Dist (ft) | | 1072 | | | 99 | | | 50 | | | 384 | |
| Turn Bay Length (ft) | | | | | | | | | 75 | | | |
| Base Capacity (vph) | | 1341 | | | 1618 | | | 401 | 542 | | 421 | |
| Starvation Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Spillback Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Storage Cap Reductn | | 0 | | | 0 | | | 0 | 0 | | 0 | |
| Reduced v/c Ratio | | 0.63 | | | 0.57 | | | 0.45 | 0.08 | | 0.65 | |

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 14 (12%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 1: Aberdeen Avenue & Lancaster Avenue





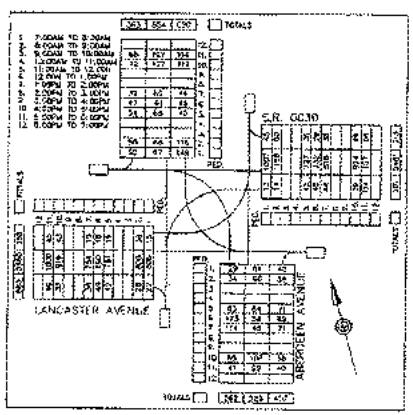
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 39 | 724 | 46 | 32 | 779 | 74 | 107 | 67 | 44 | 118 | 63 | 83 |
| Future Volume (vph) | 39 | 724 | 46 | 32 | 779 | 74 | 107 | 67 | 44 | 118 | 63 | 83 |
| Ideal Flow (vphpl) | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 | 1800 |
| Lane Width | 12 | 10 | 12 | 12 | 10 | 12 | 12 | 12 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | -1% | | | 2% | | | -4% | |
| Total Lost time (s) | | 4.0 | | | 4.0 | | | 4.0 | 5.0 | | 4.0 | |
| Lane Util. Factor | | *0.75 | | | *0.86 | | | 1.00 | 1.00 | | 1.00 | |
| Frpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 0.99 | |
| Flpb, ped/bikes | | 1.00 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Frt | | 0.99 | | | 0.99 | | | 1.00 | 0.85 | | 0.96 | |
| Flt Protected | | 1.00 | | | 1.00 | | | 0.97 | 1.00 | | 0.98 | |
| Satd. Flow (prot) | | 2356 | | | 2758 | | | 1705 | 1515 | | 1796 | |
| Flt Permitted | | 0.85 | | | 0.87 | | | 0.62 | 1.00 | | 0.63 | |
| Satd. Flow (perm) | | 1999 | | | 2413 | | | 1094 | 1515 | | 1149 | |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 41 | 754 | 48 | 33 | 811 | 77 | 111 | 70 | 46 | 123 | 66 | 86 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 0 | 843 | 0 | 0 | 921 | 0 | 0 | 181 | 46 | 0 | 275 | 0 |
| Confl. Peds. (#/hr) | | | 6 | 6 | | | 5 | | | | | 5 |
| Heavy Vehicles (%) | 3% | 6% | 0% | 0% | 4% | 3% | 0% | 3% | 0% | 1% | 3% | 1% |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | Perm | Perm | NA | |
| Protected Phases | | 2 | | | 6 | | | 8 | | | 4 | |
| Permitted Phases | 2 | | | 6 | | | 8 | | 8 | 4 | | |
| Actuated Green, G (s) | | 79.6 | | | 79.6 | | | 30.4 | 30.4 | | 30.4 | |
| Effective Green, g (s) | | 80.6 | | | 80.6 | | | 31.4 | 30.4 | | 31.4 | |
| Actuated g/C Ratio | | 0.67 | | | 0.67 | | | 0.26 | 0.25 | | 0.26 | |
| Clearance Time (s) | | 5.0 | | | 5.0 | | | 5.0 | 5.0 | | 5.0 | |
| Vehicle Extension (s) | | 3.0 | | | 3.0 | | | 3.0 | 3.0 | | 3.0 | |
| Lane Grp Cap (vph) | | 1342 | | | 1620 | | | 286 | 383 | | 300 | |
| v/s Ratio Prot | | | | | | | | | | | | |
| v/s Ratio Perm | | c0.42 | | | 0.38 | | | 0.17 | 0.03 | | c0.24 | |
| v/c Ratio | | 0.63 | | | 0.57 | | | 0.63 | 0.12 | | 0.92 | |
| Uniform Delay, d1 | | 11.2 | | | 10.5 | | | 39.2 | 34.5 | | 43.0 | |
| Progression Factor | | 1.40 | | | 1.00 | | | 1.00 | 1.00 | | 1.00 | |
| Incremental Delay, d2 | | 2.1 | | | 1.5 | | | 4.5 | 0.1 | | 31.0 | |
| Delay (s) | | 17.8 | | | 11.9 | | | 43.7 | 34.6 | | 74.0 | |
| Level of Service | | B | | | B | | | D | C | | E | |
| Approach Delay (s) | | 17.8 | | | 11.9 | | | 41.9 | | | 74.0 | |
| Approach LOS | | B | | | B | | | D | | | E | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 24.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.71 | | |
| Actuated Cycle Length (s) | 120.0 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 82.7% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |

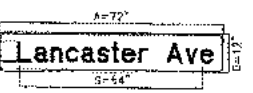
c Critical Lane Group

# APPENDIX I

## *PENNDOT SIGNAL DIAGRAMS*

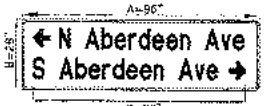



| SIGN TABULATION | | | |
|---|---|---|---|
| PLAN SYMBOL | SERIES NUMBER | SIZE | REMARKS |
| | R10-3E(L) | 9X15 | EDUCATIONAL PUSH BUTTON FOR WALKING PERSON |
| | R10-3E(R) | 9X15 | EDUCATIONAL PUSH BUTTON FOR WALKING PERSON |
| | R10-15 | 30X35 | NO TURN ON RED |
| | R10-11 | 24X30 | NO TURN ON RED |
| | D3-4 | 96X18 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | D3-5 | 96X32 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | D3-6 | 96X52 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |




SIGN F
FONT: CLEARVIEW ONE
6" UPPER CASE
4.4" LOWER CASE

**SIGN DETAILS**
NOT TO SCALE
FONT: CLEARVIEW ONE
8" UPPER CASE
6" LOWER CASE




SIGN E
16% REDUCTION

SIGN G
16% REDUCTION

## GENERAL NOTES

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ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATIONS NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH PENNDOT SIGNAL STANDARDS TC-8600 SERIES.

SYSTEM PERMIT #-0013

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 5-0

COUNTY: DELAWARE
MUNICIPALITY: RADNOR TOWNSHIP
INTERSECTION: LANCASTER AVENUE (S.R. 0030)
AND ABERDEEN AVENUE

REVIEWED:
DATE
MUNICIPAL ENGINEER
DATE

RECOMMENDED:
PAUL M. LUTZ 11/24/08
LOUIS R. BELMONTE, P.E. 11/24/08
DISTRICT TRAFFIC ENGINEER

| NO. | REVISION | BY | APPR. | DATE | REVISION | BY | APPR. | DATE |
|---|---|---|---|---|---|---|---|---|
| 1 | AS BUILT DRAWING | MDW | MB | 3/5/12 | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| 4 | | | | | | | | |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | | | | | | | | |
| 8 | | | | | | | | |

SHEET 2 OF 2 | PERMIT # 63-0879 | FILE # 0879

MOVEMENT SEQUENCE AND TIMING DIAGRAM

| PHASE | 2+6 | | | | 4+8 | | | | FLASH |
|---|---|---|---|---|---|---|---|---|---|
| INTERVAL / SIGNAL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 1,2 | G | G | Y | R | R | R | R | Y | |
| 3,4 | G | G | Y | R | R | R | R | Y | |
| 5,6 | R | R | R | G | G | G | Y | R | |
| 7,8 | R | R | R | R | G | G | Y | R | |
| 9,10,11,12* | H | FH | H | H | R | H | H | H | OFF |
| 13,14,15,16* | H | H | H | H | H | FH | H | H | OFF |
| | | | | | | | | | |

| FIXED | 1 | 3 | 2 | | 3 | 4 |
|---|---|---|---|---|---|---|
| MINIMUM | 10 | | | | 3 | |
| PASSAGE | | | | | 3 | |
| MAXIMUM 1 | 39 | | | | 48 | |
| MAXIMUM 2 | 72 | | | | 48 | |
| PEDESTRIAN* | 7 | 8 | | | 7 | 11 |
| MEMORY | NM | | | | NL | |

*MAN SYMBOL UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND SYMBOL AT ALL TIMES

- REFER TO SYSTEM PERMIT #-0013 FOR PROGRAM TIMES AND TIME-OF-DAY OPERATION

EMERGENCY PRE-EMPTION PHASING
MOVEMENT SEQUENCE AND TIMING DIAGRAM

| PHASE | 7 | 4 | 8 | 9 |
|---|---|---|---|---|
| INTERVAL / SIGNAL | 10 11 12 | 13 14 15 16 | 17 18 19 20 | 21 22 23 24 |
| 1,2 | G (*) R | R R R | R R R | R R R |
| 3,4 | R R R | G G G | R R R | R R R |
| 5,6 | R R R | R R R | G G G | R R R |
| 7,8 | R R R | R R R | R R R | G G G |
| 9,10,11,12 | H H H | H H H | H H H | H H H |
| 13,14,15,16 | H H H | H H H | H H H | H H H |
| | | | | |
| WALK | W W W | W W W | W W W | W W W |

* FOR DURATION OF PRE-EMPTION

NOTE:
IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "OUT" FEATURE ON. TO GIVE UNCOUPLED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

⑧ G WHEN RETURNING TO NORMAL OPERATION

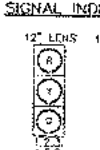
OPERATION NOTES:

- AUDIBLE PEDESTRIAN SIGNAL HEADS SHALL EMIT DIFFERENT TONES TO DIFFERENTIATE DIRECTION OF CROSSING.
- PED RECYCLE FOR PHASE 2+6

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND & SOUTHBOUND APPROACHES OF ABERDEEN AVENUE AND THE EASTBOUND & WESTBOUND APPROACHES OF LANCASTER AVENUE WITH A CYC. EMPE DRIVE FOR EACH DIRECTION OF OPERATION.
  THE EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE ROUND LIGHT, AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY, FROM THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.
- PPE SIGNALS, WHICH ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ARE YELLOW AND RED INDICATIONS FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE REQUIRED BY THE APPROACHING EMERGENCY VEHICLE.
- IF SIGNAL HAS BEEN ACTUATED BY PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PRE-EMPTED, THE PEDESTRIAN TIME SHALL BE SPLIT BETWEEN "PED WALK" AND "PED HAND". THE "PED WALK" INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "PED HAND" INTERVAL. THIS INTERVAL SHALL TIME OUT FOLLOWED BY THE APPROPRIATE CLEARANCE INTERVALS BEFORE GOING INTO EMERGENCY PRE-EMPTION.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING, ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, ONE DOMINANT PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION, PHASE 2+6 GO G IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PHOSPHY SHALL BE ESTABLISHED. PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE," OPERATION.

SIGNAL INDICATIONS

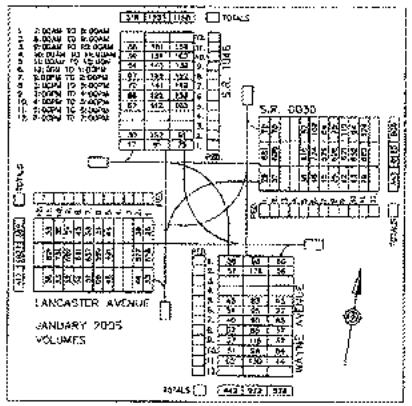



*AUDIBLE PEDESTRIAN SIGNAL HEADS

LEGEND

| | | | |
|---|---|---|---|
| 25' | MAST ARM/ IDENTIFYING LENGTH | (12'x6') | LOOP SENSOR/SIZE |
| ② | VEHICULAR SIGNAL HEAD/ BACKPLATE/VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER | MS | MICROWAVE PRESENCE DETECTOR |
| ② | PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER | EV | EMERGENCY PRE-EMPTION FLASHING BEACON |
| 7 | PEDESTRIAN PUSHBUTTON/ SIGN | ED | EMERGENCY PRE-EMPTION DEVICE |
| 2' | SIGN/IDENTIFYING LETTER | | CURB RAMP |
| | LUMINAIRE | | UTILITY POLE |
| | | ② | PHASE NUMBER |
| | | | INLET |

SCALE
25 0 25




EMERGENCY PRE-EMPTION PHASING
MOVEMENT, SEQUENCE AND TIMING DIAGRAM

| PHASE | 2 | 4 | 6 | 8 |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 3A | | | | |
| 5,6,7,8 | | | | |
| 9,10,11,12 | | | | |
| 13,14,15,16 | | | | |
| FLASH | | | | |

** FOR DURATION OF PRE-EMPTION

NOTE:
IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

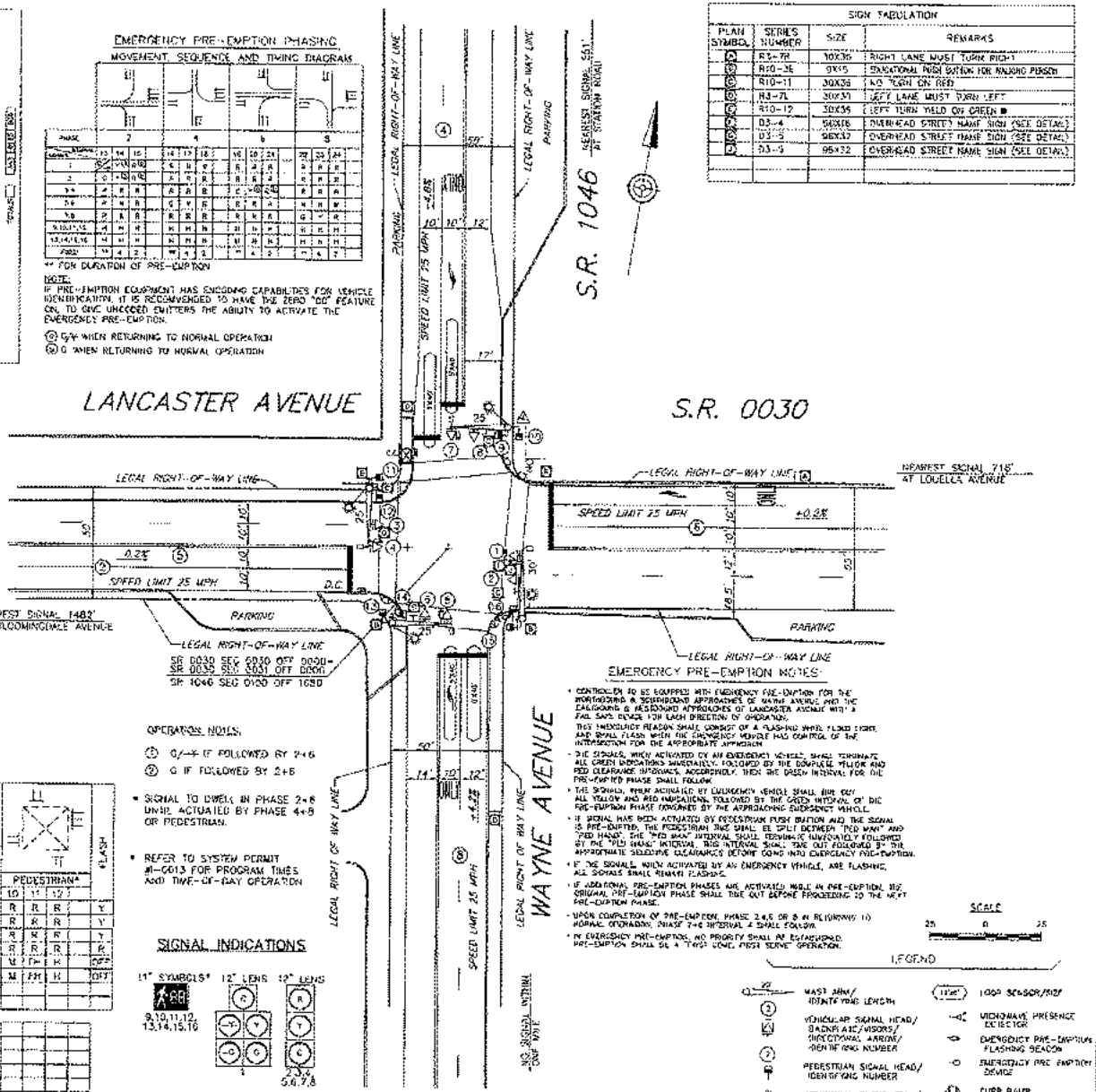
⑤ G/Y WHEN RETURNING TO NORMAL OPERATION
⑥ G WHEN RETURNING TO NORMAL OPERATION

SIGN TABULATION

| PLAN SYMBOL | SERIES NUMBER | SIZE | REMARKS |
|---|---|---|---|
| | R3-7R | 30X36 | RIGHT LANE MUST TURN RIGHT |
| | R10-3E | 9X15 | EDUCATIONAL PUSH BUTTON FOR WALKING PERSON |
| | R10-11 | 30X36 | NO "TURN ON RED" |
| | R3-7L | 30X30 | LEFT LANE MUST TURN LEFT |
| | R10-12 | 30X36 | LEFT TURN YIELD ON GREEN ■ |
| | D3-4 | 96X18 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | D3-5 | 96X30 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | D3-6 | 96X32 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |

SIGN DETAILS
NOT TO SCALE
FONT: CLEARVIEW CHF
8" UPPER CASE
6" LOWER CASE
A=90°

SIGN F: Lancaster Ave (B=16", C=272")
SIGN G: ← S Wayne Ave / N Wayne Ave → (B=28", C=86", A=96°)
SIGN J: ← N Wayne Ave / S Wayne Ave → (B=28", C=86", A=96°)




OPERATION NOTES:
① G/Y IF FOLLOWED BY 2+6
② G IF FOLLOWED BY 2+6

* SIGNAL TO DWELL IN PHASE 2+6 UNTIL ACTUATED BY PHASE 4+8 OR PEDESTRIAN.

* REFER TO SYSTEM PERMIT #1-0013 FOR PROGRAM TIMES AND TIME-OF-DAY OPERATION

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

| PHASE | 2+5 | | | 2+6 | | | 4+8 | | | PEDESTRIAN* | | | FLASH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SIGNAL INDICATION | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | |
| 1 | G/Y① | R① | R | G | Y | R | R | R | R | R | R | R | Y |
| 2 | G | R② | R | G | Y | R | R | R | G | R | R | R | Y |
| 3,4 | R | R | R | G | Y | R | R | R | R | R | R | R | Y |
| 5,6,7,8 | R | R | R | R | R | R | G | Y | R | R | R | R | R |
| 9,10,11,12* | R | R | R | R | R | R | R | R | R | W | FH | R | OFF |
| 13,14,15,16* | R | R | R | R | R | R | R | R | R | W | FH | R | OFF |

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| FIXED | 4 | 2 | | | 4 | 2 | | | 4 | 2 | | | |
| MINIMUM | 3 | | | | 10 | | | | 3 | | | | |
| PASSAGE | 3 | | | | | | | | 3 | | | | |
| MAXIMUM 1 | 8 | | | | 20 | | | | 30 | | | | |
| MAXIMUM 2 | 15 | | | | 34 | | | | 37 | | | | |
| PEDESTRIAN* | | | | | | | | | | | 9 | 15 | 2 |
| MEMORY | NL | | | | MN | | | | NL | | | | |

* MAIN SYMBOL UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND SYMBOL AT ALL TIMES

SIGNAL INDICATIONS

| 11" SYMBOLS* | 12" LENS | 12" LENS |
|---|---|---|
| 9,10,11,12, 13,14,15,16 | 1 | 2,3,5,6,7,8 |

*ALL PEDESTRIAN SIGNAL HEADS TO BE AUDIBLE

EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND & SOUTHBOUND APPROACHES OF WAYNE AVENUE AND THE EASTBOUND & WESTBOUND APPROACHES OF LANCASTER AVENUE WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION.
- THIS HARDWARE FAILSAFE DEVICE SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.
- THE SIGNALS, WHICH ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY, THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.
- THE SIGNALS, WHEN ACTUATED BY EMERGENCY VEHICLE SHALL RUN ONLY ALL YELLOW AND RED IMPERATIVES, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE DESIGNATED BY THE APPROACHING EMERGENCY VEHICLE.
- IF SIGNAL HAS BEEN ACTUATED BY PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PRE-EMPTED, THE PEDESTRIAN TIME SHALL BE SPLIT BETWEEN "PED WALK" AND "PED HAND". THE "PED WALK" INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "PED HAND" INTERVAL. THIS INTERVAL SHALL TAKE OUT FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE GOING INTO EMERGENCY PRE-EMPTION.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING, ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION, PHASE 2+6 OR 8 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL A SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED. PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

SCALE
25 0 25

LEGEND

| | | | |
|---|---|---|---|
| 12 | MAST ARM/ MOUNTING LENGTH | 1000 | 1000 SENSOR/SIZE |
| ② | VEHICULAR SIGNAL HEAD/ 3 SECTION W/ BACKPLATES/ VISORS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER | | VEHICULAR PRESENCE DETECTOR |
| ② | PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER | | EMERGENCY PRE-EMPTION FLASHING BEACON |
| | PEDESTRIAN PUSHBUTTON/ SIGN | | EMERGENCY PRE EMPTION DEVICE |
| A | SIGN/IDENTIFYING LETTER | | CURB RAMP |
| | LUMINAIRE | | UTILITY POLE |
| | | ② | PHASE NUMBER |
| | | | INLET |

# GENERAL NOTES

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POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287 PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 30, 1974.

WHEN LOOP TURNS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH PENNDOT SIGNAL STANDARDS TC-8000 SERIES.

SYSTEM PERMIT #1-0013

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

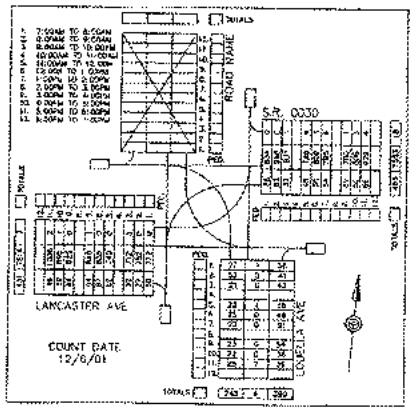
COUNTY: DELAWARE
MUNICIPALITY: RADNOR TOWNSHIP
INTERSECTION: LANCASTER AVENUE (S.R. 0030) AND WAYNE AVENUE (S.R. 1046)

REVIEWED: _____ DATE _____
REGIONAL TRAFFIC ENGINEER

RECOMMENDED:
PAUL M. LUTZ 11/24/08
LOUIS R. BELMONTE, P.E. 11/24/08
DISTRICT TRAFFIC ENGINEER DATE

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| 1 | AS-BUILT DRAWING | MKD | 05/07/09 |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |

SHEET 2 OF 2 | PERMIT # 23-0880 | FILE # 0880




| SIGN TABULATION | | | |
|---|---|---|---|
| PLAN SYMBOL | SERIES NUMBER | SIZE | REMARKS |
| | R10-4I | 24X30 | STOP HERE ON RED |
| | R10-3E(R) | 9X15 | EDUCATIONAL PUSH BUTTON FOR WALKING PERSON |
| | R10-3E(L) | 9X15 | EDUCATIONAL PUSH BUTTON FOR WALKING PERSON |
| | R10-11 | 30X36 | NO TURN ON RED ● |
| | D3-4 | 90X18 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | D3-4 | 72X18 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | R10-12 | 30X36 | LEFT TURN YIELD ON RED ● |
| | | | |
| | | | |

**SIGN DETAILS**

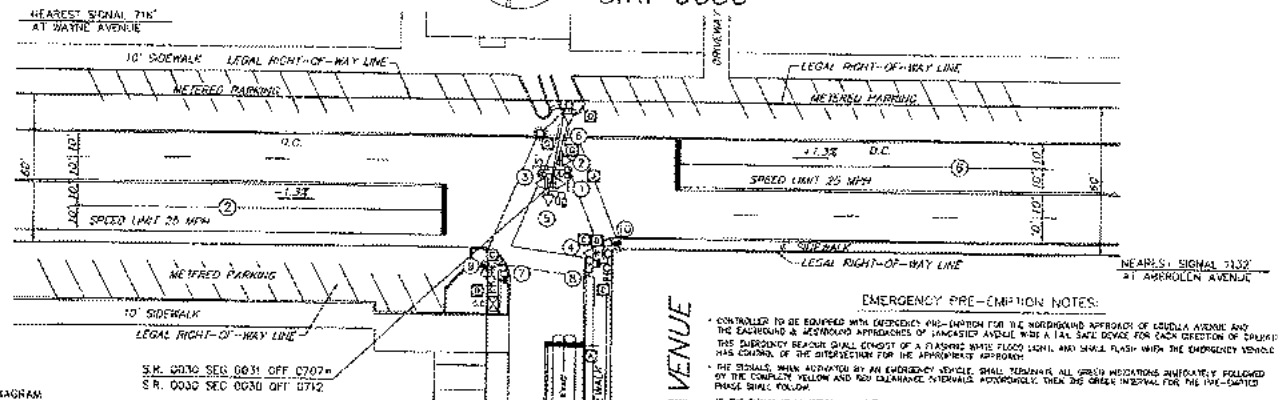
NOT TO SCALE
POINT CLEARVIEW ONE

SIGN F
8" UPPER CASE
6" LOWER CASE

SIGN G
8" UPPER CASE
6" LOWER CASE

# LANCASTER AVENUE S.R. 0030



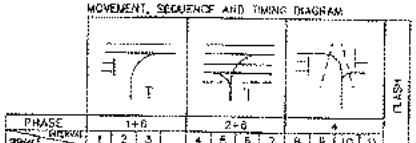




OPERATION NOTES:

① G/A-W-B FOLLOWED BY 2+6
② G IF FOLLOWED BY 2+6

- AUDIBLE PEDESTRIAN SIGNAL HEADS SHALL EMIT DIFFERENTIATE TONES TO DIFFERENTIATE DIRECTION OF CROSSING
- PED RECYCLE FOR PHASE 2+6

MOVEMENT, SEQUENCE AND TIMING DIAGRAM



| PHASE | 1+6 | | | 2+6 | | | | 4 | | | | FLASH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERVAL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | |
| 1 | A① | Y① | R① | G | G | Y | R | R | R | R | R | Y |
| 2 | G | Y | R | G | G | Y | R | R | R | R | R | Y |
| 3,4 | R | R | R | G | G | Y | R | R | R | R | R | Y |
| 5,6 | R | R | R | R | R | R | R | G | G | Y | R | R |
| 7,8* | H | H | H | M | FH | H | H | H | H | H | F | OFF |
| 9,10,11,12* | H | H | H | H | H | H | H | M | M | FH | H | H | OFF |

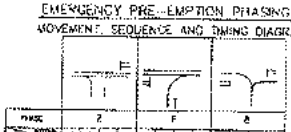
| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FIXED | 1 | 3 | 2 | | | 3 | 2 | | 3 | 3 | |
| MINIMUM | 3 | | | 10 | | | 3 | | | | |
| PASSAGE | 3 | | | | | | 3 | | | | |
| MAXIMUM 1 | 7 | | | 32 | | | 31 | | | | |
| MAXIMUM 2 | 12 | | | 99 | | | 39 | | | | |
| PEDESTRIAN | | | | 7 | 10 | | 7 | 14 | | | |
| MEMORY | MIN | | | MIN | | | L | | | | |

* MAN SYMBOL UPON PEDESTRIAN ACTIVATION ONLY. OTHERWISE HAND SYMBOL AT ALL TIMES.

- REFER TO SYSTEM PERMIT #-0013 FOR PROGRAM TIMES AND TIME-OF-DAY OPERATION

EMERGENCY PRE-EMPTION PHASING

MOVEMENT, SEQUENCE AND TIMING DIAGRAM



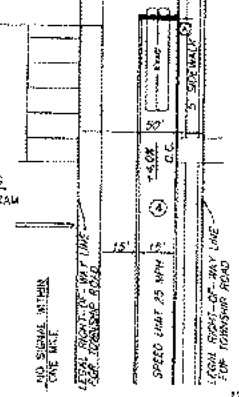
| PHASE | 2 | | | 6 | | | 8 | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERVAL | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 2 | G | Y | R | G | G | Y | R | R | R | R | R |
| 3,4 | G | Y | R | G | G | Y | R | R | R | R | R |
| 5,6 | R | R | R | R | R | R | G | G | Y | R | R |
| 7,8 | H | H | H | H | H | H | H | H | H | H | H |
| 9,10,11,12 | H | H | H | H | H | H | H | H | H | H | H |
| ** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

** FOR DURATION OF PRE-EMPTION

NOTE:
IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

Ⓐ G/A WHEN RETURNING TO NORMAL OPERATION
Ⓑ G WHEN RETURNING TO NORMAL OPERATION

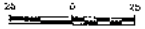
LOUELLA AVENUE




EMERGENCY PRE-EMPTION NOTES:

- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE NORTHBOUND APPROACH OF LOUELLA AVENUE AND THE EASTBOUND & WESTBOUND APPROACHES OF LANCASTER AVENUE WITH A TAX SAFE DEVICE FOR EACH DIRECTION OF OPERATION. THIS EMERGENCY REARDUR SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT AND SHALL FLASH WHEN THE EMERGENCY VEHICLE HAS CLEARED THE INTERSECTION FOR THE APPROPRIATE APPROACH.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE SEQUENCES AUTOMATICALLY. THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.
- IF THE SIGNAL IS IN INTERVAL 1 WHEN ACTIVATED BY AN EMERGENCY VEHICLE ON PHASE 8, PHASE 8 WILL REMAIN GREEN FOR THE DURATION OF PRE-EMPTION, PHASE 2 SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS.
- IF THE SIGNAL IS IN INTERVAL 8 WHEN ACTIVATED BY AN EMERGENCY VEHICLE ON PHASE 4, PHASE 4 WILL REMAIN GREEN FOR THE DURATION OF PRE-EMPTION.
- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INTERVALS FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTION PHASE COVERED BY THE APPROACHING EMERGENCY VEHICLE.
- IF SIGNALS HAS BEEN ACTIVATED BY PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PRE-EMPTED, THE PEDESTRIANS TIME SHALL BE SHUT BETWEEN "PED WALK" AND "PED HAND". THE "PED WALK" INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "PED HAND" INTERVAL. THIS INTERVAL SHALL TIME OUT FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE GOING INTO EMERGENCY PRE-EMPTION.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION, PHASE 2,6 OR 4,8 IN RETURNING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 4 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED. PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

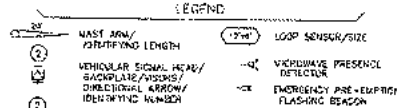
SCALE




SIGNAL INDICATIONS

*ALL PEDESTRIAN SIGNAL HEADS TO BE ANDIBLE

LEGEND




# GENERAL NOTES

(a) MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION 68, 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 16 FT. ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET.

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT.

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CIRCUIT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408.

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 20, 1974.

WHEN MOLDED FIBER DUCT IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REQUIRING EXCAVATION.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS O.D. OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS 701-8900 SERIES.

SYSTEM PERMIT #- 0013

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: DELAWARE
MUNICIPALITY: RADNOR TOWNSHIP
INTERSECTION: LANCASTER AVENUE (S.R. 0030)
AND LOUELLA AVENUE

REVIEWED:

MUNICIPAL OFFICIAL — DATE

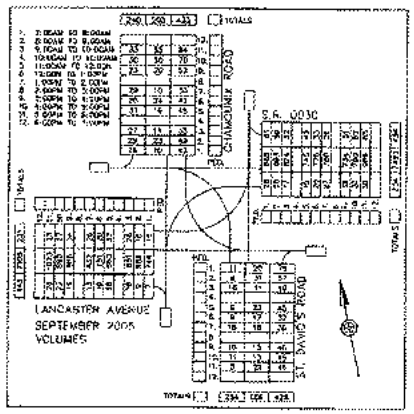
RECOMMENDED:

WERNER J. EICHORN — 6/3/03
DISTRICT TRAFFIC ENGINEER — DATE

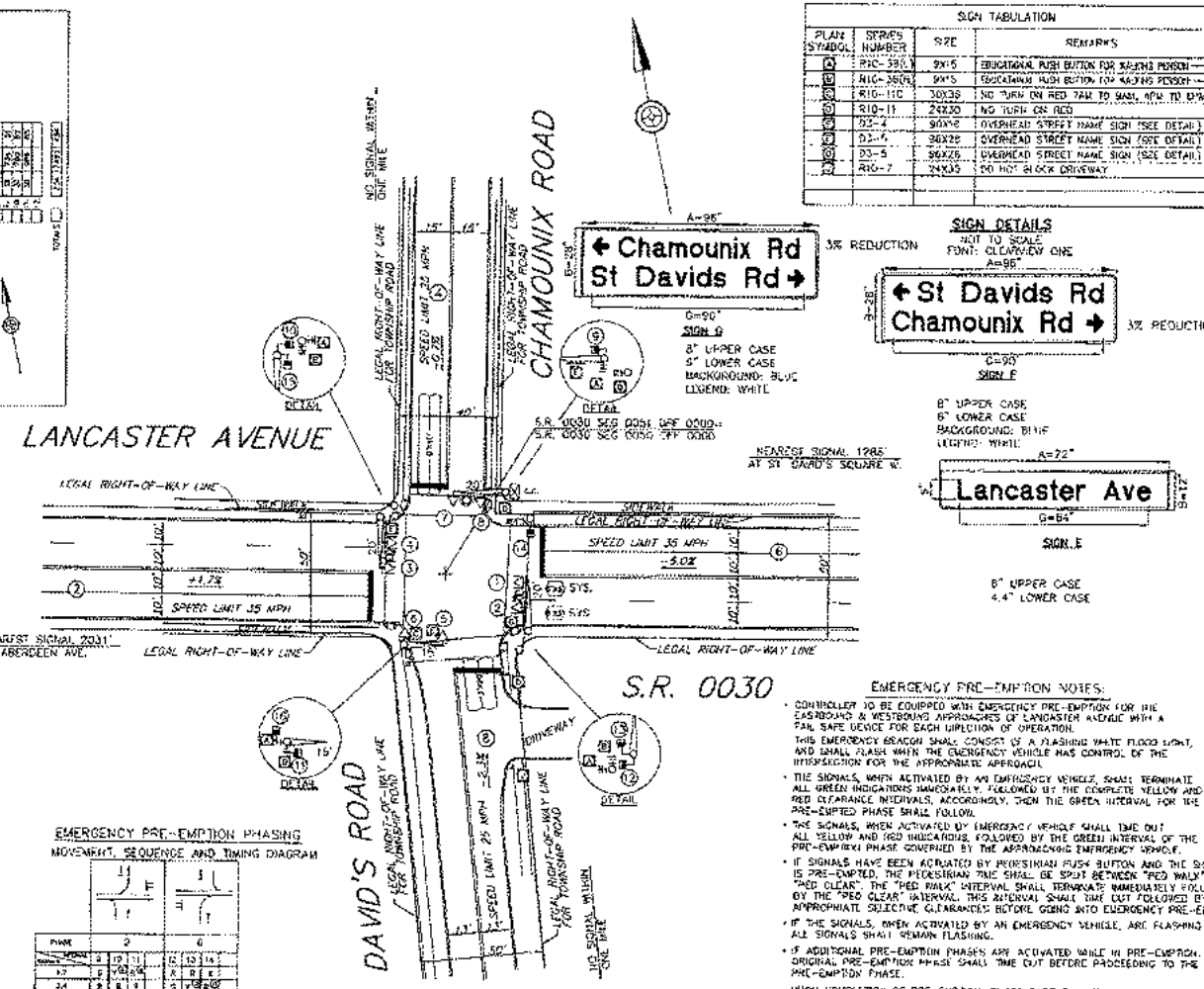
STEPHEN B. LESTER — 6/7/03
DISTRICT PERMITS ENGINEER — DATE

| NO. | REVISION | BY | DATE | BY | DATE | BY | DATE |
|---|---|---|---|---|---|---|---|
| 1 | AS-BUILT DRAWING | MAW | 7/24/03 | JJS | 8/4/03 | JJS | 10/6/03 |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |

SHEET 2 OF 2 | PERMIT # 03-0047 | FILE # 0047




| SIGN TABULATION | | | |
|---|---|---|---|
| PLAN SYMBOL | SERIES NUMBER | SIZE | REMARKS |
| | R10-3E(L) | 9X15 | EDUCATIONAL PUSH BUTTON FOR WALKING PERSON |
| | R10-3E(R) | 9X15 | EDUCATIONAL PUSH BUTTON FOR WALKING PERSON |
| | R10-11C | 30X36 | NO TURN ON RED TUE TO WED, 4PM TO 6PM |
| | R10-11 | 24X30 | NO TURN ON RED |
| | D3-4 | 90X12 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | D3-6 | 96X25 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | D3-5 | 96X25 | OVERHEAD STREET NAME SIGN (SEE DETAIL) |
| | R10-7 | 24X36 | DO NOT BLOCK DRIVEWAY |
| | | | |
| | | | |




## SIGN DETAILS

NOT TO SCALE
FONT: CLEARVIEW ONE




3% REDUCTION

SIGN G
8" UPPER CASE
6" LOWER CASE
BACKGROUND: BLUE
LEGEND: WHITE




3% REDUCTION

SIGN F
8" UPPER CASE
6" LOWER CASE
BACKGROUND: BLUE
LEGEND: WHITE




SIGN E
8" UPPER CASE
4.4" LOWER CASE

## GENERAL NOTES

NO MODIFICATIONS OF THIS INSTALLATION ARE PERMITTED UNLESS PRIOR APPROVAL IS GRANTED IN WRITING BY A REPRESENTATIVE OF THE DEPARTMENT OF TRANSPORTATION.

ALL MAINTENANCE WORK INCLUDING TRIMMING OF TREES, NECESSARY FOR PROPER VISIBILITY OF THE SIGNALS IS THE RESPONSIBILITY OF THE PERMITTEE.

ALL SIGNS AND PAVEMENT MARKINGS INDICATED ON THIS DRAWING ARE CONSIDERED PART OF THE PERMIT AND SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH PUBLICATION NO. 212.

POST MOUNTED SIGNALS SHALL BE INSTALLED WITH THE SIGNAL HEADS A MINIMUM OF 2 FEET BEHIND THE FACE OF CURB OR THE EDGE OF THE SHOULDER. SUPPORT POLES FOR OVERHEAD SIGNALS SHALL ALSO HAVE A MINIMUM CLEARANCE HORIZONTALLY OF 2 FEET.

SIGNALS ERECTED OVER THE ROADWAY SHALL HAVE A MINIMUM VERTICAL CLEARANCE OF 18 FT ABOVE THE ROADWAY. POST MOUNTED SIGNALS SHALL BE A MINIMUM OF 8 FT. ABOVE THE SIDEWALK OR PAVEMENT.

ALL OVERHEAD SIGNALS MUST BE RIGIDLY MOUNTED, TOP AND BOTTOM, AND EQUIPPED WITH BACKPLATES.

THE MINIMUM HORIZONTAL DISTANCE BETWEEN SIGNALS MEASURED AT RIGHT ANGLES TO THE APPROACH SHALL BE 8 FEET

EXACT LOCATION OF DETECTORS SHALL BE DETERMINED PRIOR TO INSTALLATION BY A REPRESENTATIVE OF PENNDOT

CURBING TO BE INSTALLED BY MUNICIPALITY AND WHERE NOTED, SHALL BE PLAIN CEMENT CONCRETE CURB OR GRANITE CURB, INSTALLED IN ACCORDANCE WITH DEPARTMENT SPECIFICATIONS FORM 408

PRIOR TO INSTALLATION THE CONTRACTOR SHALL CONSULT WITH THE LOCAL OFFICIALS AND UTILITY COMPANIES TO RESOLVE ANY PROBLEMS WHICH MAY BE CREATED DUE TO THE LOCATION OF UTILITIES.

THIS DRAWING CANNOT BE USED AS A CONSTRUCTION DRAWING UNLESS THE PERMITTEE COMPLIES WITH THE PROVISIONS OF THE LATEST AMENDMENT TO ACT 287, PREVENTION OF DAMAGE TO UNDERGROUND UTILITIES, DATED DECEMBER 2ND, 1974.

WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT, FOR REVIEW, PRIOR TO BIDDING

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATING.

CONDUIT INSTALLED IN BITUMINOUS ROADWAY LESS THAN 5 YEARS OLD, OR CONCRETE ROADWAY REGARDLESS OF AGE, MUST BE BORED OR JACKED UNDER THE ROADWAY. INSTALL IN ACCORDANCE WITH TRAFFIC SIGNAL STANDARDS TC-8000 SERIES

SYSTEM PERMIT #--0071

PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6-0

COUNTY: DELAWARE
MUNICIPALITY: RADNOR TOWNSHIP
INTERSECTION: LANCASTER AVENUE (S.R. 0030) & CHAMOUNIX ROAD/ST. DAVID'S ROAD

REVIEWED: _____ DATE _____
DISTRICT OFFICE _____ DATE _____

RECOMMENDED:
PAUL M. LUTZ 11/24/08
LOUIS R. BELMONTE, P.E. 11/24/08
DISTRICT TRAFFIC ENGINEER DATE

| NO. | REASON | BY | DATE | APVD. | DATE | REGION | DATE |
|---|---|---|---|---|---|---|---|
| 1 | AS-BUILT DRAWING | MEW | 3/3/10 | LJS | 3/4/10 | JMS | 3/4/10 |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |

SHEET 2 OF 2 | PERMIT # 63-0881 | FILE # 0881

## OPERATION NOTES:

- PED RECYCLE FOR PHASE 2+6

## MOVEMENT, SEQUENCE AND TIMING DIAGRAM

| PHASE | 2+6 | | | | 4+8 | | | | FLASH |
|---|---|---|---|---|---|---|---|---|---|
| INTERVAL / ASSIGN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| 1,2 | G | G | Y | R | R | R | R | R | Y |
| 3,4 | G | G | Y | R | R | R | R | R | Y |
| 5,6 | R | R | R | R | G | G | Y | R | R |
| 7,8 | R | R | R | R | G | G | Y | R | R |
| 9,10,11,12* | R | FR | R | R | R | Y | R | R | OFF |
| 13,14,15,16* | R | R | R | R | R | FR | R | R | OFF |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FIXED | | | | | | | |
| MINIMUM | 10 | | | | 4 | | |
| PASSAGE | | | | | 4 | | |
| MAXIMUM 1 | 23 | | | | 20 | | |
| MAXIMUM 2 | 72 | | | | 48 | | |
| PEDESTRIAN* | 7 | 11 | | | 7 | 12 | |
| MEMORY | MIN | | | | NL | | |

*MAN SYMBOL UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND SYMBOL AT ALL TIMES.

## EMERGENCY PRE-EMPTION PHASING

MOVEMENT, SEQUENCE AND TIMING DIAGRAM

| PHASE | 2 | | | | 6 | | | |
|---|---|---|---|---|---|---|---|---|
| INTERVAL / ASSIGN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1,2 | P | G | Y | R | R | R | R | R |
| 3,4 | P | G | Y | R | R | R | R | R |
| 5,6,7,8 | R | R | R | R | P | R | R | R |
| 9,10,11,12 | R | R | R | R | R | R | R | R |
| 13,14,15,16 | R | R | R | R | R | R | R | R |
| FIXED | * | | | | * | | | |

* FOR DURATION OF PRE-EMPTION

NOTE:
IF PRE-EMPTION EQUIPMENT HAS ENCODING CAPABILITIES FOR VEHICLE IDENTIFICATION, IT IS RECOMMENDED TO HAVE THE ZERO "00" FEATURE ON, TO GIVE UNCODED EMITTERS THE ABILITY TO ACTIVATE THE EMERGENCY PRE-EMPTION.

(5) 0 WHEN RETURNING TO NORMAL OPERATION

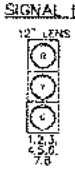
- REFER TO SYSTEM PERMIT #: 0071 FOR PROGRAM TIMES AND TIME-OF-DAY OPERATION

## EMERGENCY PRE-EMPTION NOTES:

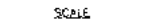
- CONTROLLER TO BE EQUIPPED WITH EMERGENCY PRE-EMPTION FOR THE EASTBOUND & WESTBOUND APPROACHES OF LANCASTER AVENUE WITH A FAIL SAFE DEVICE FOR EACH DIRECTION OF OPERATION. THIS EMERGENCY BEACON SHALL CONSIST OF A FLASHING WHITE FLOOD LIGHT, AND SMALL FLASH WHITE THE EMERGENCY VEHICLE HAS CONTROL OF THE INTERSECTION FOR THE APPROPRIATE APPROACH.
- THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, SHALL TERMINATE ALL GREEN INDICATIONS IMMEDIATELY, FOLLOWED BY THE COMPLETE YELLOW AND RED CLEARANCE INTERVALS, ACCORDINGLY, THEN THE GREEN INTERVAL FOR THE PRE-EMPTED PHASE SHALL FOLLOW.
- THE SIGNALS, WHEN ACTIVATED BY EMERGENCY VEHICLE SHALL TIME OUT ALL YELLOW AND RED INDICATIONS, FOLLOWED BY THE GREEN INTERVAL OF THE PRE-EMPTED PHASE GOVERNED BY THE APPROACHING EMERGENCY VEHICLE.
- IF SIGNALS HAVE BEEN ACTUATED BY PEDESTRIAN PUSH BUTTON AND THE SIGNAL IS PRE-EMPTED, THE PEDESTRIAN TIME SHALL BE SPLIT BETWEEN "PED WALK" AND "PED CLEAR". THE "PED WALK" INTERVAL SHALL TERMINATE IMMEDIATELY FOLLOWED BY THE "PED CLEAR" INTERVAL. THIS INTERVAL SHALL TIME OUT FOLLOWED BY THE APPROPRIATE SELECTIVE CLEARANCES BEFORE GOING INTO EMERGENCY PRE-EMPTION.
- IF THE SIGNALS, WHEN ACTIVATED BY AN EMERGENCY VEHICLE, ARE FLASHING ALL SIGNALS SHALL REMAIN FLASHING.
- IF ADDITIONAL PRE-EMPTION PHASES ARE ACTIVATED WHILE IN PRE-EMPTION, THE ORIGINAL PRE-EMPTION PHASE SHALL TIME OUT BEFORE PROCEEDING TO THE NEXT PRE-EMPTION PHASE.
- UPON COMPLETION OF PRE-EMPTION, PHASE 2 OR 6 IN RESUMING TO NORMAL OPERATION, PHASE 2+6 INTERVAL 1 SHALL FOLLOW.
- IN EMERGENCY PRE-EMPTION, NO PRIORITY SHALL BE ESTABLISHED, PRE-EMPTION SHALL BE A "FIRST COME, FIRST SERVE" OPERATION.

## SIGNAL INDICATIONS

12" LENS 11" SYMBOLS




SCALE




## LEGEND

- MAST ARM/ IDENTIFYING LENGTH
- VEHICULAR SIGNAL HEAD/ BACKPLATE/HOODS/ DIRECTIONAL ARROW/ IDENTIFYING NUMBER
- PEDESTRIAN SIGNAL HEAD/ IDENTIFYING NUMBER
- PEDESTRIAN PUSHBUTTON/ SIGN
- SIGN/IDENTIFYING LETTER
- LUMINAIRE
- LOOP SENSOR/SIZE
- MICROWAVE PRESENCE DETECTOR
- EMERGENCY PRE-EMPTION FLASHING BEACON
- EMERGENCY PRE-EMPTION DEVICE
- CURB RAMP
- UTILITY POLE
- PHASE NUMBER
- WALK

SIGNALS TO BE EQUIPPED WITH TURNING VISORS 1,2,3,4

# TRAFFIC SIGNAL SYSTEM PERMIT PLAN

| WEEKLY PROGRAM CHART | | | | | | |
|---|---|---|---|---|---|---|
| EVENT | DAY | TIME | CYCLE | OFFSET | PROGRAM | REMARKS |
| 1 | 1–7 | 20:00 | – | – | MAX. 1 | FREE |
| 2 | 1–5 | 06:00 | VARIES | VARIES | 1 | AM PEAK |
| 3 | 1–5 | 10:00 | VARIES | VARIES | 2 | OFF PEAK |
| 4 | 1–5 | 15:00 | VARIES | VARIES | 3 | PM PEAK |
| 5 | 6,7 | 08:00 | VARIES | VARIES | 2 | OFF PEAK |
| | | | | | | |
| | | | | | | |

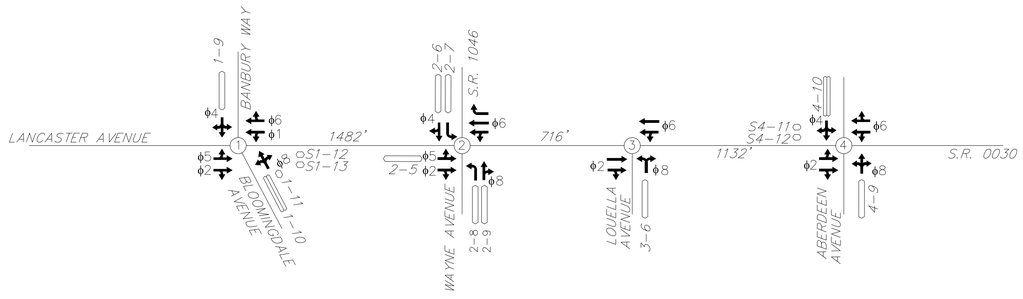
MONDAY = DAY 1
OFFSET IN SECONDS

OFFSET REFERENCED TO START OF YELLOW ON LANCASTER AVE.

NOTES: – ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
– REFER TO SIGNAL PERMIT PLAN FOR MAX 1, MAX 2, CLEARANCE AND PED TIMES.

## SYSTEM NOTES

1. PROGRAM TO BE SELECTED BY CLOSED LOOP SYSTEM (TIME OF DAY) OR TBC BACKUP.
2. OFFSETS ARE REFERENCED TO THE BEGINNING OF YELLOW ON LANCASTER AVENUE.
3. SYSTEM LIMITS : LANCASTER AVENUE (2 INTERSECTIONS) FROM BLOOMINGDALE AVE TO ABERDEEN AVE.
   MASTER: RADNOR MAINTENANCE BUILDING
4. PRIMARY COORDINATION: FIBER OPTIC CABLE.
   SECONDARY COORDINATION: TBC (DEFAULT TO BACKUP TBC).




## CYCLE/SPLIT/OFFSET

| Program 1 = | | | | Phase | | | | | | | | | Cycle | Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intersections | File # | Master | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 1 | LANCASTER AVE & BLOOMINGDALE AVE/BANBURY WAY | 0884 | | | 59 | | 46 | | 59 | | 46 | | 105 | 96 |
| 2 | LANCASTER AVE & WAYNE AVE | 0880 | | | 49 | | 30 | 13 (LEAD) | 36 | | 30 | 26 | 105 | 33 |
| 3 | LANCASTER AVE & LOUELLA AVE | 0047 | | | 73 | | | | 73 | | 32 | | 105 | 48 |
| 3 | LANCASTER AVE & ABERDEEN AVE | 0879 | | | 62 | | 43 | | 62 | | 43 | | 105 | 6 |

## CYCLE/SPLIT/OFFSET

| Program 2 = | | | | Phase | | | | | | | | | Cycle | Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intersections | File # | Master | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 1 | LANCASTER AVE & BLOOMINGDALE AVE/BANBURY WAY | 0884 | | | 65 | | 55 | | 65 | | 55 | | 120 | 119 |
| 2 | LANCASTER AVE & WAYNE AVE | 0880 | | | 64 | | 30 | 30 (LEAD) | 34 | | 30 | 26 | 120 | 48 |
| 3 | LANCASTER AVE & LOUELLA AVE | 0047 | | | 81 | | | | 81 | | 39 | | 120 | 54 |
| 3 | LANCASTER AVE & ABERDEEN AVE | 0879 | | | 72 | | 48 | | 72 | | 48 | | 120 | 14 |

## CYCLE/SPLIT/OFFSET

| Program 3 = | | | | Phase | | | | | | | | | Cycle | Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intersections | File # | Master | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | | |
| 1 | LANCASTER AVE & BLOOMINGDALE AVE/BANBURY WAY | 0884 | | | 32 | | 28 | | 32 | | 28 | | 60 | 52 |
| 2 | LANCASTER AVE & WAYNE AVE | 0880 | | | 64 | | 30 | 30 (LEAD) | 34 | | 30 | 26 | 120 | 19 |
| 3 | LANCASTER AVE & LOUELLA AVE | 0047 | | | 34 | | | | 34 | | 26 | | 60 | 6 |
| 3 | LANCASTER AVE & ABERDEEN AVE | 0879 | | | 37 | | 23 | | 37 | | 23 | | 60 | 38 |

## LEGEND

- SX–Y — SYSTEM DETECTOR, INTERSECTION X – LOOP NO. Y
- X–Y — DETECTOR, INTERSECTION X – LOOP NO. Y
- φ — PHASE

SCALE: NOT TO SCALE

| DISTRICT | COUNTY | ROUTE | SECTION | SHEET |
|---|---|---|---|---|
| 6–0 | DELAWARE | 0030 | CLR–T | 2 OF 4 |
| RADNOR TOWNSHIP | | | | |

| REVISION NUMBER | REVISIONS | DATE | BY |
|---|---|---|---|
| | | | |
| | | | |

## GENERAL NOTES

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SET UP PENNDOT DISTRICT 6–0 COMPUTER WITH THE SYSTEM DATABASE AND GRAPHICS. MODIFY THE DATABASE AND GRAPHICS FOR SYSTEMS REVISIONS.

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WHEN LIQUID FUELS MONEY IS USED, SIGNAL INSTALLATION MUST CONFORM TO FORM 408 AND A COPY OF THE PROPOSED SPECIFICATIONS MUST BE SUBMITTED TO THE DISTRICT TRAFFIC UNIT FOR REVIEW PRIOR TO BIDDING.

PERMITTEE SHALL OBTAIN A HIGHWAY OCCUPANCY PERMIT FOR ANY CHANGES IN INTERSECTION GEOMETRY REGARDING EXCAVATION.

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6–0

COUNTY: DELAWARE

MUNICIPALITY: RADNOR TOWNSHIP

INTERSECTION: TRAFFIC SIGNAL SYSTEM

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

PAUL M. LUTZ 11/24/08

LOUIS R. BELMONTE, P.E. 11/24/08
DISTRICT TRAFFIC ENGINEER DATE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MATTHEW M. KOZSUCH
ENGINEER 54396–E

| NO. | REVISION | DES./ REVW. | DATE | REVW. | DATE | RECOM. | DATE |
|---|---|---|---|---|---|---|---|
| 1 | AS–BUILT DRAWING | McM | 3/5/12 | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |

INTERCONNECT PERMIT #I–0013 SHEET 1 OF 1

# TRAFFIC SIGNAL SYSTEM PERMIT PLAN

| WEEKLY PROGRAM CHART | | | | | | |
|---|---|---|---|---|---|---|
| EVENT | DAY | TIME | CYCLE | OFFSET | PROGRAM | REMARKS |
| 1 | 1–7 | 20:00 | – | – | MAX. 1 | FREE |
| 2 | 1–5 | 06:00 | VARIES | VARIES | 1 | AM PEAK |
| 3 | 1–5 | 10:00 | VARIES | VARIES | 2 | OFF PEAK |
| 4 | 1–5 | 15:00 | VARIES | VARIES | 3 | PM PEAK |
| 5 | 6,7 | 08:00 | VARIES | VARIES | 2 | OFF PEAK |
| | | | | | | |
| | | | | | | |

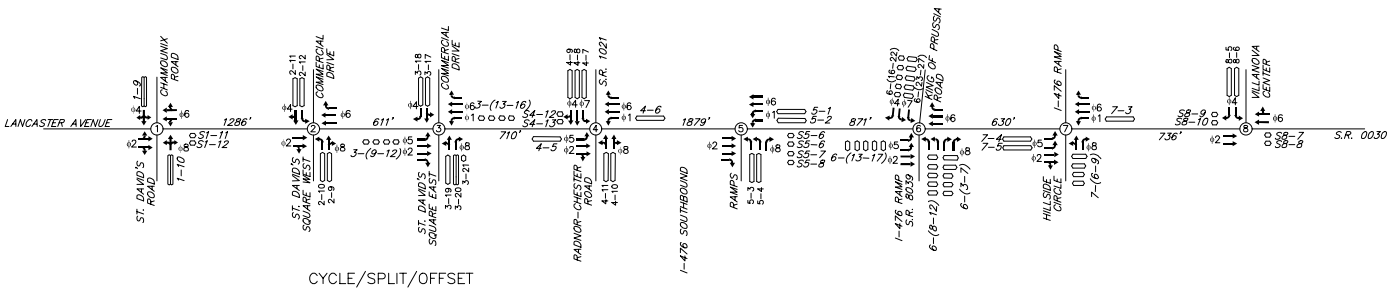
MONDAY = DAY 1
OFFSET IN SECONDS

OFFSET REFERENCED TO START OF YELLOW ON LANCASTER AVE.

NOTES: – ALL SPLIT TIMES INCLUDE YELLOW AND RED TIMES FOR A GIVEN PHASE.
– REFER TO SIGNAL PERMIT PLAN FOR MAX 1, MAX 2, CLEARANCE AND PED TIMES.

## SYSTEM NOTES

1. PROGRAM TO BE SELECTED BY CLOSED LOOP SYSTEM (TIME OF DAY) OR TBC BACKUP.
2. OFFSETS ARE REFERENCED TO THE BEGINNING OF YELLOW ON LANCASTER AVENUE.
3. SYSTEM LIMITS : LANCASTER AVENUE (8 INTERSECTIONS) FROM ST. DAVID'S RD TO VILLANOVA CENTER.
   MASTER: RADNOR MAINTENANCE BUILDING
4. PRIMARY COORDINATION: FIBER OPTIC CABLE.
   SECONDARY COORDINATION: TBC (DEFAULT TO BACKUP TBC).




## CYCLE/SPLIT/OFFSET

| Program 1 = | | | | Phase | | | | | | | | Cycle | Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intersections | File # | Master | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | |
| 1 | LANCASTER AVE & ST. DAVID'S/CHAMOUNIX RD | 0881 | | | 36 | | 24 | | 36 | | 24 | 60 | 20 |
| 2 | LANCASTER AVE & ST. DAVID'S SQUARE WEST | 0082 | | | 82 | | 38 | | 82 | | 38 | 120 | 43 |
| 3 | LANCASTER AVE & ST. DAVID'S SQUARE EAST | 0062 | | 13 (LEAD) | 68 | | 39 | 16 (LEAD) | 65 | | 39 | 120 | 34 |
| 4 | LANCASTER AVE & RADNOR-CHESTER RD | 0063 | | 14 (LEAD) | 54 | | 52 | 14 (LEAD) | 54 | 13 (LEAD) | 39 | 120 | 22 |
| 5 | LANCASTER AVE & I-476 SOUTHBOUND RAMPS | 2532 | | 12 (LEAD) | 24 | | | | 36 | | 24 | 60 | 36 |
| 6 | LANCASTER AVE & I-476/KING OF PRUSSIA RD | 2530 | | | 56 | 50 (LEAD) | 14 | 20 (LEAD) | 36 | 12 (LEAD) | 52 | 120 | 19 |
| 7 | LANCASTER AVE & I-476 RAMP/HILLSIDE CIRCLE | 2531 | | 14 (LEAD) | 70 | | | 32 (LEAD) | 52 | | 36 | 120 | 21 |
| 8 | LANCASTER AVE & VILLANOVA CENTER | 3416 | | | 35 | | 25 | | 35 | | | 60 | 51 |

## CYCLE/SPLIT/OFFSET

| Program 2 = | | | | Phase | | | | | | | | Cycle | Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intersections | File # | Master | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | |
| 1 | LANCASTER AVE & ST. DAVID'S/CHAMOUNIX RD | 0881 | | | 72 | | 38 | | 72 | | 38 | 110 | 15 |
| 2 | LANCASTER AVE & ST. DAVID'S SQUARE WEST | 0082 | | | 67 | | 43 | | 67 | | 43 | 110 | 12 |
| 3 | LANCASTER AVE & ST. DAVID'S SQUARE EAST | 0062 | | 25 (LEAD) | 46 | | 39 | 13 (LEAD) | 58 | | 39 | 110 | 5 |
| 4 | LANCASTER AVE & RADNOR-CHESTER RD | 0063 | | 13 (LEAD) | 45 | | 52 | 23 (LEAD) | 35 | 13 (LEAD) | 39 | 110 | 0 |
| 5 | LANCASTER AVE & I-476 SOUTHBOUND RAMPS | 2532 | | 27 (LEAD) | 33 | | | | 60 | | 30 | 90 | 49 |
| 6 | LANCASTER AVE & I-476/KING OF PRUSSIA RD | 2530 | | | 51 | 13 (LEAD) | 26 | 12 (LEAD) | 39 | 20 (LEAD) | 19 | 90 | 0 |
| 7 | LANCASTER AVE & I-476 RAMP/HILLSIDE CIRCLE | 2531 | | 12 (LEAD) | 44 | | | 15 (LEAD) | 41 | | 34 | 90 | 85 |
| 8 | LANCASTER AVE & VILLANOVA CENTER | 3416 | | | 56 | | 34 | | 56 | | | 90 | 1 |

## CYCLE/SPLIT/OFFSET

| Program 3 = | | | | Phase | | | | | | | | Cycle | Offset |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Intersections | File # | Master | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | |
| 1 | LANCASTER AVE & ST. DAVID'S/CHAMOUNIX RD | 0881 | | | 71 | | 29 | | 71 | | 29 | 100 | 66 |
| 2 | LANCASTER AVE & ST. DAVID'S SQUARE WEST | 0082 | | | 67 | | 33 | | 67 | | 33 | 100 | 14 |
| 3 | LANCASTER AVE & ST. DAVID'S SQUARE EAST | 0062 | | 16 (LEAD) | 45 | | 39 | 13 (LEAD) | 48 | | 39 | 100 | 12 |
| 4 | LANCASTER AVE & RADNOR-CHESTER RD | 0063 | | 13 (LEAD) | 35 | | 52 | 14 (LEAD) | 34 | 13 (LEAD) | 39 | 100 | 0 |
| 5 | LANCASTER AVE & I-476 SOUTHBOUND RAMPS | 2532 | | 26 (LEAD) | 34 | | | | 60 | | 30 | 90 | 51 |
| 6 | LANCASTER AVE & I-476/KING OF PRUSSIA RD | 2530 | | | 47 | 18 (LEAD) | 25 | 12 (LEAD) | 35 | 24 (LEAD) | 19 | 90 | 81 |
| 7 | LANCASTER AVE & I-476 RAMP/HILLSIDE CIRCLE | 2531 | | 12 (LEAD) | 44 | | | 15 (LEAD) | 41 | | 34 | 90 | 88 |
| 8 | LANCASTER AVE & VILLANOVA CENTER | 3416 | | | 65 | | 25 | | 65 | | | 90 | 12 |

## LEGEND

- SYSTEM DETECTOR, INTERSECTION X – LOOP NO. Y
- DETECTOR, INTERSECTION X – LOOP NO. Y
- ϕ PHASE

SCALE: NOT TO SCALE

| DISTRICT | COUNTY | ROUTE | SECTION | SHEET |
|---|---|---|---|---|
| 6–0 | DELAWARE | 0030 | CLR–T | 3 OF 4 |
| RADNOR TOWNSHIP | | | | |

| REVISION NUMBER | REVISIONS | DATE | BY |
|---|---|---|---|
| | | | |
| | | | |
| | | | |

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PENNSYLVANIA DEPARTMENT OF TRANSPORTATION
ENGINEERING DISTRICT 6–0

COUNTY: DELAWARE
MUNICIPALITY: RADNOR TOWNSHIP
INTERSECTION: TRAFFIC SIGNAL SYSTEM

REVIEWED:

DATE

MUNICIPAL OFFICIAL DATE

RECOMMENDED:

PAUL M. LUTZ 11/24/08

LOUIS R. BELMONTE, P.E. 11/24/08
DISTRICT TRAFFIC ENGINEER DATE

| NO. | REVISION | DES./REVW. | DATE | REVW. | DATE | RECOM. | DATE |
|---|---|---|---|---|---|---|---|
| 1 | AS–BUILT DRAWING | McM | 3/5/12 | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| 5 | | | | | | | |
| 6 | | | | | | | |
| 7 | | | | | | | |
| 8 | | | | | | | |

INTERCONNECT PERMIT #I–0071 SHEET 1 OF 1

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MATTHEW M. KOZSUCH
ENGINEER

# APPENDIX J

## *AUXILIARY LANE WARRANT ANALYSIS*

# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | AM Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 72 | 2.0% | 73 |
| | Through | - | 983 | 4.0% | 1003 |
| | Right | No | | | N/A |
| Opposing | Left | No | | | N/A |
| | Through | - | 913 | 4.0% | 932 |
| | Right | Yes | 77 | 2.0% | 78 |

| | |
|---|---|
| **Advancing Volume:** | 1076 |
| **Opposing Volume:** | 1010 |
| **Left Turn Volume:** | 73 |
| **% Left Turns in Advancing Volume:** | 6.78% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 913 | 4.0% | N/A |
| | Right | - | 77 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 7

**Warrant Met?:** Yes

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 73 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** 1.0

**PennDOT Publication 46, Exhibit 11-6**

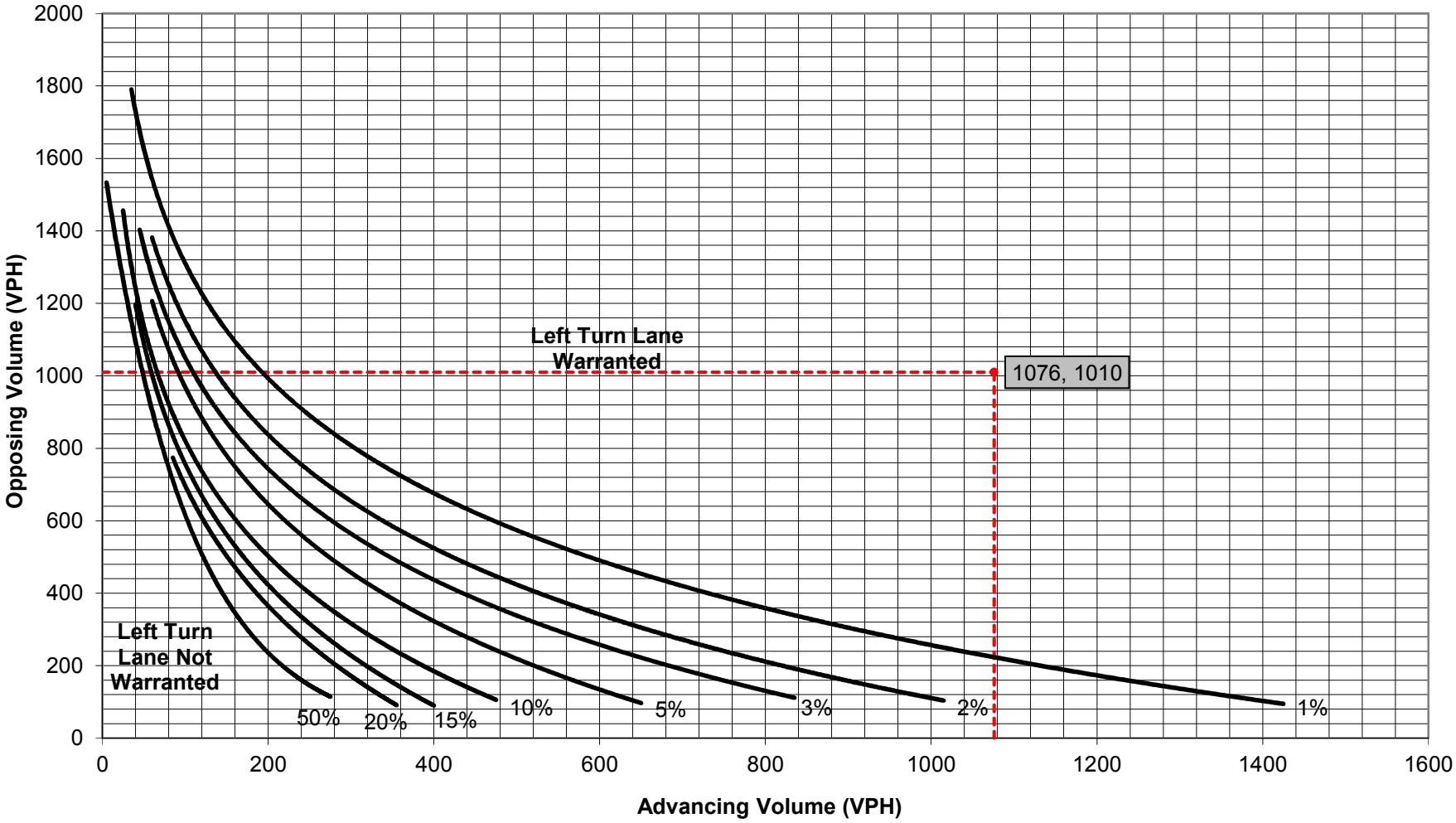
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | 75 | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Left Turn Lane Storage Length:** | 75 | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 7. Warrant for left turn lanes on four-lane, undivided highways (unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | PM Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 60 | 2.0% | 61 |
| | Through | - | 1009 | 1.0% | 1015 |
| | Right | Yes | | | 0 |
| Opposing | Left | Yes | | | 0 |
| | Through | - | 932 | 1.0% | 937 |
| | Right | Yes | 62 | 2.0% | 63 |

| | |
|---|---|
| **Advancing Volume:** | 1076 |
| **Opposing Volume:** | 1000 |
| **Left Turn Volume:** | 61 |
| **% Left Turns in Advancing Volume:** | 5.67% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 932 | 1.0% | N/A |
| | Right | - | 62 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 7

**Warrant Met?:** Yes

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 61 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** 1.0

**PennDOT Publication 46, Exhibit 11-6**

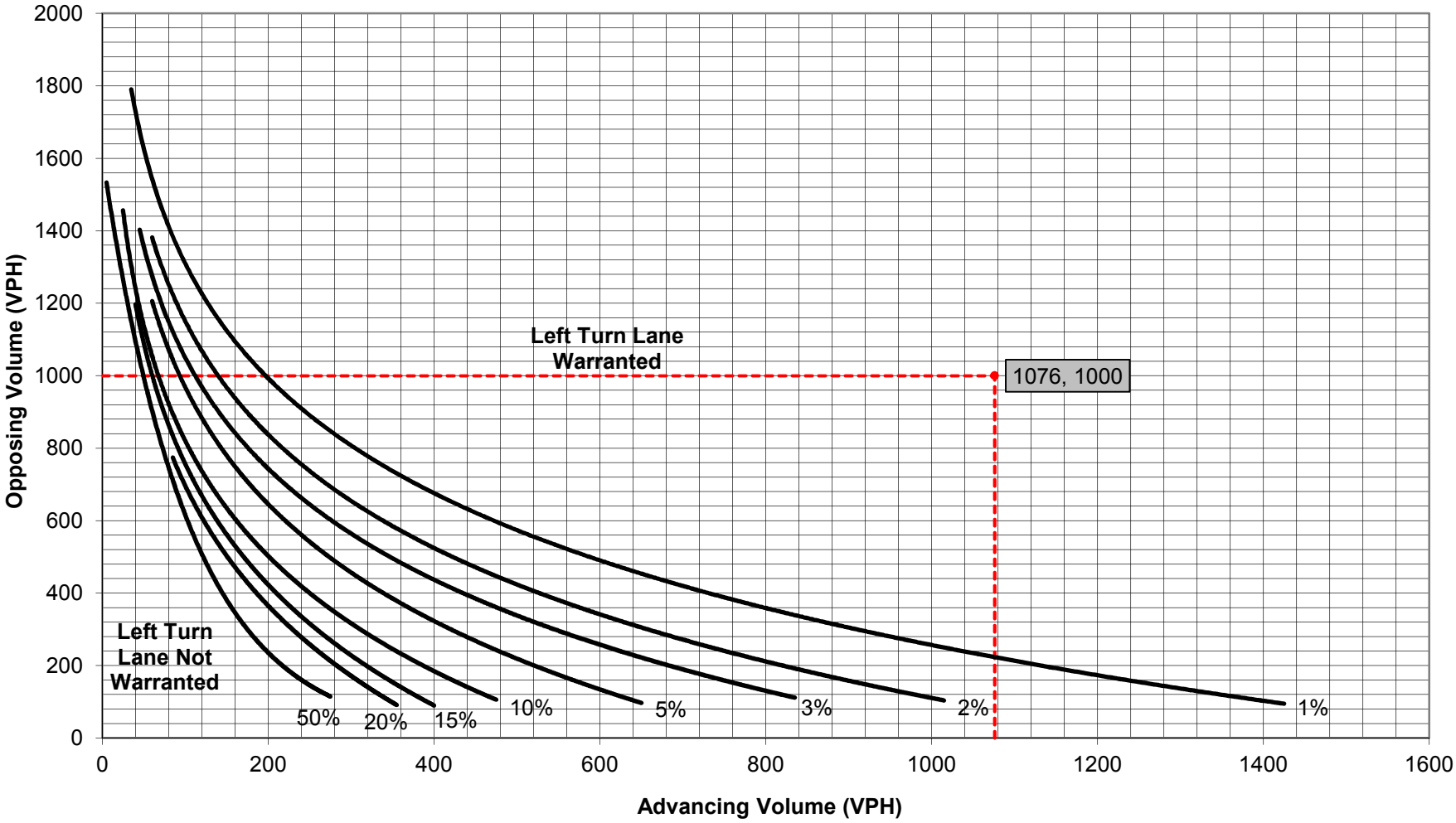
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | 75 | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Left Turn Lane Storage Length:** | 75 | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 7. Warrant for left turn lanes on four-lane, undivided highways (unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
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**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | SAT Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 55 | 2.0% | 56 |
| | Through | - | 906 | 2.0% | 916 |
| | Right | Yes | | | 0 |
| Opposing | Left | Yes | | | 0 |
| | Through | - | 789 | 2.0% | 797 |
| | Right | Yes | 58 | 2.0% | 59 |

| | |
|---|---|
| **Advancing Volume:** | 972 |
| **Opposing Volume:** | 856 |
| **Left Turn Volume:** | 56 |
| **% Left Turns in Advancing Volume:** | 5.76% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 789 | 2.0% | N/A |
| | Right | - | 58 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 7

**Warrant Met?:** Yes

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 56 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** 1.0

**PennDOT Publication 46, Exhibit 11-6**

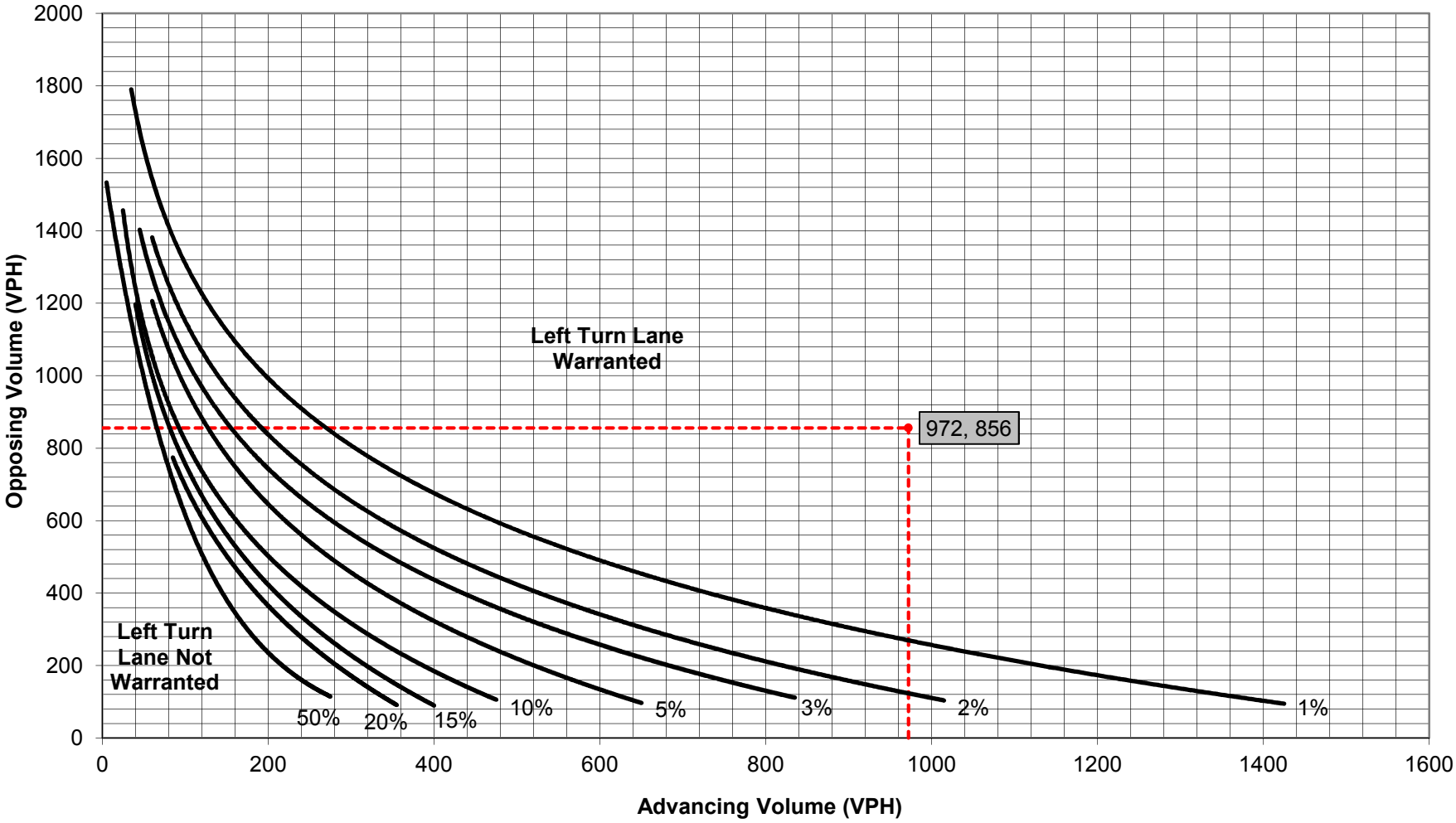
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | 75 | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Left Turn Lane Storage Length:** | 75 | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 7. Warrant for left turn lanes on four-lane, undivided highways (unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | SUN Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 54 | 2.0% | 55 |
| | Through | - | 609 | 1.0% | 613 |
| | Right | Yes | | | 0 |
| Opposing | Left | Yes | | | 0 |
| | Through | - | 592 | 1.0% | 595 |
| | Right | Yes | 61 | 2.0% | 62 |

| | |
|---|---|
| **Advancing Volume:** | 668 |
| **Opposing Volume:** | 657 |
| **Left Turn Volume:** | 55 |
| **% Left Turns in Advancing Volume:** | 8.23% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 592 | 1.0% | N/A |
| | Right | - | 61 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 7

**Warrant Met?:** Yes

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 55 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** 1.0

**PennDOT Publication 46, Exhibit 11-6**

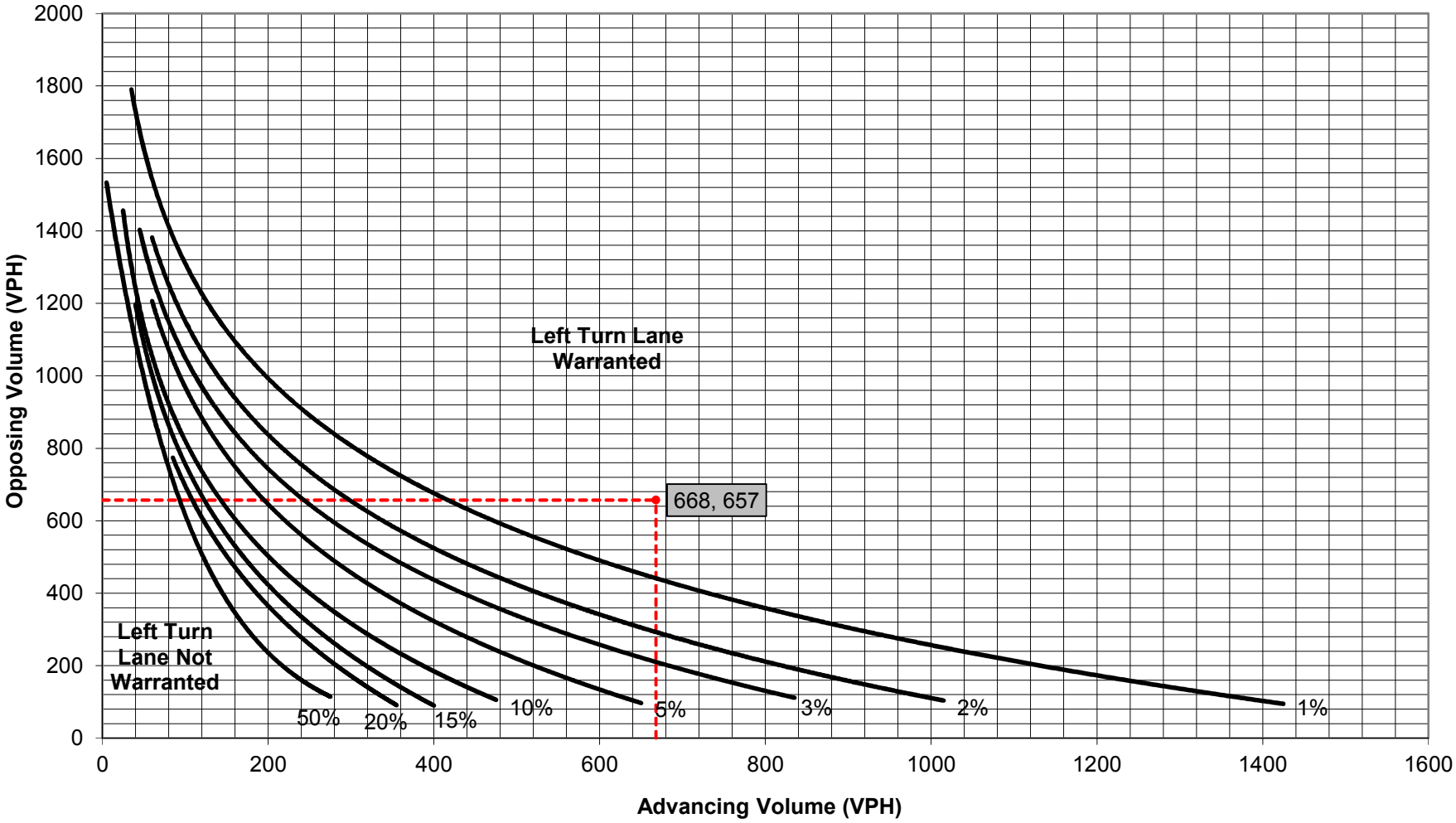
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | 75 | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Left Turn Lane Storage Length:** | 75 | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 7. Warrant for left turn lanes on four-lane, undivided highways (unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | Weekday Midday Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 70 | 2.0% | 71 |
| | Through | - | 870 | 3.0% | 884 |
| | Right | No | | | N/A |
| Opposing | Left | No | | | N/A |
| | Through | - | 796 | 4.0% | 812 |
| | Right | Yes | 79 | 33.0% | 93 |

| | |
|---|---|
| **Advancing Volume:** | 955 |
| **Opposing Volume:** | 905 |
| **Left Turn Volume:** | 71 |
| **% Left Turns in Advancing Volume:** | 7.43% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 796 | 4.0% | N/A |
| | Right | - | 79 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 7

**Warrant Met?:** Yes

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 71 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** 1.0

**PennDOT Publication 46, Exhibit 11-6**

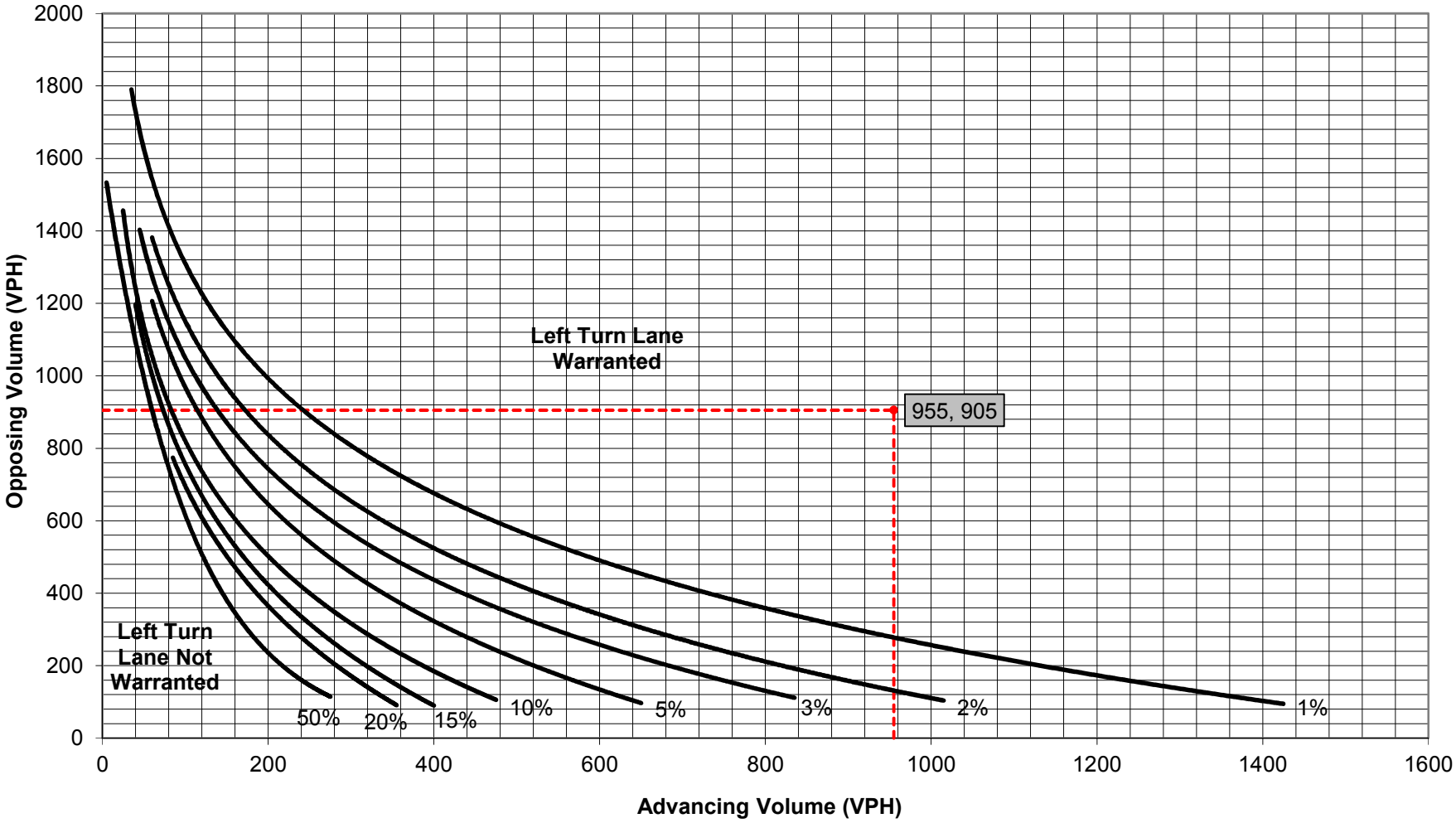
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | 75 | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Left Turn Lane Storage Length:** | 75 | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 7. Warrant for left turn lanes on four-lane, undivided highways (unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | AM Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 72 | 2.0% | N/A |
| | Through | - | 983 | 4.0% | N/A |
| | Right | No | | | N/A |
| Opposing | Left | No | | | N/A |
| | Through | - | 913 | 4.0% | N/A |
| | Right | Yes | 77 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 913 | 4.0% | 932 |
| | Right | - | 77 | 2.0% | 78 |

| | |
|---|---|
| **Advancing Volume:** | 1010 |
| **Right Turn Volume:** | 78 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 11

**Warrant Met?:** Yes

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 78 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** 1.0

**PennDOT Publication 46, Exhibit 11-6**

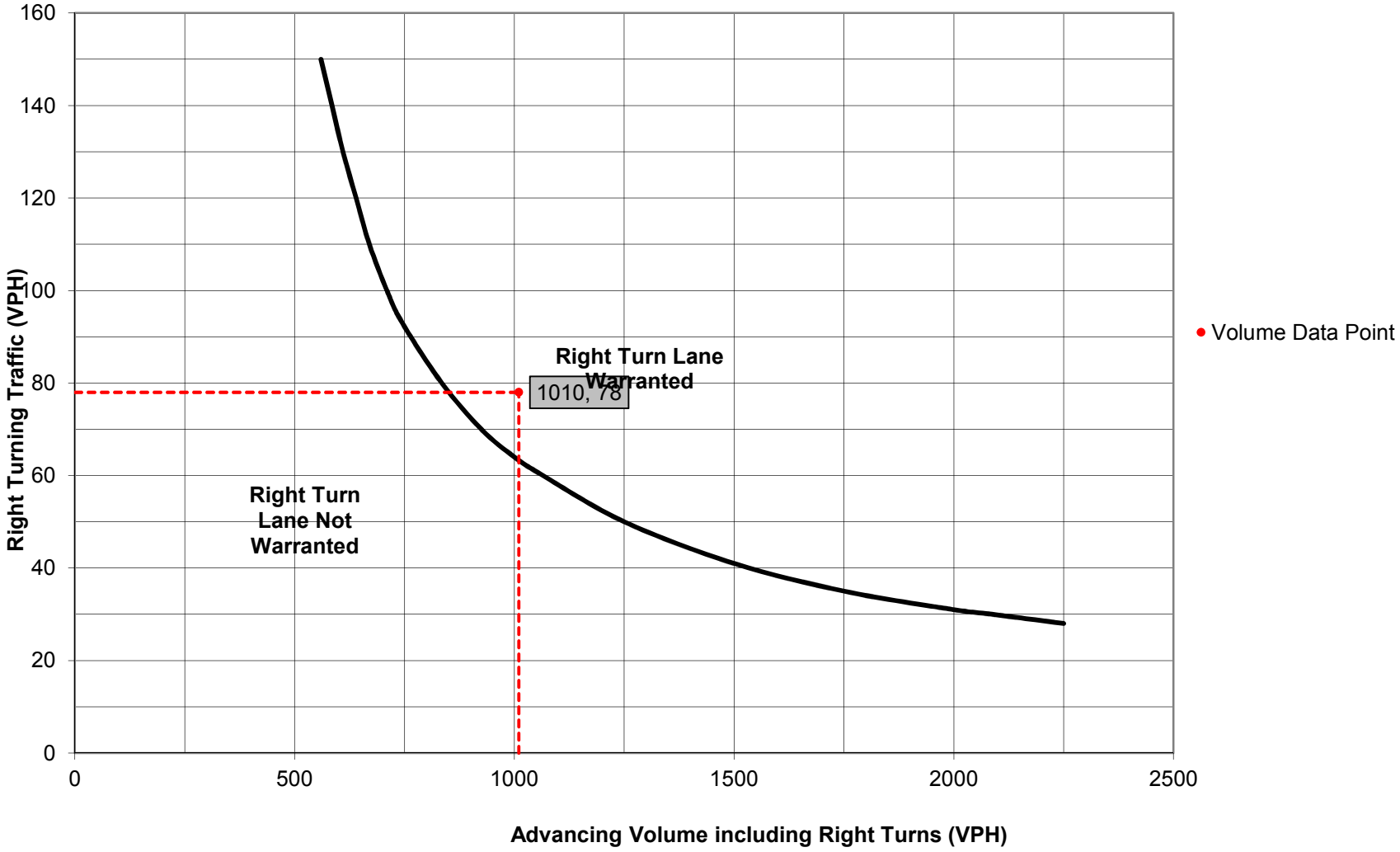
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | 75 | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | 75 | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 11. Warrant for right turn lanes on four-lane roadways (40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/25/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | PM Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 60 | 2.0% | N/A |
| | Through | - | 1009 | 1.0% | N/A |
| | Right | Yes | | | N/A |
| Opposing | Left | Yes | | | N/A |
| | Through | - | 932 | 1.0% | N/A |
| | Right | Yes | 62 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 932 | 1.0% | 937 |
| | Right | - | 62 | 2.0% | 63 |

| | |
|---|---|
| **Advancing Volume:** | 1000 |
| **Right Turn Volume:** | 63 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 11

**Warrant Met?:** No

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 63 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

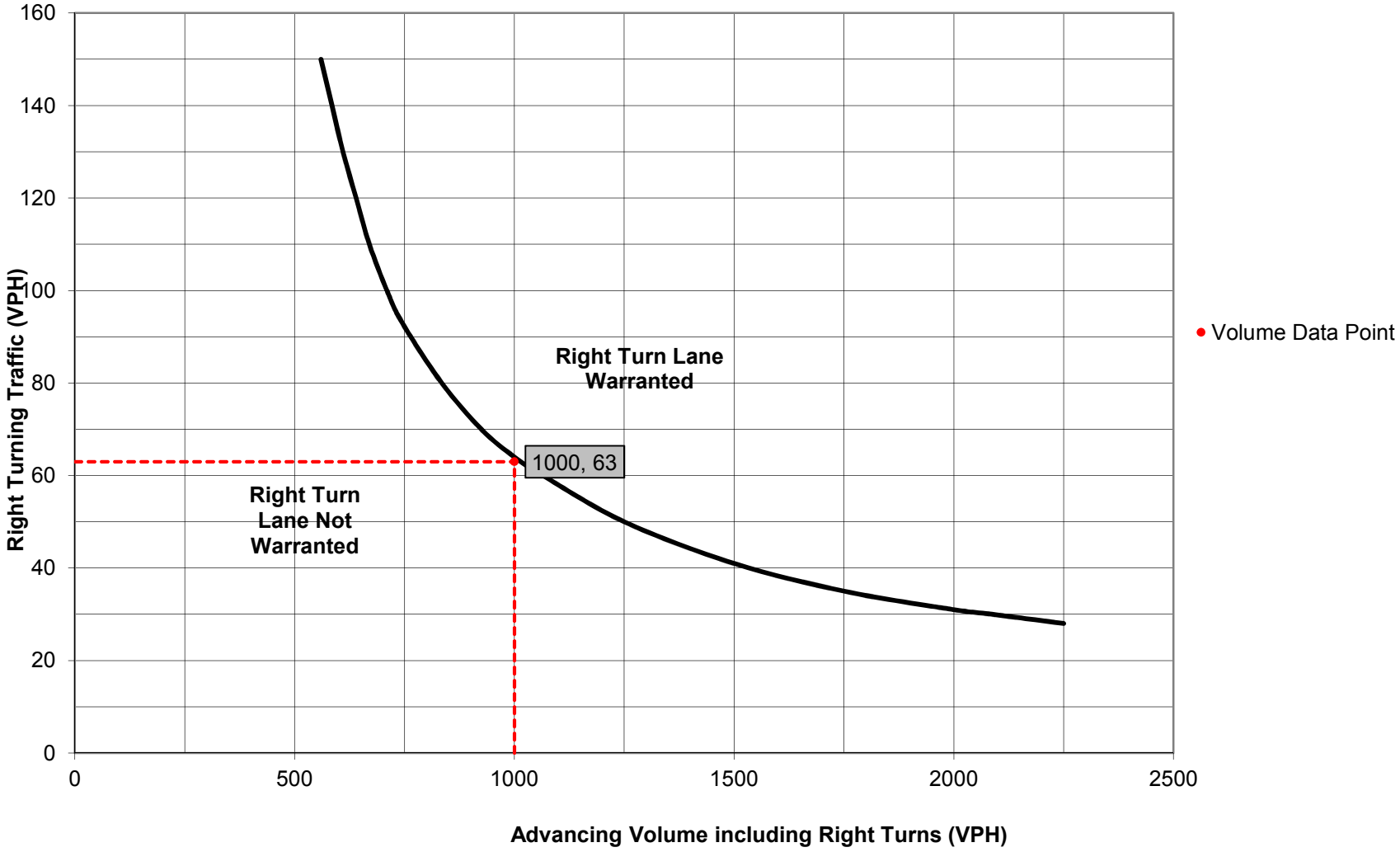
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 11. Warrant for right turn lanes on four-lane roadways**
**(40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | SAT Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 55 | 2.0% | N/A |
| | Through | - | 906 | 2.0% | N/A |
| | Right | Yes | | | N/A |
| Opposing | Left | Yes | | | N/A |
| | Through | - | 789 | 2.0% | N/A |
| | Right | Yes | 58 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 789 | 2.0% | 797 |
| | Right | - | 58 | 2.0% | 59 |

| | |
|---|---|
| **Advancing Volume:** | 856 |
| **Right Turn Volume:** | 59 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 11

**Warrant Met?:** No

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 59 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

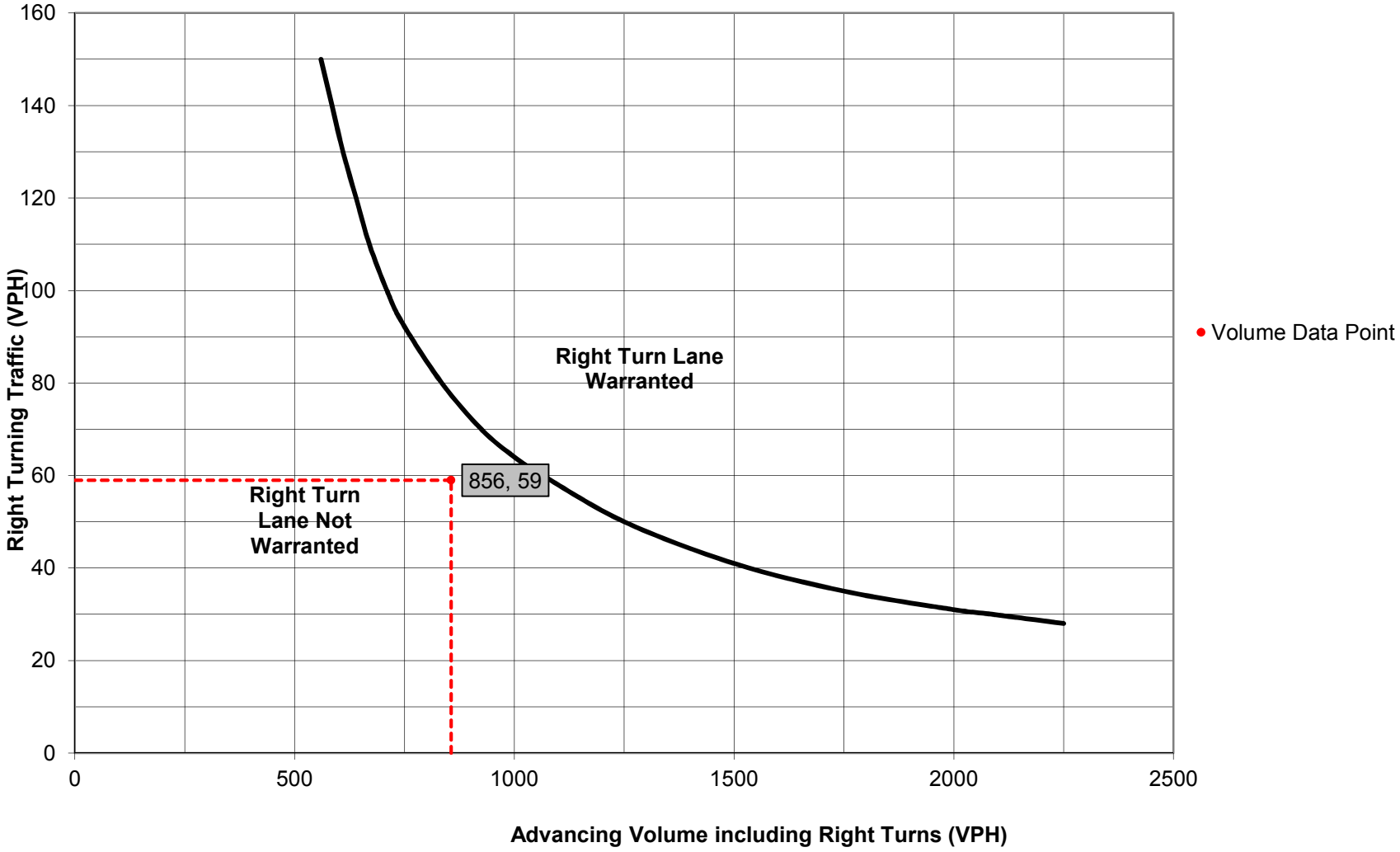
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 11. Warrant for right turn lanes on four-lane roadways**
**(40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | SUN Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 54 | 2.0% | N/A |
| | Through | - | 609 | 1.0% | N/A |
| | Right | Yes | | | N/A |
| Opposing | Left | Yes | | | N/A |
| | Through | - | 592 | 1.0% | N/A |
| | Right | Yes | 61 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 592 | 1.0% | 595 |
| | Right | - | 61 | 2.0% | 62 |

| | |
|---|---|
| **Advancing Volume:** | 657 |
| **Right Turn Volume:** | 62 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 11

**Warrant Met?:** No

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 62 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

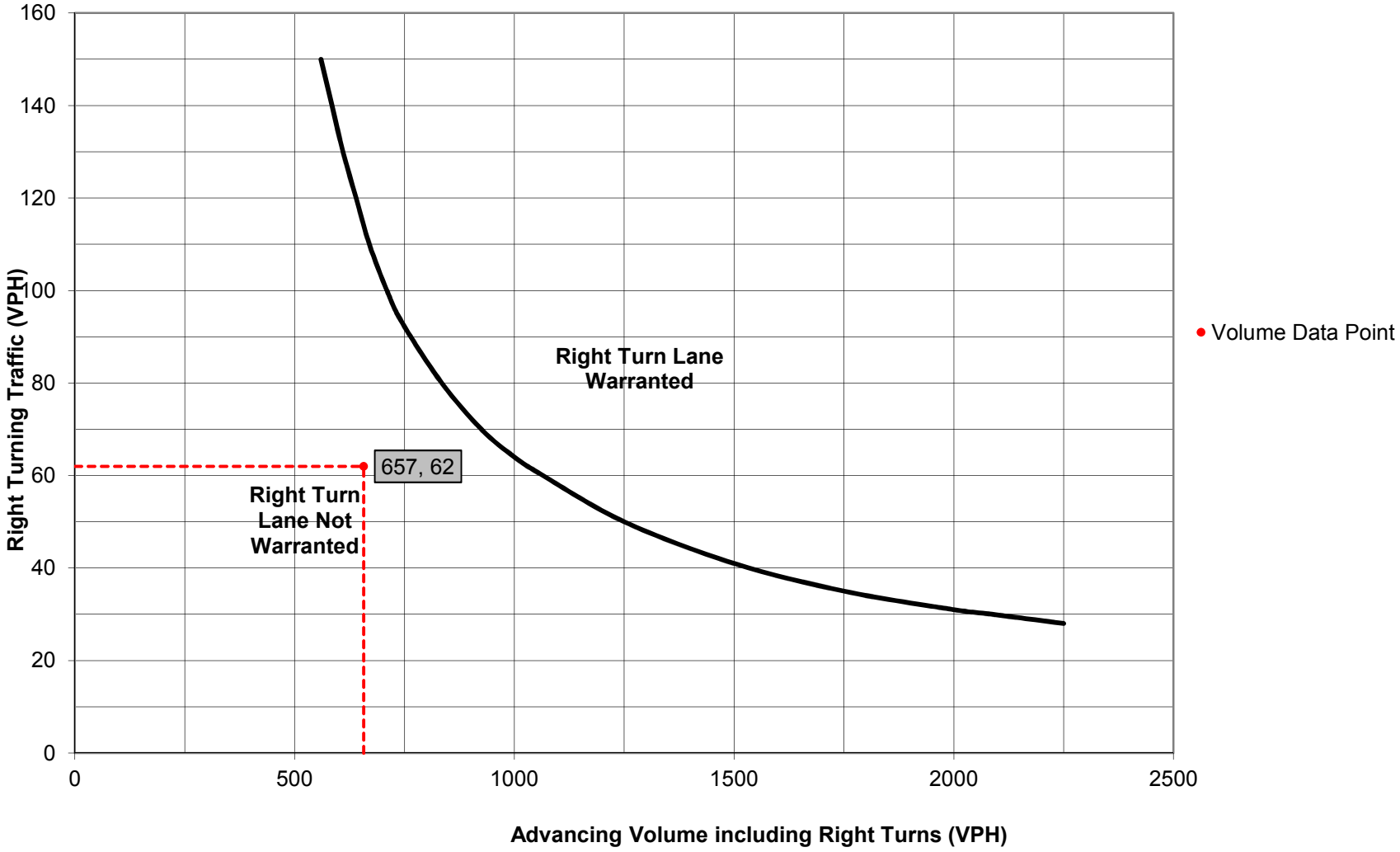
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 11. Warrant for right turn lanes on four-lane roadways (40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Lancaster Avenue & Proposed Full Access Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 2 |
| **Design Hour:** | Weekday Midday Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 35 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 70 | 2.0% | N/A |
| | Through | - | 870 | 3.0% | N/A |
| | Right | No | | | N/A |
| Opposing | Left | No | | | N/A |
| | Through | - | 796 | 4.0% | N/A |
| | Right | Yes | 79 | 33.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 796 | 4.0% | 812 |
| | Right | - | 79 | 2.0% | 80 |

| | |
|---|---|
| **Advancing Volume:** | 892 |
| **Right Turn Volume:** | 80 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 11

**Warrant Met?:** Yes

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 80 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** 1.0

**PennDOT Publication 46, Exhibit 11-6**

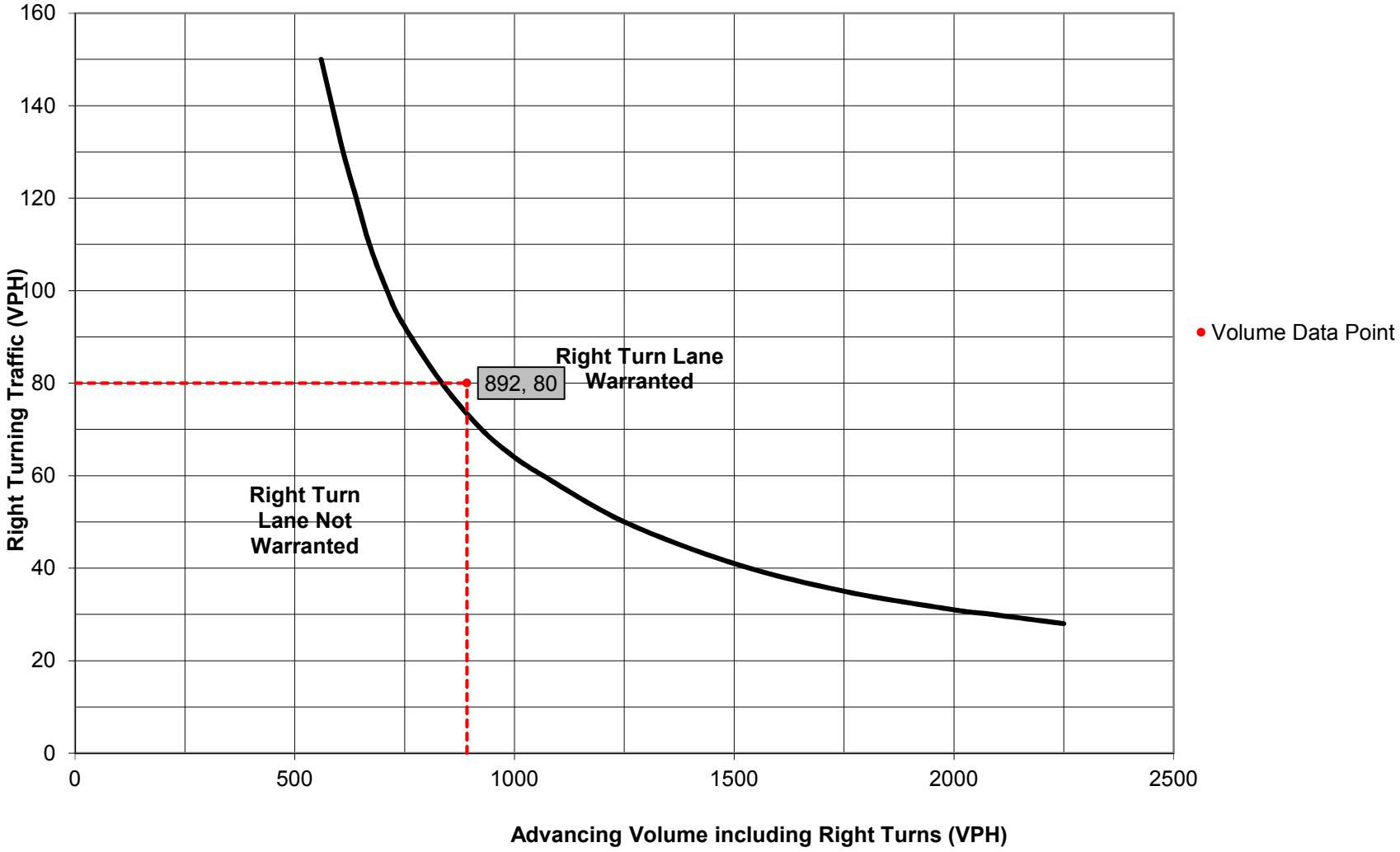
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | 75 | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | 75 | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 11. Warrant for right turn lanes on four-lane roadways**
**(40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | AM Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 33 | 2.0% | 34 |
| | Through | - | 123 | 2.0% | 125 |
| | Right | Yes | | | 0 |
| Opposing | Left | Yes | | | 0 |
| | Through | - | 206 | 8.0% | 215 |
| | Right | Yes | 15 | 2.0% | 16 |

| | |
|---|---|
| **Advancing Volume:** | 159 |
| **Opposing Volume:** | 231 |
| **Left Turn Volume:** | 34 |
| **% Left Turns in Advancing Volume:** | 21.38% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 206 | 8.0% | N/A |
| | Right | - | 15 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 1

**Warrant Met?:** No

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 34 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

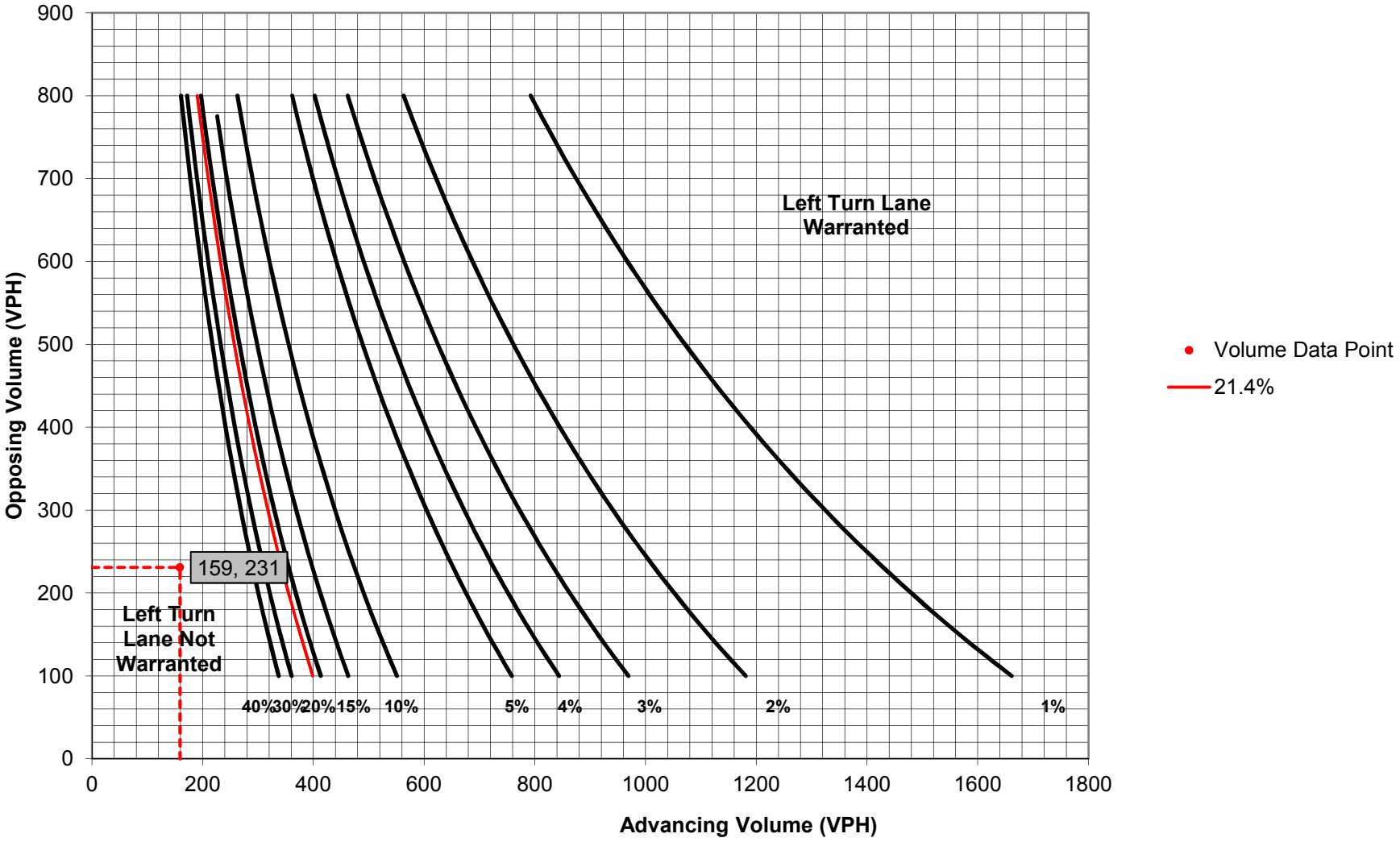
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Left Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 1. Warrant for left turn lanes on two-lane roadways**
**(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | PM Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 30 | 2.0% | 31 |
| | Through | - | 145 | 3.0% | 148 |
| | Right | Yes | | | 0 |
| Opposing | Left | Yes | | | 0 |
| | Through | - | 125 | 0.0% | 125 |
| | Right | Yes | 12 | 2.0% | 13 |

| | |
|---|---|
| **Advancing Volume:** | 179 |
| **Opposing Volume:** | 138 |
| **Left Turn Volume:** | 31 |
| **% Left Turns in Advancing Volume:** | 17.32% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 125 | 0.0% | N/A |
| | Right | - | 12 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 1

**Warrant Met?:** No

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 31 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

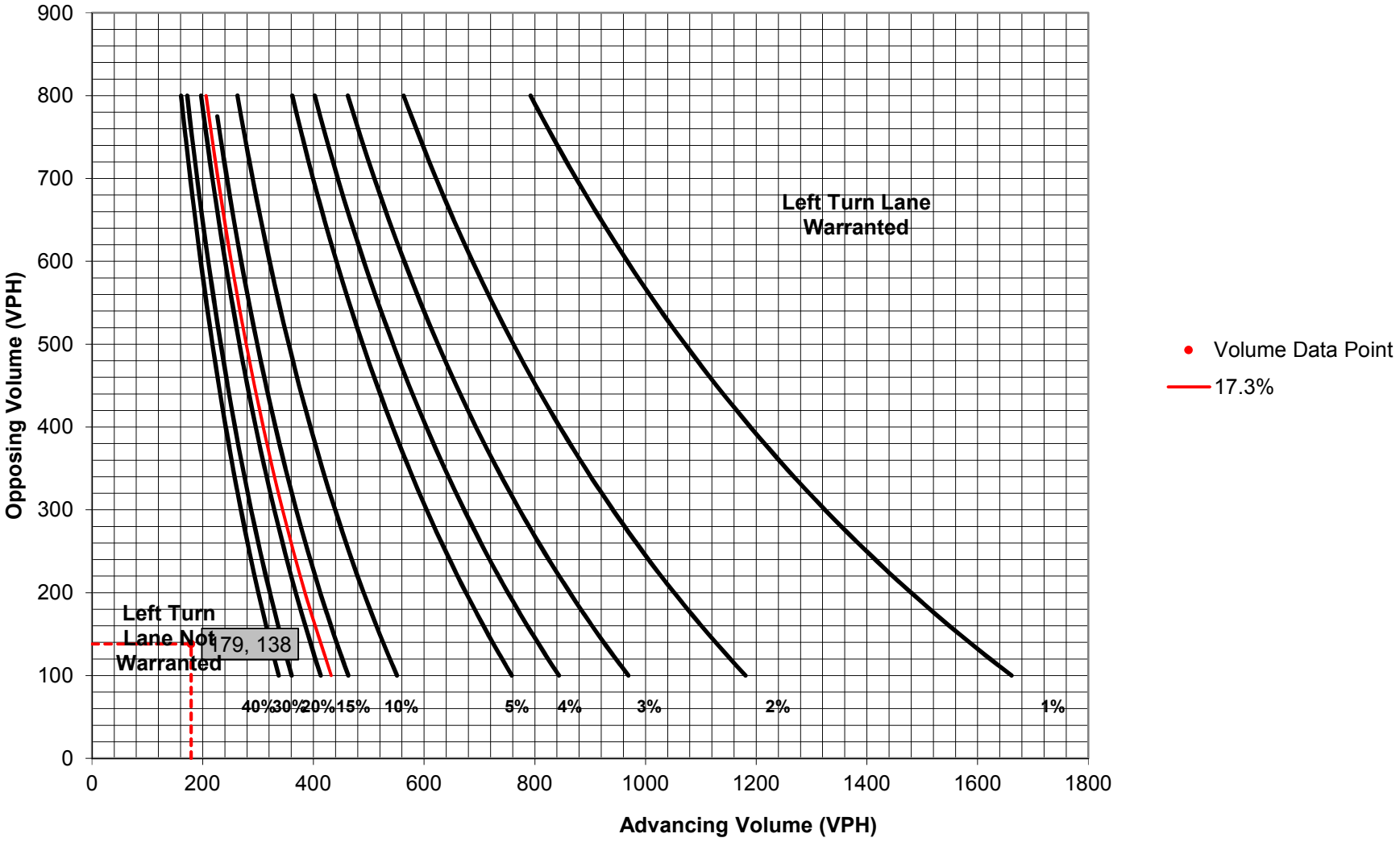
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Left Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 1. Warrant for left turn lanes on two-lane roadways**
**(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | SAT Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 27 | 2.0% | 28 |
| | Through | - | 122 | 1.0% | 123 |
| | Right | Yes | | | 0 |
| Opposing | Left | Yes | | | 0 |
| | Through | - | 161 | 2.0% | 163 |
| | Right | Yes | 11 | 2.0% | 12 |

| | |
|---|---|
| **Advancing Volume:** | 151 |
| **Opposing Volume:** | 175 |
| **Left Turn Volume:** | 28 |
| **% Left Turns in Advancing Volume:** | 18.54% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 161 | 2.0% | N/A |
| | Right | - | 11 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** **Figure 1**

**Warrant Met?:** **No**

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** **N/A**

**Warrant Met?:** **N/A**

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 28 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

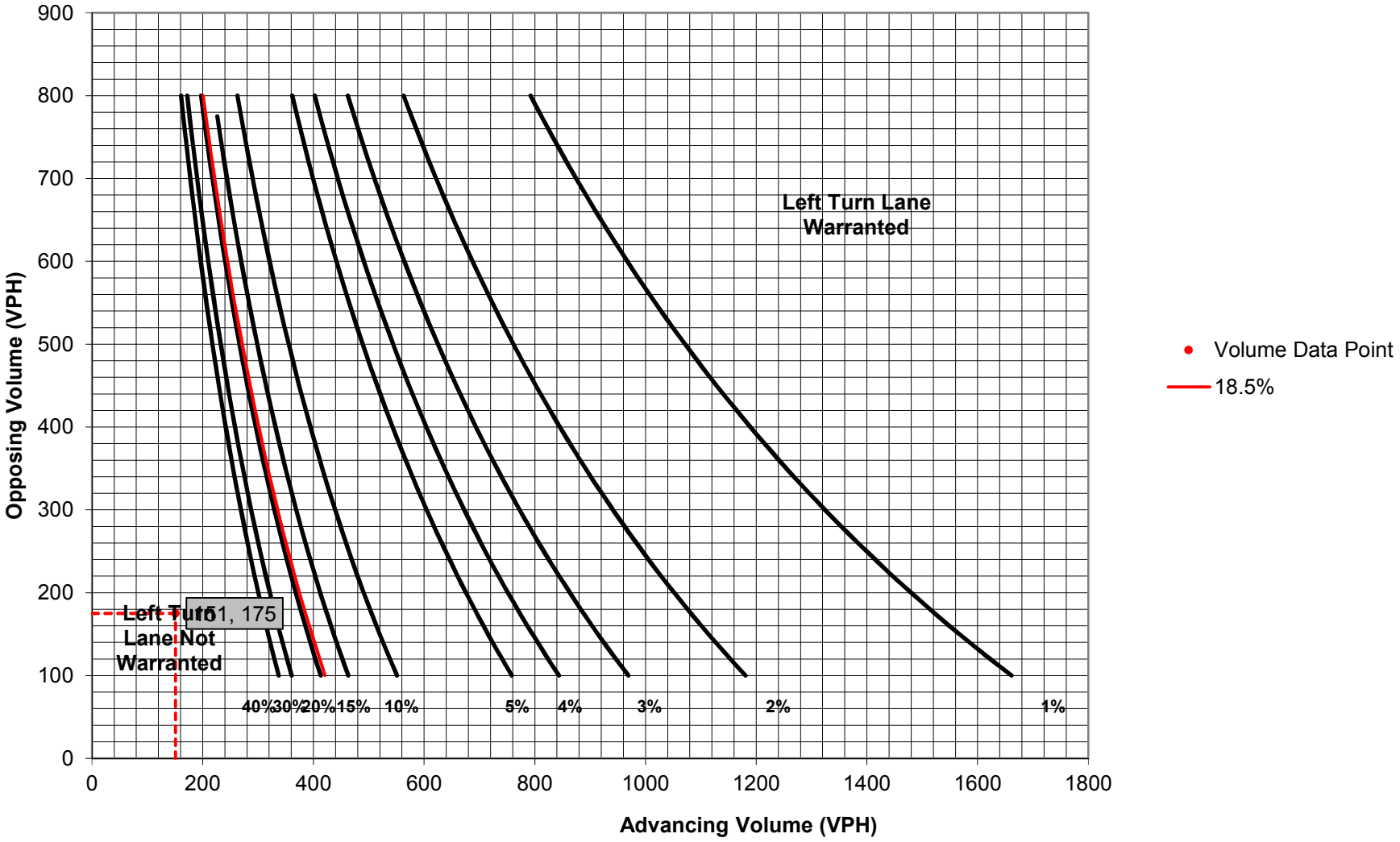
| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | **N/A** | **Feet** |
| **Condition B:** | **N/A** | **Feet** |
| **Condition C:** | **N/A** | **Feet** |
| **Required Left Turn Lane Storage Length:** | **N/A** | **Feet** |

**Additional Findings:**

**N/A**

**Additional Comments / Justifications:**

**Figure 1. Warrant for left turn lanes on two-lane roadways**
**(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | SUN Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 26 | 2.0% | 27 |
| | Through | - | 81 | 2.0% | 82 |
| | Right | Yes | | | 0 |
| Opposing | Left | Yes | | | 0 |
| | Through | - | 90 | 2.0% | 91 |
| | Right | Yes | 10 | 2.0% | 11 |

| | |
|---|---|
| **Advancing Volume:** | 109 |
| **Opposing Volume:** | 102 |
| **Left Turn Volume:** | 27 |
| **% Left Turns in Advancing Volume:** | 24.77% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 90 | 2.0% | N/A |
| | Right | - | 10 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** **Figure 1**

**Warrant Met?:** **No**

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** **N/A**

**Warrant Met?:** **N/A**

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 27 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

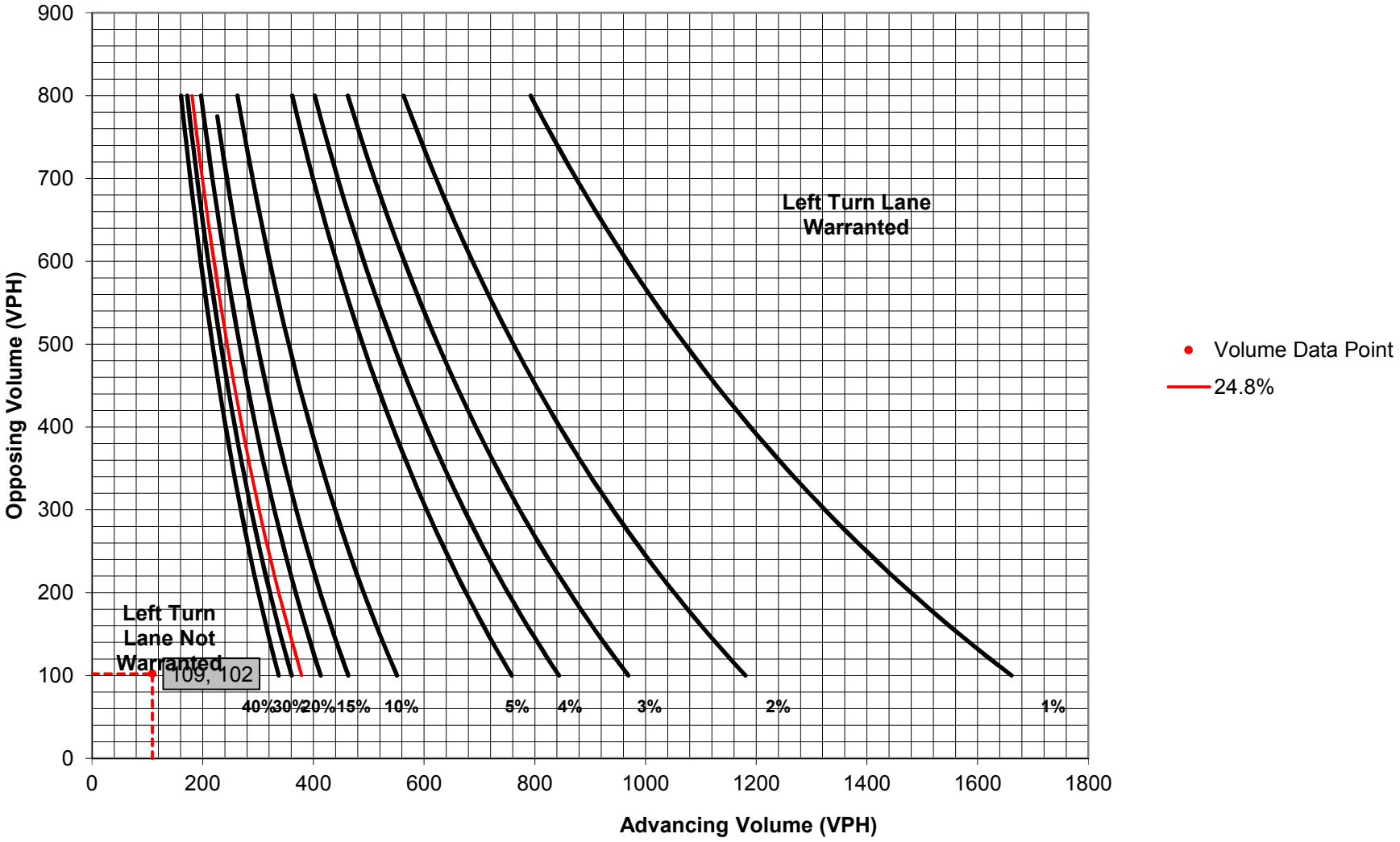
| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | **N/A** | **Feet** |
| **Condition B:** | **N/A** | **Feet** |
| **Condition C:** | **N/A** | **Feet** |
| **Required Left Turn Lane Storage Length:** | **N/A** | **Feet** |

**Additional Findings:**

**N/A**

**Additional Comments / Justifications:**

**Figure 1. Warrant for left turn lanes on two-lane roadways**
**(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | Weekday Midday Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Left Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 34 | 2.0% | 35 |
| | Through | - | 107 | 5.0% | 110 |
| | Right | Yes | | | 0 |
| Opposing | Left | Yes | | | 0 |
| | Through | - | 117 | 2.0% | 119 |
| | Right | Yes | 14 | 0.0% | 14 |

| | |
|---|---|
| **Advancing Volume:** | 145 |
| **Opposing Volume:** | 133 |
| **Left Turn Volume:** | 35 |
| **% Left Turns in Advancing Volume:** | 24.14% |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | N/A |
| | Through | - | 117 | 2.0% | N/A |
| | Right | - | 14 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Right Turn Volume:** | N/A |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 1

**Warrant Met?:** No

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 35 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

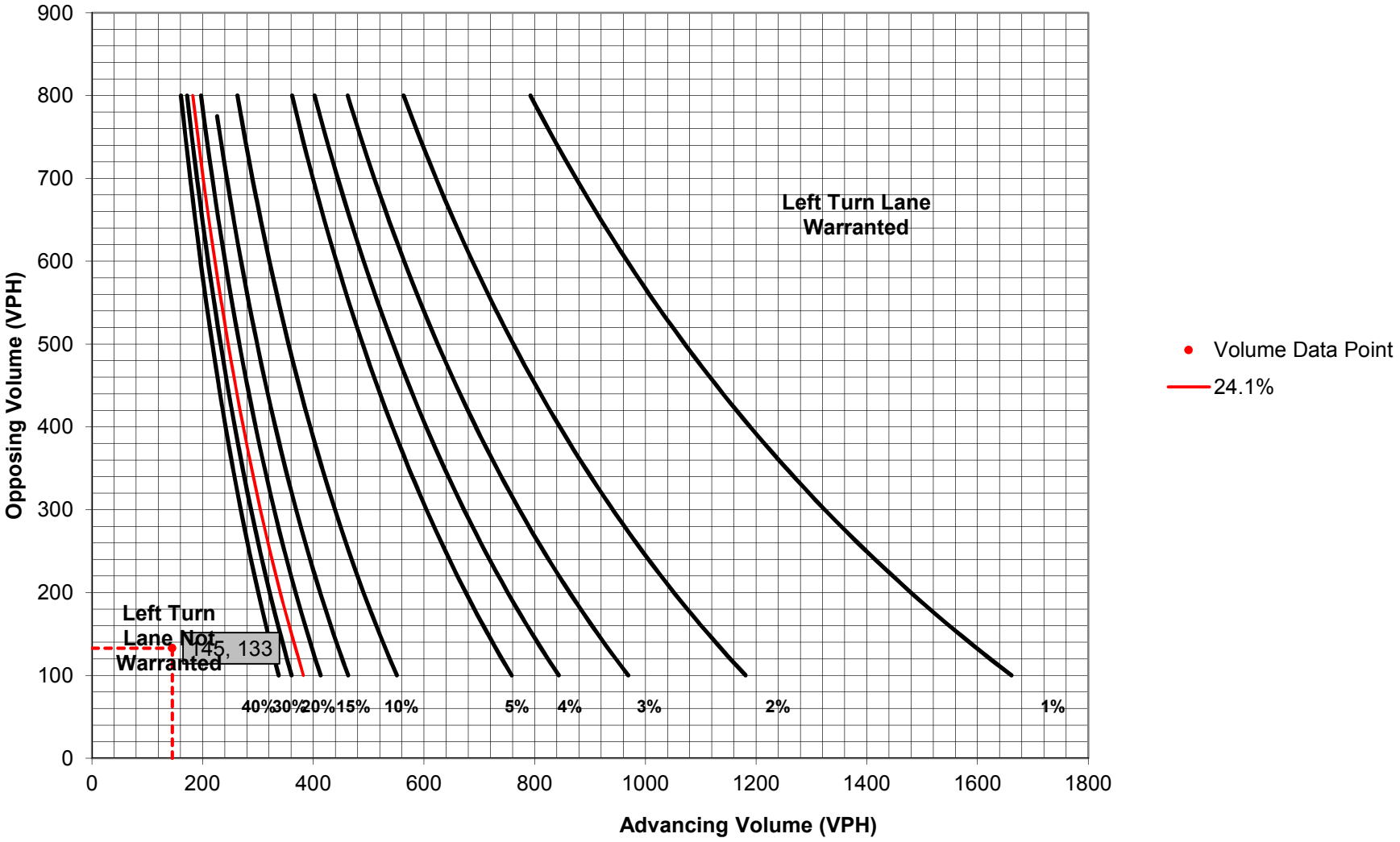
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Left Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Left Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 1. Warrant for left turn lanes on two-lane roadways**
**(speeds to 35 mph, unsignalized and signalized intersections)**
(L = % Left Turns in Advancing Volume)



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | AM Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 33 | 2.0% | N/A |
| | Through | - | 123 | 2.0% | N/A |
| | Right | Yes | | | N/A |
| Opposing | Left | Yes | | | N/A |
| | Through | - | 206 | 8.0% | N/A |
| | Right | Yes | 15 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 206 | 8.0% | 215 |
| | Right | - | 15 | 2.0% | 16 |

| | |
|---|---|
| **Advancing Volume:** | 231 |
| **Right Turn Volume:** | 16 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 9

**Warrant Met?:** No

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 16 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

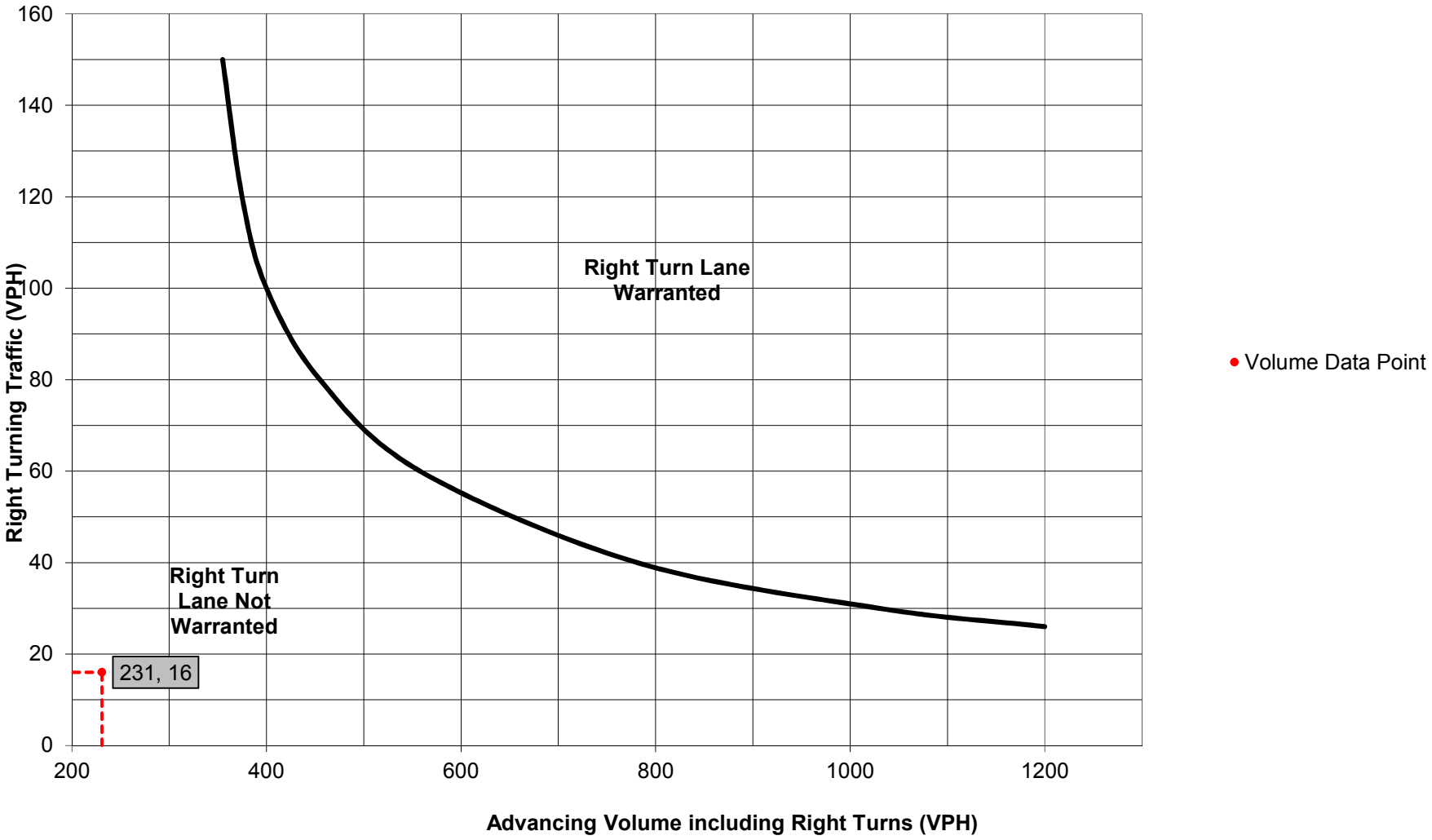
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 9. Warrant for right turn lanes on two-lane roadways**
**(40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/25/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | PM Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 30 | 2.0% | N/A |
| | Through | - | 145 | 3.0% | N/A |
| | Right | Yes | | | N/A |
| Opposing | Left | Yes | | | N/A |
| | Through | - | 125 | 0.0% | N/A |
| | Right | Yes | 12 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 125 | 0.0% | 125 |
| | Right | - | 12 | 2.0% | 13 |

| | |
|---|---|
| **Advancing Volume:** | 138 |
| **Right Turn Volume:** | 13 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 9

**Warrant Met?:** No

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 13 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

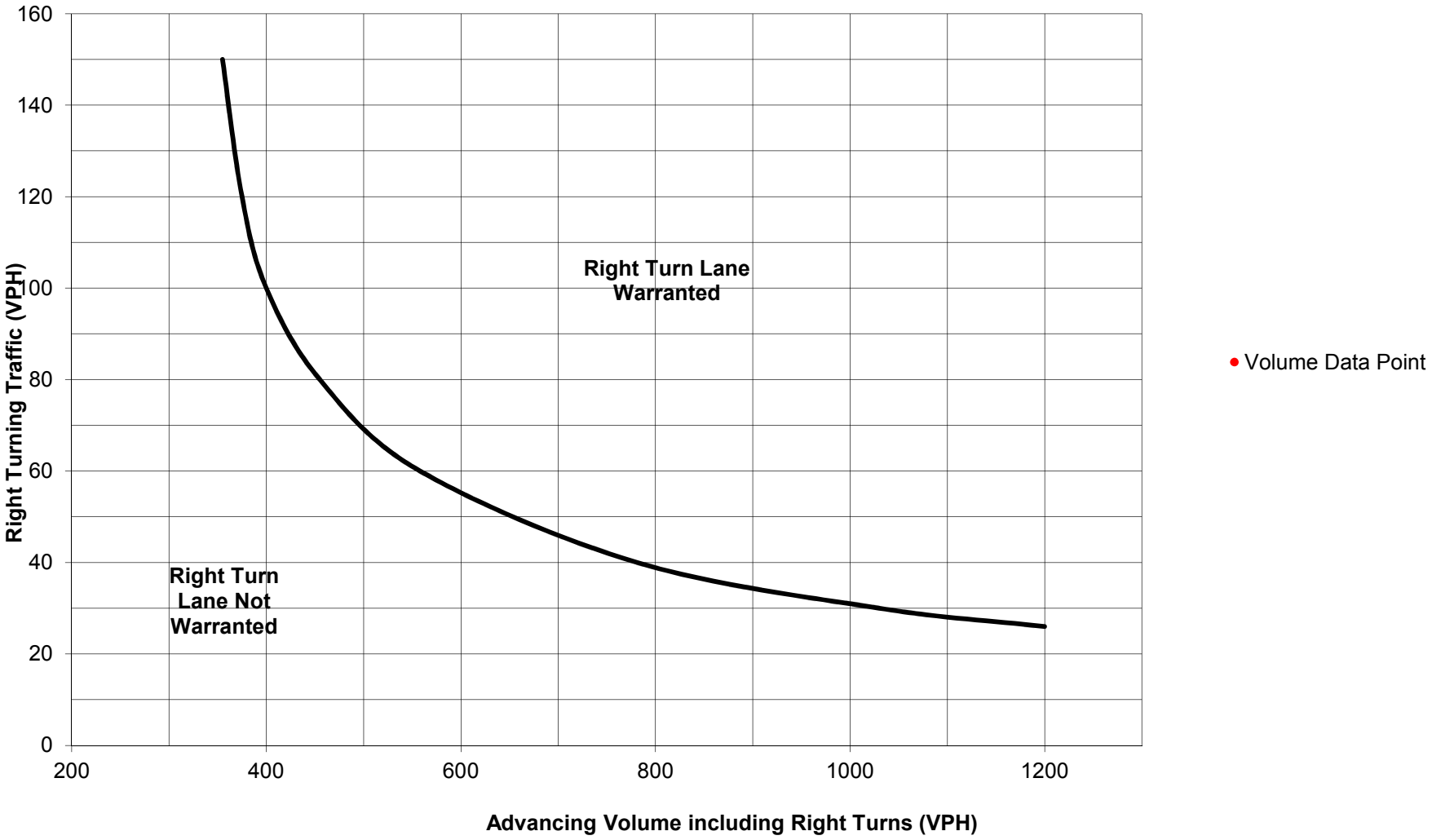
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 9. Warrant for right turn lanes on two-lane roadways**
**(40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/25/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | SAT Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 27 | 2.0% | N/A |
| | Through | - | 122 | 1.0% | N/A |
| | Right | Yes | | | N/A |
| Opposing | Left | Yes | | | N/A |
| | Through | - | 161 | 2.0% | N/A |
| | Right | Yes | 11 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 161 | 2.0% | 163 |
| | Right | - | 11 | 2.0% | 12 |

| | |
|---|---|
| **Advancing Volume:** | 175 |
| **Right Turn Volume:** | 12 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 9

**Warrant Met?:** No

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 12 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

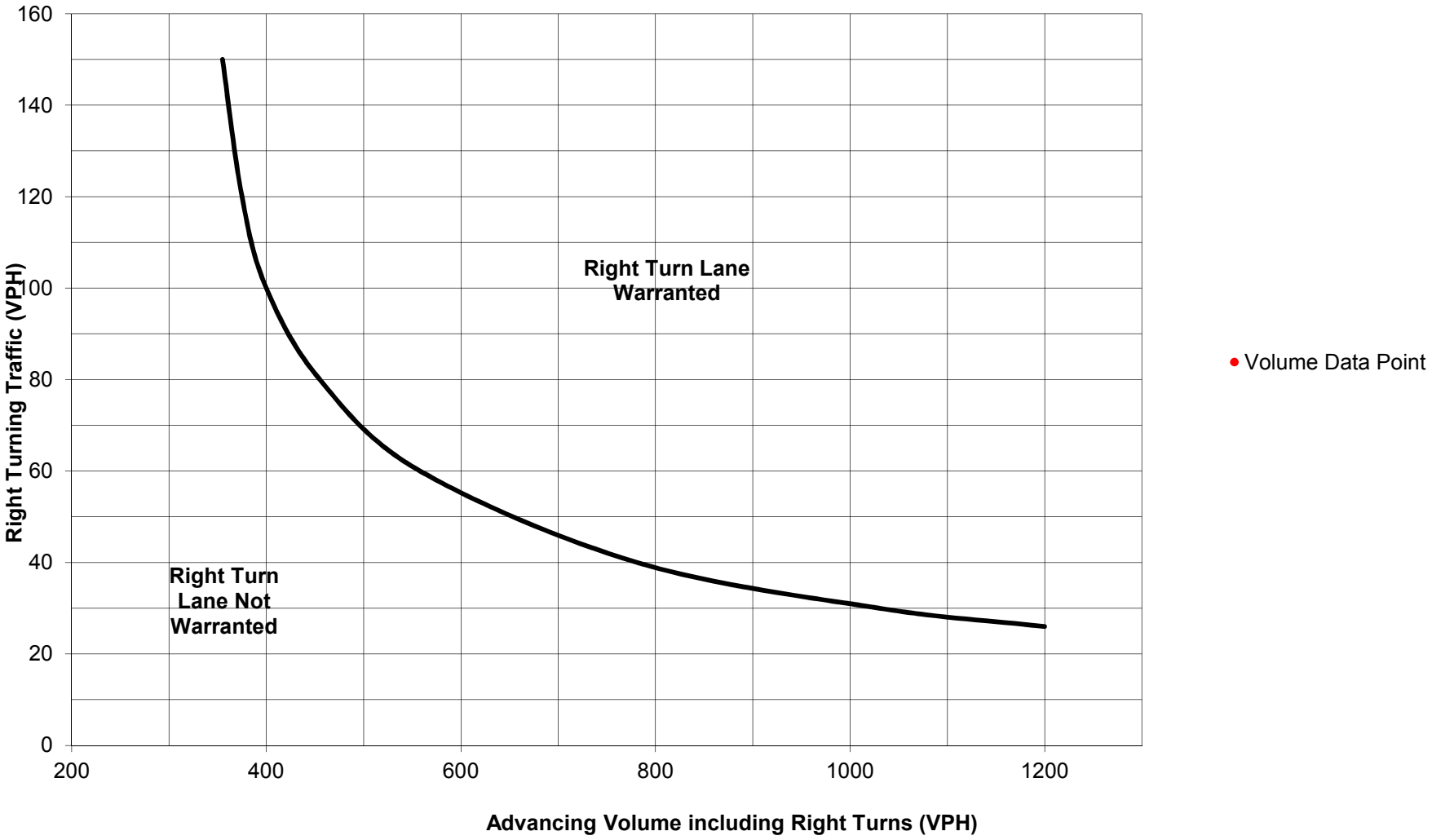
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 9. Warrant for right turn lanes on two-lane roadways**
**(40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/25/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | SUN Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 26 | 2.0% | N/A |
| | Through | - | 81 | 2.0% | N/A |
| | Right | Yes | | | N/A |
| Opposing | Left | Yes | | | N/A |
| | Through | - | 90 | 2.0% | N/A |
| | Right | Yes | 10 | 2.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 90 | 2.0% | 91 |
| | Right | - | 10 | 2.0% | 11 |

| | |
|---|---|
| **Advancing Volume:** | 102 |
| **Right Turn Volume:** | 11 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 9

**Warrant Met?:** No

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 11 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

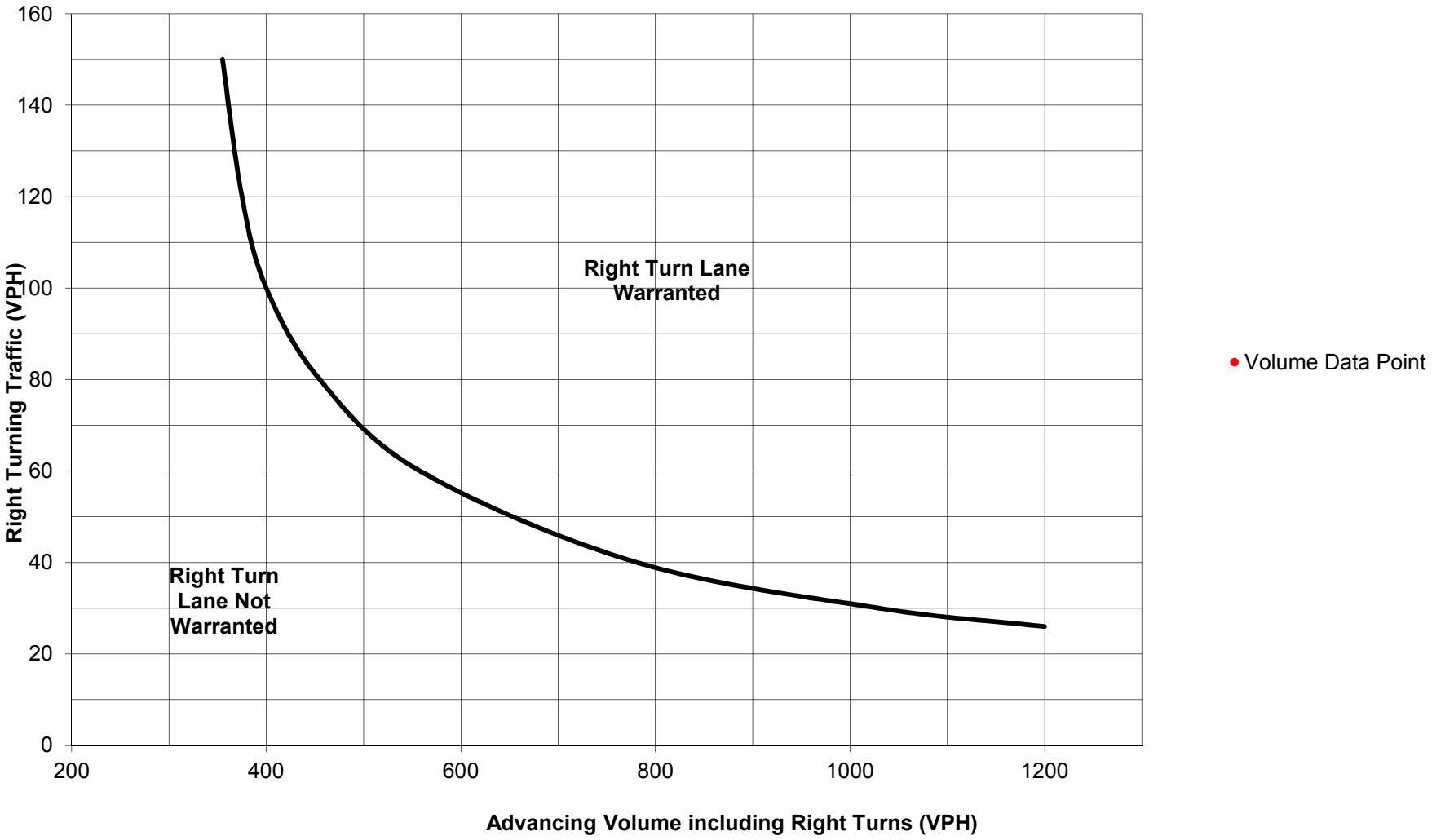
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 9. Warrant for right turn lanes on two-lane roadways**
**(40 mph or lower speeds, unsignalized and signalized intersections)**



# Turn Lane Warrant and Length Analysis Workbook

## STUDY LOCATION AND ANALYSIS INFORMATION

| | | | |
|---|---|---|---|
| **Municipality:** | Radnor Township | **Analysis Date:** | 2/27/2019 |
| **County:** | Delaware County | **Conducted By:** | PG |
| **PennDOT Engineering District:** | 6 | **Checked By:** | |
| | | **Agency/Company Name:** | TPD |

**Intersection & Approach Description:** Aberdeen Avenue & Proposed Driveway

| | | | |
|---|---|---|---|
| **Analysis Period:** | 2025 Projected Conditions | **Number of Approach Lanes:** | 1 |
| **Design Hour:** | Weekday Midday Peak | **Undivided or Divided Highway:** | Undivided |
| **Intersection Control:** | Unsignalized | | |
| **Posted Speed Limit (MPH):** | 25 | | **Type of Analysis** |
| **Type of Terrain:** | Level | **Left or Right-Turn Lane Analysis?:** | Right Turn Lane |

## VOLUME CALCULATIONS

### Left Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | 34 | 2.0% | N/A |
| | Through | - | 107 | 5.0% | N/A |
| | Right | Yes | | | N/A |
| Opposing | Left | Yes | | | N/A |
| | Through | - | 117 | 2.0% | N/A |
| | Right | Yes | 14 | 0.0% | N/A |

| | |
|---|---|
| **Advancing Volume:** | N/A |
| **Opposing Volume:** | N/A |
| **Left Turn Volume:** | N/A |
| **% Left Turns in Advancing Volume:** | N/A |

### Right Turn Lane Volume Calculations

| Movement | | Include? | Volume | % Trucks | PCEV |
|---|---|---|---|---|---|
| Advancing | Left | Yes | | | 0 |
| | Through | - | 117 | 2.0% | 119 |
| | Right | - | 14 | 2.0% | 15 |

| | |
|---|---|
| **Advancing Volume:** | 134 |
| **Right Turn Volume:** | 15 |

## TURN LANE WARRANT FINDINGS

### Left Turn Lane Warrant Findings

**Applicable Warrant Figure:** N/A

**Warrant Met?:** N/A

### Right Turn Lane Warrant Findings

**Applicable Warrant Figure:** Figure 9

**Warrant Met?:** No

## TURN LANE LENGTH CALCULATIONS

| | |
|---|---|
| **Intersection Control:** | Unsignalized |
| **Design Hour Volume of Turning Lane:** | 15 |
| **Cycles Per Hour (Assumed):** | 60 |
| **Cycles Per Hour (If Known):** | |

**Average # of Vehicles/Cycle:** N/A

**PennDOT Publication 46, Exhibit 11-6**

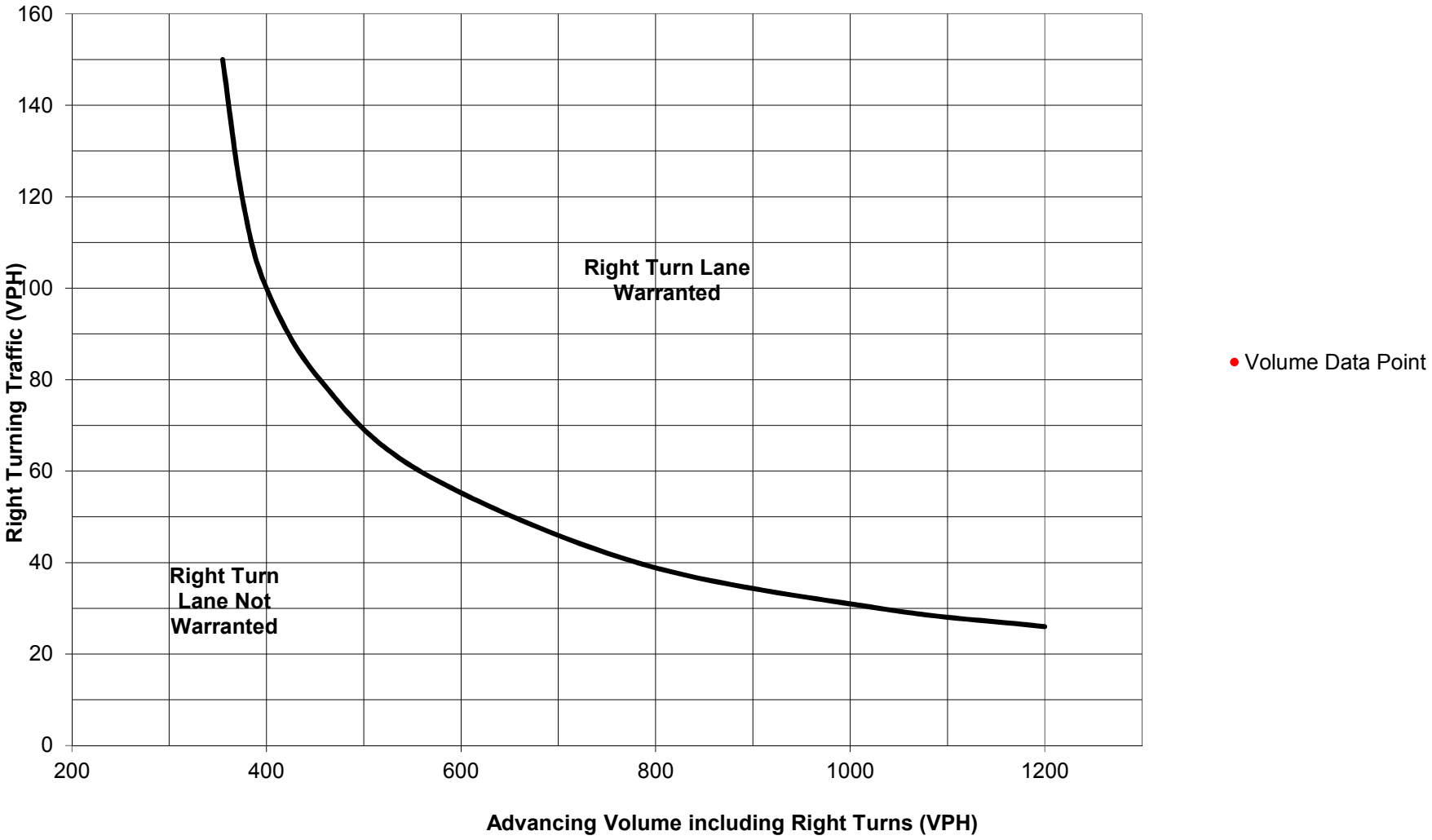
| Type of Traffic Control | Speed (MPH) | | | | | |
|---|---|---|---|---|---|---|
| | 25-35 | | 40-45 | | 50-60 | |
| | Turn Demand Volume | | | | | |
| | High | Low | High | Low | High | Low |
| Signalized | A | A | B or C | B or C | B or C | B or C |
| Unsignalized | A | A | C | B | B or C | B |

| | | |
|---|---|---|
| **Right Turn Lane Storage Length, Condition A:** | N/A | Feet |
| **Condition B:** | N/A | Feet |
| **Condition C:** | N/A | Feet |
| **Required Right Turn Lane Storage Length:** | N/A | Feet |

**Additional Findings:** N/A

**Additional Comments / Justifications:**

**Figure 9. Warrant for right turn lanes on two-lane roadways**
**(40 mph or lower speeds, unsignalized and signalized intersections)**



# APPENDIX K

## *GAP ANALYSIS*

**Study Name** GAP - Lancaster Avenue - AM/PM/SAT

**Dates** 05/31/2018 & 06/02/2018

**Left from Minor**

| | 7.7-10.5 | 10.5-13.3 | 13.3-16.1 | 16.1-18.9 | 18.9-21.7 | 21.7-24.5 | 24.5-27.3 | 27.3+ |
|---|---|---|---|---|---|---|---|---|
| 7:45 | 3 | 5 | 0 | 0 | 0 | 0 | 0 | 1 |
| 8:00 | 6 | 1 | 1 | 0 | 0 | 0 | 0 | 0 |
| 8:15 | 8 | 3 | 2 | 2 | 0 | 0 | 0 | 0 |
| 8:30 | 6 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **23** | **12** | **3** | **2** | **0** | **0** | **0** | **1** |

| | 7.7-10.5 | 10.5-13.3 | 13.3-16.1 | 16.1-18.9 | 18.9-21.7 | 21.7-24.5 | 24.5-27.3 | 27.3+ |
|---|---|---|---|---|---|---|---|---|
| 16:45 | 7 | 2 | 3 | 0 | 1 | 0 | 1 | 0 |
| 17:00 | 5 | 1 | 0 | 1 | 0 | 1 | 0 | 0 |
| 17:15 | 5 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17:30 | 4 | 3 | 1 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **21** | **10** | **4** | **1** | **1** | **1** | **1** | **0** |

| | 7.7-10.5 | 10.5-13.3 | 13.3-16.1 | 16.1-18.9 | 18.9-21.7 | 21.7-24.5 | 24.5-27.3 | 27.3+ |
|---|---|---|---|---|---|---|---|---|
| 11:15 | 6 | 1 | 3 | 1 | 0 | 1 | 0 | 0 |
| 11:30 | 5 | 2 | 2 | 1 | 0 | 0 | 0 | 0 |
| 11:45 | 8 | 3 | 2 | 1 | 0 | 0 | 0 | 2 |
| 12:00 | 3 | 5 | 1 | 0 | 0 | 0 | 0 | 0 |
| **TOTAL** | **22** | **11** | **8** | **3** | **0** | **1** | **0** | **2** |

## Gap Calculation for Unsignalized Intersection
## Left Turn from Two-Lane Minor Road to Four-Lane Major Road

**Intersection:** **Major St.** **Lancaster Avenue (S.R. 0030)**
**Minor St.** **Proposed Full-Access Driveway**

**Time Studied:** **Weekday A.M. Peak Hour, 7:45-8:45 AM**
**Date of Study:** **Thursday, May 31, 2018**

**Critical Gaps (2010 HCM Methodology w/PennDOT Pub. 46 values and PA Defaults)**

| | | |
|---|---|---|
| Critical Gap = | 7.7 | seconds |
| Follow-up Gap = | 2.8 | seconds |

| Vehicles Served | Required Gap | |
|---|---|---|
| 1 | 7.7 | seconds |
| 2 | 10.5 | seconds |
| 3 | 13.3 | seconds |
| 4 | 16.1 | seconds |
| 5 | 18.9 | seconds |
| 6 | 21.7 | seconds |
| 7 | 24.5 | seconds |
| 8 | 27.3 | seconds |

**Turn Capacity Calculation**

| Gap Duration (sec) | 7.7-10.5 | 10.5-13.3 | 13.3-16.1 | 16.1-18.9 | 18.9-21.7 | 21.7-24.5 | 24.5-27.3 | 27.3+ |
|---|---|---|---|---|---|---|---|---|
| # of counted gaps | 23 | 12 | 3 | 2 | 0 | 0 | 0 | 1 |
| multiplier* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| total | 23 | 24 | 9 | 8 | 0 | 0 | 0 | 8 |

* multiplier = number of turns that can be made given the gap range (in seconds)
Note: The multipliers are based on the critical gap time and the follow-up time above.

| | | |
|---|---|---|
| **Total Available Turn Capacity:** | **72** | left turns |
| **Left-Turn Egress Volume:** | **20** | vehicles |
| **Reserve Capacity for Turns** | **52** | |

## Gap Calculation for Unsignalized Intersection
## Left Turn from Two-Lane Minor Road to Four-Lane Major Road

**Intersection:** **Major St.** **Lancaster Avenue (S.R. 0030)**
**Minor St.** **Proposed Full-Access Driveway**

**Time Studied:** **Weekday P.M. Peak Hour, 4:45-5:45 PM**
**Date of Study:** **Thursday, May 31, 2018**

**Critical Gaps (2010 HCM Methodology w/PennDOT Pub. 46 values and PA Defaults)**

| | | |
|---|---|---|
| Critical Gap = | 7.7 | seconds |
| Follow-up Gap = | 2.8 | seconds |

| Vehicles Served | Required Gap | |
|---|---|---|
| 1 | 7.7 | seconds |
| 2 | 10.5 | seconds |
| 3 | 13.3 | seconds |
| 4 | 16.1 | seconds |
| 5 | 18.9 | seconds |
| 6 | 21.7 | seconds |
| 7 | 24.5 | seconds |
| 8 | 27.3 | seconds |

**Turn Capacity Calculation**

| Gap Duration (sec) | 7.7-10.5 | 10.5-13.3 | 13.3-16.1 | 16.1-18.9 | 18.9-21.7 | 21.7-24.5 | 24.5-27.3 | 27.3+ |
|---|---|---|---|---|---|---|---|---|
| # of counted gaps | 21 | 10 | 4 | 1 | 1 | 1 | 1 | 0 |
| multiplier* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| total | 21 | 20 | 12 | 4 | 5 | 6 | 7 | 0 |

* multiplier = number of turns that can be made given the gap range (in seconds)
Note: The multipliers are based on the critical gap time and the follow-up time above.

| | | |
|---|---|---|
| **Total Available Turn Capacity:** | **75** | left turns |
| **Left-Turn Egress Volume:** | **17** | vehicles |
| **Reserve Capacity for Turns** | **58** | |

## Gap Calculation for Unsignalized Intersection
## Left Turn from Two-Lane Minor Road to Four-Lane Major Road

**Intersection:** **Major St.** **Lancaster Avenue (S.R. 0030)**
**Minor St.** **Proposed Full-Access Driveway**

**Time Studied:** **SAT Midday Peak Hour, 11:15 AM-12:15 PM**
**Date of Study:** **Saturday, June 2, 2018**

**Critical Gaps (2010 HCM Methodology w/PennDOT Pub. 46 values and PA Defaults)**

| | | |
|---|---|---|
| Critical Gap = | 7.7 | seconds |
| Follow-up Gap = | 2.8 | seconds |

| Vehicles Served | Required Gap | |
|---|---|---|
| 1 | 7.7 | seconds |
| 2 | 10.5 | seconds |
| 3 | 13.3 | seconds |
| 4 | 16.1 | seconds |
| 5 | 18.9 | seconds |
| 6 | 21.7 | seconds |
| 7 | 24.5 | seconds |
| 8 | 27.3 | seconds |

**Turn Capacity Calculation**

| Gap Duration (sec) | 7.7-10.5 | 10.5-13.3 | 13.3-16.1 | 16.1-18.9 | 18.9-21.7 | 21.7-24.5 | 24.5-27.3 | 27.3+ |
|---|---|---|---|---|---|---|---|---|
| # of counted gaps | 22 | 11 | 8 | 3 | 0 | 1 | 0 | 2 |
| multiplier* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| total | 22 | 22 | 24 | 12 | 0 | 6 | 0 | 16 |

* multiplier = number of turns that can be made given the gap range (in seconds)
Note: The multipliers are based on the critical gap time and the follow-up time above.

| | | |
|---|---|---|
| **Total Available Turn Capacity:** | **102** | left turns |
| **Left-Turn Egress Volume:** | **15** | vehicles |
| **Reserve Capacity for Turns** | **87** | |

**Study Name GAP - Aberdeen Ave - AM/PM/SAT**
**Dates 05/31/2018 & 06/02/2018**

**Left from Minor**

| | 6.4-9.4 | 9.4-12.4 | 12.4-15.4 | 15.4-18.4 | 18.4-21.4 | 21.4-24.4 | 24.4-27.4 | 27.4+ |
|---|---|---|---|---|---|---|---|---|
| 7:45 | 7 | 6 | 1 | 4 | 1 | 1 | 0 | 2 |
| 8:00 | 6 | 6 | 2 | 2 | 8 | 0 | 3 | 4 |
| 8:15 | 6 | 4 | 4 | 1 | 0 | 1 | 3 | 12 |
| 8:30 | 7 | 7 | 5 | 1 | 2 | 1 | 2 | 9 |
| **TOTAL** | **26** | **23** | **12** | **8** | **11** | **3** | **8** | **27** |

| | 6.4-9.4 | 9.4-12.4 | 12.4-15.4 | 15.4-18.4 | 18.4-21.4 | 21.4-24.4 | 24.4-27.4 | 27.4+ |
|---|---|---|---|---|---|---|---|---|
| 16:45 | 5 | 6 | 6 | 5 | 2 | 2 | 4 | 5 |
| 17:00 | 4 | 12 | 3 | 4 | 2 | 2 | 2 | 9 |
| 17:15 | 1 | 4 | 5 | 4 | 4 | 3 | 2 | 9 |
| 17:30 | 6 | 3 | 2 | 6 | 4 | 3 | 2 | 9 |
| **TOTAL** | **16** | **25** | **16** | **19** | **12** | **10** | **10** | **32** |

| | 6.4-9.4 | 9.4-12.4 | 12.4-15.4 | 15.4-18.4 | 18.4-21.4 | 21.4-24.4 | 24.4-27.4 | 27.4+ |
|---|---|---|---|---|---|---|---|---|
| 11:15 | 4 | 6 | 7 | 3 | 2 | 1 | 1 | 10 |
| 11:30 | 6 | 3 | 3 | 0 | 1 | 4 | 3 | 7 |
| 11:45 | 8 | 3 | 3 | 3 | 2 | 2 | 0 | 4 |
| 12:00 | 5 | 3 | 9 | 2 | 3 | 1 | 0 | 7 |
| **TOTAL** | **23** | **15** | **22** | **8** | **8** | **8** | **4** | **28** |

## Gap Calculation for Unsignalized Intersection
## Left Turn from Two-Lane Minor Road to Two-Lane Major Road

**Intersection:** **Major St.** **Aberdeen Avenue**
**Minor St.** **Proposed Full-Access Driveway**

**Time Studied:** **Weekday A.M. Peak Hour, 7:45-8:45 AM**
**Date of Study:** **Thursday, May 31, 2018**

**Critical Gaps (2010 HCM Methodology w/PennDOT Pub. 46 values and PA Defaults)**

| | | |
|---|---|---|
| Critical Gap = | 6.4 | seconds |
| Follow-up Gap = | 3.0 | seconds |

| Vehicles Served | Required Gap | |
|---|---|---|
| 1 | 6.4 | seconds |
| 2 | 9.4 | seconds |
| 3 | 12.4 | seconds |
| 4 | 15.4 | seconds |
| 5 | 18.4 | seconds |
| 6 | 21.4 | seconds |
| 7 | 24.4 | seconds |
| 8 | 27.4 | seconds |

**Turn Capacity Calculation**

| Gap Duration (sec) | 6.4-9.4 | 9.4-12.4 | 12.4-15.4 | 15.4-18.4 | 18.4-21.4 | 21.4-24.4 | 24.4-27.4 | 27.4+ |
|---|---|---|---|---|---|---|---|---|
| # of counted gaps | 23 | 23 | 12 | 8 | 11 | 3 | 8 | 27 |
| multiplier* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| total | 23 | 46 | 36 | 32 | 55 | 18 | 56 | 216 |

* multiplier = number of turns that can be made given the gap range (in seconds)
Note: The multipliers are based on the critical gap time and the follow-up time above.

| | | |
|---|---|---|
| **Total Available Turn Capacity:** | **482** | left turns |
| **Left-Turn Egress Volume:** | **9** | vehicles |
| **Reserve Capacity for Turns** | **473** | |

## Gap Calculation for Unsignalized Intersection
## Left Turn from Two-Lane Minor Road to Two-Lane Major Road

**Intersection:** **Major St.** **Aberdeen Avenue**
**Minor St.** **Proposed Full-Access Driveway**

**Time Studied:** **Weekday P.M. Peak Hour, 4:45-5:45 PM**
**Date of Study:** **Thursday, May 31, 2018**

**Critical Gaps (2010 HCM Methodology w/PennDOT Pub. 46 values and PA Defaults)**

| | | |
|---|---|---|
| Critical Gap = | 6.4 | seconds |
| Follow-up Gap = | 3.0 | seconds |

| Vehicles Served | Required Gap | |
|---|---|---|
| 1 | 6.4 | seconds |
| 2 | 9.4 | seconds |
| 3 | 12.4 | seconds |
| 4 | 15.4 | seconds |
| 5 | 18.4 | seconds |
| 6 | 21.4 | seconds |
| 7 | 24.4 | seconds |
| 8 | 27.4 | seconds |

**Turn Capacity Calculation**

| Gap Duration (sec) | 6.4-9.4 | 9.4-12.4 | 12.4-15.4 | 15.4-18.4 | 18.4-21.4 | 21.4-24.4 | 24.4-27.4 | 27.4+ |
|---|---|---|---|---|---|---|---|---|
| # of counted gaps | 16 | 25 | 16 | 19 | 12 | 10 | 10 | 32 |
| multiplier* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| total | 16 | 50 | 48 | 76 | 60 | 60 | 70 | 256 |

* multiplier = number of turns that can be made given the gap range (in seconds)
Note: The multipliers are based on the critical gap time and the follow-up time above.

| | | |
|---|---|---|
| **Total Available Turn Capacity:** | **636** | left turns |
| **Left-Turn Egress Volume:** | **11** | vehicles |
| **Reserve Capacity for Turns** | **625** | |

## Gap Calculation for Unsignalized Intersection
## Left Turn from Two-Lane Minor Road to Two-Lane Major Road

**Intersection:** **Major St.** **Aberdeen Avenue**
**Minor St.** **Proposed Full-Access Driveway**

**Time Studied:** **SAT Midday Peak Hour, 11:15 AM-12:15 PM**
**Date of Study:** **Saturday, June 2, 2018**

**Critical Gaps (2010 HCM Methodology w/PennDOT Pub. 46 values and PA Defaults)**

| | | |
|---|---|---|
| Critical Gap = | 6.4 | seconds |
| Follow-up Gap = | 3.0 | seconds |

| Vehicles Served | Required Gap | |
|---|---|---|
| 1 | 6.4 | seconds |
| 2 | 9.4 | seconds |
| 3 | 12.4 | seconds |
| 4 | 15.4 | seconds |
| 5 | 18.4 | seconds |
| 6 | 21.4 | seconds |
| 7 | 24.4 | seconds |
| 8 | 27.4 | seconds |

**Turn Capacity Calculation**

| Gap Duration (sec) | 6.4-9.4 | 9.4-12.4 | 12.4-15.4 | 15.4-18.4 | 18.4-21.4 | 21.4-24.4 | 24.4-27.4 | 27.4+ |
|---|---|---|---|---|---|---|---|---|
| # of counted gaps | 23 | 15 | 22 | 8 | 8 | 8 | 4 | 28 |
| multiplier* | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| total | 23 | 30 | 66 | 32 | 40 | 48 | 28 | 224 |

* multiplier = number of turns that can be made given the gap range (in seconds)
Note: The multipliers are based on the critical gap time and the follow-up time above.

| | | |
|---|---|---|
| **Total Available Turn Capacity:** | **491** | left turns |
| **Left-Turn Egress Volume:** | **9** | vehicles |
| **Reserve Capacity for Turns** | **482** | |

# APPENDIX L

## *CONFLICT FACTOR CALCULATIONS*

# LEFT TURN SIGNALIZATION DOCUMENTATION

COUNTY: **DELAWARE**
MUNICIPALITY: **RADNOR TOWNSHIP**
INTERSECTION: **LANCASTER AVENUE (S.R. 0030) & ABERDEEN AVENUE**
DIRECTION: **(E/W)** **(N/S)**

| | Left Turn | | | | Opposing | | Calculated | Required |
|---|---|---|---|---|---|---|---|---|
| Time | Direction | Exclusive Lane | Per Cycle | Volume | Through Volume | # of Lanes | Conflict Factor | Conflict Factor |
| AM PEAK | EB | N | 1.05 | 36 | 931 | 2 | 33,516 | 45,000 |
| | WB | N | 0.82 | 28 | 804 | 2 | 22,512 | 45,000 |
| | NB | N | 4.17 | 143 | 85 | 1 | 12,155 | 35,000 |
| | SB | N | 4.20 | 144 | 113 | 1 | 16,272 | 35,000 |
| PM PEAK | EB | N | 0.57 | 34 | 940 | 2 | 31,960 | 45,000 |
| | WB | N | 0.42 | 25 | 841 | 2 | 21,025 | 45,000 |
| | NB | N | 1.63 | 98 | 114 | 1 | 11,172 | 35,000 |
| | SB | N | 2.03 | 122 | 68 | 1 | 8,296 | 35,000 |
| SAT PEAK | EB | N | 1.33 | 40 | 843 | 2 | 33,720 | 45,000 |
| | WB | N | 0.87 | 26 | 690 | 2 | 17,940 | 45,000 |
| | NB | N | 3.03 | 91 | 73 | 1 | 6,643 | 35,000 |
| | SB | N | 3.87 | 116 | 98 | 1 | 11,368 | 35,000 |
| SUN PEAK | EB | N | 0.97 | 29 | 565 | 2 | 16,385 | 45,000 |
| | WB | N | 0.83 | 25 | 558 | 2 | 13,950 | 45,000 |
| | NB | N | 2.60 | 78 | 49 | 1 | 3,822 | 35,000 |
| | SB | N | 2.20 | 66 | 51 | 1 | 3,366 | 35,000 |
| MID | EB | N | 1.30 | 39 | 779 | 2 | 30,381 | 45,000 |
| | WB | N | 1.07 | 32 | 724 | 2 | 23,168 | 45,000 |
| | NB | N | 3.57 | 107 | 63 | 1 | 6,741 | 35,000 |
| | SB | N | 3.93 | 118 | 67 | 1 | 7,906 | 35,000 |

*Volumes based upon 2025 Projected Conditions
AM Cycle Length (Seconds) - 105
PM Cycle Length (Seconds) - 60
SAT Cycle Length (Seconds) - 120
SUN Cycle Length (Seconds) - 120
MID Cycle Length (Seconds) - 120

| DIRECTION | LEFT TURN PHASES | |
|---|---|---|
| | Warrant Satified | Proposed |
| Eastbound | NO | NO |
| Westbound | NO | NO |
| Northbound | NO | NO |
| Southbound | NO | NO |

**COMMENTS:** Match Existing Phasing

**Protected/Permitted**
**No Turn Lane** **>35,000 one lane** **>45,000 two lane**
**Turn Lane** **>50,000 one lane** **>65,000 two lane**

**Protected/Prohibited**
**Turn Lane** **>67,500 one lane** **>90,000 two lane**

Compiled by: PG
Date: 2/27/2019
Checked by:
Date: