

## **BOARD OF COMMISSIONERS**

### **REVISED AGENDA**

**Monday, October 9, 2017 - 6:30 PM**

Pledge of Allegiance

Notice of Executive Session preceding the Board of Commissioners meeting of October 9, 2017

#### **1. Consent Agenda**

- a) Disbursement Review and Approval: 2017-9D, 2017-9E
- b) Approval of Meeting Minutes from September 18, 2017 & September 25, 2017 Board of Commissioners meeting
- c) Staff Traffic Committee Meeting Minutes - September 20, 2017
- d) Resolution #2017-110 - Authorizing the Township to Purchase & Replace Playground Equipment at Petrie Park
- e) Resolution #2017-111 - Awarding the Professional Services Contract for Engineering, Permitting, and Construction Drawings for the Darby-Paoli Multi-Use Trail
- f) Resolution #2017-113 - Authorizing the Professional Services Contract for Engineering, Design, Permitting, and Construction Drawings for the Skunk Hollow Emergency Sanitary Sewer Trunk Line Replacement
- g) Waiver Request: 301 South Wayne Avenue GP# 17-155 – Requesting a waiver from §245-22 the Stormwater Management Requirements for Groundwater Recharge
- h) Motion to Authorize John Rice to attend the Zoning Hearing Board meeting on behalf of the Board of Commissioners for APPEAL #3001 - The Applicant, GI II Radnor Crossing LP, property located at 284 Iven Avenue and split Zoned PA and R-1, seeks a special exception pursuant to Section 280-1 Ol(A)(l) of the Zoning Code to change one non-conforming use to another non-conforming use to change the tennis court to parking. In the alternative Applicant seeks a variance from section 280-14 or such other relief as required under the Zoning Code consistent with the Application
- i) HARB Certificates:
  - HARB-2017-16 – 224 S Aberdeen Avenue – Re-submitting for two (2) changes to previous HARB approval (2017-05) – dormer details and front entry pent roof.
  - HARB-2017-17 – 400 Oak Lane - 2nd story addition above sun room; extend pent roof; change bay window roof to copper; remove hip roof and replace with gable roof; remove double staircase; remove shed dormer; add new two car garage; extend 2nd floor over porch.
  - HARB-2017-18 – 416 St Davids Road - Build new detached garage, expand driveway in back of house for new garage; remove existing circular driveway in front of house.
  - ~~HARB-2017-19 – 326 Louella Avenue – New Garage and pool house building; 2 new exterior stairs on exterior of existing house; demolition of existing carriage barn and concrete pad; modifications to existing pool terrace and walkways.~~
  - HARB-2017-20 – 430 Meadowbrook Avenue - Addition to east façade of house; replace existing bow window on north elevation and replace with casement windows; new covered entrance on south elevation.
  - ~~HARB-2017-21 – 111 Walnut Ave – New 2 story addition at rear of existing house. Proposed design will match historic details and materials. 1887-88 William Price Architect, Wendel and Smith Builders.~~
- j) Remove Pine Tree Rd. Traffic Islands (by Township Staff, with rental equipment as necessary), not to exceed \$15,000 (***Requested by Commissioner Booker***)

#### **2. Public Participation**

#### **3. Appointments to Various Boards and Commissions**

4. Announcement of Boards and Commissions Vacancies

*Shade Tree Commission - 2 Vacancies      Environmental Advisory Council - 1 Vacancy*  
*Board of Health – 1 Vacancy              Stormwater Advisory Committee – 1 Vacancy*

5. Committee Reports

**PERSONNEL & ADMINISTRATION**

A. Discussion and Possible Motion of the Willows Funding

**B. Motion to Replace the President of the Board and Elect a New Candidate (*Requested by Commissioner Booker*)**

**C. Motion to Eliminate the Consent Agenda (*Requested by Commissioner Nagle*)**

**D. Motion that the agenda is locked as of noon on the Wednesday prior to the meeting. Any items requested after that time shall be placed on the next regular meeting agenda (*Requested by Commissioner Nagle*)**

**FINANCE & AUDIT**

E. 2018 Township Manager's Recommended Budget Presentation

**PUBLIC WORKS & ENGINEERING**

F. Violation of Ordinance No. 2012-05 of Radnor Township, the Shade Tree Ordinance, sections 263-9C and 263-11-A-3, by Miller Brothers, in Connection with Gas Utility Construction on East Beechtree Lane: Compensatory Plantings and Fine

G. Ordinance #2017-16 – (**Adoption**) - Vacating a Portion of Belrose Lane Extending Between Huston Road and Glenmary Lane with the Exception of Radnor's Easement Rights in the Sewer Facilities Located Within the Existing Right of Way

H. Ordinance #2017-15 – (**Introduction**) - Establishing Rules and Regulations for The Management Of Its Rights-Of Way; Requiring A Permit Application Fee And Plan For Any Street, Driveway, Or Utility Installation Upon Any Portion Of A Township Road Or Other Public Road Or Right-Of-Way

**I. Resolution #2017-116 - Authorizing Payment of Change Orders to the Prime Contractors for the Memorial Library of Radnor Update and Expansion Project**

**COMMUNITY DEVELOPMENT**

J. Motion to Authorize Advertising for the Adoption of Ordinance #2016-13 at the November 13, 2017 Board of Commissioners Meeting - Ordinance #2016-13 – Amending Chapter 280 Zoning, Article Xv, PLO Planned Laboratory-Office District, Sections 280-62, 280-63 And 280-64, By Providing For Additional Uses In The PLO Planned Laboratory-Office District Including Mixed Use Developments; Providing For Revised Dimensional Requirements For Mixed Use Developments Including Financial Subdivisions And Providing For Additional Accessory Uses

K. Authorization to file an Enforcement Action Re: 5 Marlyn Circle and 713 Miller Street

**PUBLIC SAFETY**

**LIBRARY**

**PUBLIC HEALTH**

**PARKS & RECREATION**

Old Business

New Business

Public Participation

Adjournment

***RADNOR TOWNSHIP***  
***DISBURSEMENTS SUMMARY***  
***October 9, 2017***

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The table below summarizes the amount of disbursements made since the last public meeting held on September 25, 2017. As approved by the Board, the Administration is now making weekly accounts payable disbursement batches and publishing those lists on the Township's web site at the following link. Please refer to those files for a detailed listing of the amounts paid by vendor by account code.

Link: <http://radnor.com/728/Disbursements-List>

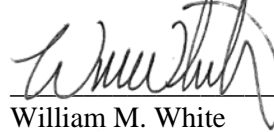
<b>Fund (Fund Number)</b>	<b>2017-9D September 22, 2017</b>	<b>2017-9E September 29, 2017</b>	<b>Total</b>
General Fund (01)	\$86,105.63	\$274,246.38	\$360,352.01
Sewer Fund (02)	413,758.62	30,740.22	444,498.84
Storm Sewer Management (04)	4,998.99	0.00	4,998.99
Capital Improvement Fund (05)	57,722.20	0.00	57,722.20
OPEB Fund (08)	0.00	124,936.06	124,936.06
Escrow Fund (10)	600.00	0.00	600.00
\$8 Million Settlement Fund (18)	0.00	10,708.20	10,708.20
The Willows Fund (23)	12,747.77	276.66	13,024.43
Debt Service Fund (24)	1,800.00	0.00	1,800.00
Library Improvement Fund (500)	0.00	178,681.78	178,681.78
Park & Trail Improvement Fund (501)	0.00	71,672.47	71,672.47
<b><i>Total Accounts Payable Disbursements</i></b>	<b><i>\$577,733.21</i></b>	<b><i>\$691,261.77</i></b>	<b><i>\$1,268,994.98</i></b>
<i>Electronic Disbursements</i>	n/a	n/a	1,011,000.00
<b><i>Grand Total</i></b>	<b><i>\$577,733.21</i></b>	<b><i>\$691,261.77</i></b>	<b><i>\$2,279,994.98</i></b>

In addition to the accounts payable checks, the Township also has various electronic payments including payroll, debt service, credit card purchases and fees as well as others from time to time. The attached table reflects all of the electronic payments made since the last public Board meeting as well as those anticipated prior to the next Board meeting.

The Administration has adopted various internal control and processing procedures to insure that amounts obligated are within the budgetary limits established by the Board of Commissioners. Those procedures are monitored on a daily basis by members of the Finance Department and responsible employees of the various departments. The amounts included in the table above have been scrutinized as part of the internal control and processing procedures and have obtained the required approvals prior to disbursement.

If you should have any questions, please contact the Finance Department.

Respectfully Submitted,



William M. White  
*Finance Director*

# ELECTRONICALLY PAID DISBURSEMENT LISTING

Estimated Through October 23, 2017

Description	Account No.	Date	Purpose	Amount
Credit Card Revenue Fees - Estimated	Various Funds	10/10/2017	9/17 Credit Card Revenue Processing Fees	\$5,000.00 *
Payroll [Bi-Weekly] Transaction - Estimated	01-various	10/5/2017	Salaries and Payroll Taxes - General Fund	\$485,000.00
Payroll [Bi-Weekly] Transaction - Estimated	02-various	10/5/2017	Salaries and Payroll Taxes - Sewer Fund	\$17,500.00
Payroll [Bi-Weekly] Transaction - Estimated	17-various	10/5/2017	Salaries and Payroll Taxes - K-9 Fund	\$500.00
Payroll [Bi-Weekly] Transaction - Estimated	01-various	10/19/2017	Salaries and Payroll Taxes - General Fund	\$485,000.00
Payroll [Bi-Weekly] Transaction - Estimated	02-various	10/19/2017	Salaries and Payroll Taxes - Sewer Fund	\$17,500.00
Payroll [Bi-Weekly] Transaction - Estimated	17-various	10/19/2017	Salaries and Payroll Taxes - K-9 Fund	\$500.00
<b>Period Total</b>				<b>\$1,011,000.00</b>

Submitted:



\* Credit card fees are charged to the Township's accounts on the tenth of the month

<u>Original Estimate</u>			<u>Actual Amount</u>
\$485,000.00	9/21/2017	Salaries and Payroll Taxes - General Fund	\$435,965.57
\$17,500.00	9/21/2017	Salaries and Payroll Taxes - Sewer Fund	\$17,727.95
\$500.00	9/21/2017	Salaries and Payroll Taxes - K-9 Fund	\$135.64
<b>\$503,000.00</b>			<b>\$453,829.16</b>
\$186,839.03	10/1/2017	Police Pension Payroll	\$186,839.03
\$137,409.28	10/1/2017	Civilian Pension Payroll	\$137,409.28
<b>\$324,248.31</b>			<b>\$324,248.31</b>



**TOWNSHIP OF RADNOR**  
***Minutes of the Special Meeting of September 18, 2017***

*The Radnor Township Board of Commissioners met at approximately 6:30 PM in the Radnorshire Room in the Radnor Township Municipal Building, 301 Iven Avenue, Wayne, PA 19087*

***Commissioners Present***

<i>Phil Ahr, President</i>	<i>Elaine Schaefer, Vice President</i>	<i>James Higgins</i>
<i>Luke Clark</i>	<i>John Nagle</i>	<i>Richard F. Booker</i> <i>Donald Curley</i>

***Also Present:*** *Robert A. Zienkowski, Township Manager; John Rice, Township Solicitor; William White, Assistant Township Manager & Finance Director and Jennifer DeStefano, Executive Assistant to the Township Manager.*

*President Ahr called the meeting to order and led the assembly in the Pledge of Allegiance*

*Notice of Executive Session on September 18, 2017 preceding the Board of Commissioners meeting*

There was an Executive Session held on September 18, 2017 where all commissioners attended where matters of personnel, litigation and real estate were discussed.

*1. Public Participation*

None

*2. Review Pension Assumptions / Capital Plan Funding*

Mr. White made a presentation which can be found on the Township website at:

<http://www.radnor.com/910/Board-of-Commissioners-Presentations>

Topics that were discussed were Pension Plan Funding Level History and Annual Cost; Assumptions Recommended Changes; Cost – 2018 Forecasted MMO; Direction – Board decision on recommended changes and Next Steps. Mark Yasenchak, with PFM Asset Management, Colleen Deer, Mockenhaupt and Jerry Linden, CARFAC were also in attendance to answer questions. There was an in-depth discussion amongst the Commissioners, Staff and consultants.

Commissioner Schaefer made a motion to accept the recommendations put forth in front of the Board by the consultants on all five points effecting our MMO and that the Board instruct staff to incorporate the recommendations in the 2018 Budget Proposal, seconded by Commissioner Clark. Motion passed 6-1 with Commissioner Booker opposed.

Mr. Zienkowski commented that the upcoming managers recommended 2018 budget will not call for a tax increase.

*There being no further business, the meeting adjourned on a motion duly made and seconded.*

*Respectfully submitted,*

*Jennifer DeStefano*

**TOWNSHIP OF RADNOR**  
***Minutes of the Meeting of September 25, 2017***

*The Radnor Township Board of Commissioners met at approximately 6:30 PM in the Radnorshire Room in the Radnor Township Municipal Building, 301 Iven Avenue, Wayne, PA 19087*

***Commissioners Present***

*Elaine Schaefer, Vice President*  
*Luke Clark*

*Donald Curley*  
*John Nagle*

*Richard F. Booker*  
*James Higgins*

***Absent: Phil Ahr, President***

***Also Present:*** *Robert A. Zienkowski, Township Manager; Peter Nelson, Township Solicitor; William White, Assistant Township Manager & Finance Director; Steve Norcini, Township Engineer; William Colarulo, Superintendent of Police; Tammy Cohen, Director of Recreation and Community Programming; Andrew Block, Deputy Superintendent of Police; Christopher Flanagan, Deputy Superintendent of Police; Mark Stiansen, Traffic Unit; Alex Janoski, Traffic Amy Kaminski, Traffic Engineer and Jennifer DeStefano, Executive Assistant to the Township Manager.*

*Vice President Schaefer called the meeting to order and led the assembly in the Pledge of Allegiance*

*Commissioner Schaefer read a statement: As you are aware, on Friday of last week, the Office of the Delaware County District Attorney confirmed that, a day earlier, they had executed a sealed search warrant on the home of Commissioner Ahr. Later on Friday, the Township issued a Press Release noting that no Township officer, employee or official has participated or been involved in any way with this investigation. While the investigation continues, this Board will focus on conducting the business of the Township and serving the members of our community. When developments occur with the criminal investigation, we will address them as appropriate. However, until that time, we will be making no further comment.*

*Notice of Executive Session on September 21, 2017 and September 25, 2017 preceding the Board of Commissioners meeting*

There was an Executive Session on Thursday, September 21<sup>st</sup> where all Commissioners participated with the exception of Commissioner Ahr and matters of Personnel were discussed. There was also an Executive Session prior to this meeting where all Commissioners attended with the exception of Commissioner Ahr where matters of Personnel and Litigation were discussed.

***1. Consent Agenda***

- a) Disbursement Review and Approval: 2017-09B, 2017-09C
- b) Approval of Meeting Minutes from the September 11, 2017 Board of Commissioners meeting
- c) HARB-2017-16 – 224 S Aberdeen Avenue – Re-submitting for two (2) changes to previous HARB approval (2017-05) – dormer details and front entry pent roof
- d) Acceptance of Department Monthly Reports
- e) Resolution #2017-105 - Application for County Aid For Allocation of Delaware County Liquid Fuels Tax Funds
- f) ~~Removal of traffic islands on Pine Tree Rd., at a cost not to exceed \$15,000 (Requested by Commissioner Booker)~~

Commissioner Nagle requested item f be removed from the consent agenda.

Commissioner Curley made a motion to approve the consent agenda excluding item f, seconded by Commissioner Clark. Motion passed 6-0 with Commissioner Ahr absent.

## 2. Proclamation to Marty Costello – Freedom Medal Award

Commissioner Schaefer along with Mr. Zienkowski presented Marty Costello with a Proclamation congratulating him for being a recipient of the 2017 Freedom Medal Award in Delaware County. Mr. Costello was selected for his commitment to our country through his military service.

## 3. Public Participation

Dan Sherry, Wayne – He commented regarding past Commissioner, Bill Spingler as well as current Board President Ahr and the Ethics Board.

Leslie Morgan, Farm Road – She spoke regarding potential ways to fund the Willows Project.

Jake Abel, Wayne – He commented in regard to wires hanging from poles as well as double poles throughout the Township.

Doug McCone – He commented in regard to prior comments during the meeting.

Mr. Zienkowski thanked Villanova for their day of service as well as commented that Conestoga Road will begin to be milled and paved tomorrow.

## 4. Announcement of Boards and Commissions Vacancies

<u>Shade Tree Commission - 2 Vacancies</u>	<u>Environmental Advisory Council - 1 Vacancy</u>
<u>Board of Health – 1 Vacancy</u>	<u>Stormwater Advisory Committee – 1 Vacancy</u>

Commissioner Schaefer announced the above vacancies on various Boards and Commissions. Anyone interested should submit their resume to Bob Zienkowski, Township Manager, rzienkowski@radnor.org.

## 5. Willows Mansion Discussion – Updated Information in Packet

Christina Perrone commented about the Hybrid Community Plan submitted by Barton Partners. The improvements will include a fully renovated first floor with stabilization of the existing building systems, new stairs and accessibility improvements, an open concept community space, the Pond View Room as a community destination with great views to the Willows Park and new terraces for small gatherings. To reduce the overall scope and cost of this Hybrid Community Plan, it does not include: 1) an expansion to the existing 57 space parking lot, 2) widening of the existing driveway, 3) expanded terrace for larger gatherings, 4) painting of fountain wall, 5) new loading area, 6) new exterior signage or 7) second floor upgrades.

#### Public Comment

Leslie Morgan, Farm Road – She commented about community involvement with the Willows.

Alex Yannopolis, Rosemont – He commented regarding his concern of Ward 7 not having representation.

Dan Sherry, Wayne – He inquired if the Radnor Conservancy has given a presentation about the Willows.

Jane Galli – She commented in support of the Willows Project.

Lisa Borowski, Goshen Road – She thanked the residents that have contributed their time to help with the projects.

There was an in-depth discussion amongst the Commissioners and staff regarding the Willows Project and potential funding. There was support from majority of the Board to proceed.

#### 6. Update on Radnor Crossing tennis court/temporary parking lot issue (**Requested by Commissioner Clark**)

Paul Wessel, neighboring resident gave a brief update that the temporary parking isn't being used for the use which was approved.

#### 7. Committee Reports

##### G. Ordinance #2017-16 – (**Introduction**) - Vacating a Portion of Belrose Lane Extending Between Huston Road and Glenmary Lane with the Exception of Radnor's Easement Rights in the Sewer Facilities Located Within the Existing Right of Way

Commissioner Booker made a motion to introduce ordinance #2017-16, seconded by Commissioner Clark.

Peter Nelson, Township Solicitor gave a brief background of the above ordinance.

Public Comment

Josh Gross, Huston Road – He commented regarding typos within the ordinance.

Ryan Lemieux, 500 Huston Road – He thanked everyone for their help.

Commissioner Schaefer called the vote, motion passed 6-0 with Commissioner Ahr absent.

***FINANCE & AUDIT******A. Adoption of the 2018 Budget Calendar***

Commissioner Curley made a motion to adopt the budget calendar, seconded by Commissioner Clark. Motion passed 5-0 with Commissioner Booker out of the room and Commissioner Ahr absent.

***B. Resolution #2017-108 - Establishing the 2018 Minimum Municipal Obligation ("MMO"), subject to further amendment during the 2018 budget process***

Bill White, Assistant Township Manager & Finance Director gave a brief overview of the resolution.

Commissioner Curley made a motion to approve, seconded by Commissioner Clark. Motion passed 5-1 with Commissioner Booker opposed and Commissioner Ahr absent.

***PUBLIC WORKS & ENGINEERING******C. Discussion and Possible Resolution: Banbury Way Stormwater Management Project***

Banbury Way Flood mitigation design contract was awarded to T&M Associates. After providing many alternatives (based on the CH2M design in the RFP for these services), the Board of Commissioners chose the option included in the attachments. This option, which met the criteria of managing a 25-year frequency, 1 hour storm event, included construction of the system on Banbury Way, Windsor Avenue, and Francis. In 2017, two meetings were held with residents of the affected area, and they voiced concerns over: the disturbance to the area, tree removal, access to their houses during construction, cost, and overall impact of the project in their neighborhood. At the end of the last meeting, an area (limit of disturbance) was depicted for a possible project. The limit of the project area outlined for the residents was the R.O.W of Banbury, from SR 0030 to Francis/Windsor, the intersection itself, and the "triangle" (traffic island area). At the meeting, we discussed possibly pursuing the following, noting the issues involved: 1.) we could provide three basic preliminary options, 2.) by using the prescribed area, we are "backing into" the project, in that we are not designing for a specific frequency rain event, but working in a limited area, and trying to provide the best/as much as we can SWM, and the 3.) the projects would be at a somewhat high level, 4.) I could meet with T& M to provide these options. In the Board Packet, there is a memorandum are three options, for the prescribed area, as put forth by T& M Associates. The table on page five of that packet summarizes the costs and capacity of the systems. At this point, staff respectfully requests direction from the Board of Commissioners regarding the Banbury Way Flood Mitigation project. We offer the following for the Board of Commissioners, regarding direction on the project:

- Terminate the current contract, and work with T&M in the manner noted previously.



- Continue working on the original option as chosen by the Commissioners, and move towards bidding.
- Pursue various options, as determined by the Board of Commissioners, based on the Board's requirements, the T& M options, and/or suggestions from staff and the Stormwater Management Advisory Committee.

There was a brief discussion amongst the Commissioners, staff and members of Stormwater Advisory Committee.

Commissioner Curley made a motion to discontinue the project on Banbury and return the funds to the stormwater fund, seconded by Commissioner Higgins. Motion passed 5-1 with Commissioner Clark opposed and Commissioner Ahr absent.

#### Public Comment

John Sheehan, Windsor Ave – He thanked staff for working with neighbors as well as discussed, the severity of flooding in the Windsor/Farm Road area.

#### D. Resolution #2017-106 - SALDO Application # 2017-S-02 – Final - Wheeler Field – Minor Final Subdivision

Commissioner Higgins made a motion to approve, seconded by Commissioner Curley.

Commissioner Schaefer made a motion to amend the resolution to contain language that incorporates a condition that the deed reflects any sale of property out of the hands of the Boy Scouts will allow the Township to buy back at the same price as the sale price, seconded by Commissioner Higgins. Motion passed 5-0 with Commissioner Clark out of the room and Commissioner Ahr absent.

Commissioner Schaefer called the vote on the original motion, motion passed 5-0 with Commissioner Clark out of the room and Commissioner Ahr absent.

#### E. Resolution #2017-107 - SALDO Application #2017-D-03 JCHAI Building – Final - Preliminary/Final Land Development

Commissioner Higgins made a motion to approve, seconded by Commissioner Nagle. Motion passed 4-2 with Commissioner Booker and Schaefer opposed and Commissioner Ahr absent.

#### F. Discussion of Township Policy on Maintenance of Private Roads (leaf collection, repairs, snow plowing, etc.) (Requested by Commissioner Higgins)

Commissioner Higgins gave a brief background of the above agenda item such as private roads and the maintenance of them. There was a discussion amongst Commissioners and staff.

Item f from the Consent Agenda

Removal of traffic islands on Pine Tree Rd., at a cost not to exceed \$15,000 (Requested by Commissioner Booker)

There was an in-depth discussion amongst the Commissioners and staff regarding the agenda item.

Commissioner Booker made a motion to remove the traffic islands on Pine Tree Road, at a cost not to exceed \$15,000, seconded by Commissioner Clark.

Public Comment

Dan Sherry, Wayne – He commented about the discussions amongst the Commissioners on the above agenda item.

Austin Hepburn, Upper Gulph Road – He commented in support of the removal of the islands.

Alan Brink, Hermitage Drive – He is in support of the removal of the islands.

Commissioner Schaefer called the vote, motion failed for lack of a majority with Commissioner Higgins, Schaefer and Nagle opposed and Commissioner Ahr absent.

**COMMUNITY DEVELOPMENT**

H. ~~DRB—Consideration of Appeal filed in opposition of DRB 2017-23—208 N. Wayne Avenue~~

Item removed from the agenda by request of the applicant.

- I. Discussion and Possible Motion to Authorize John Rice to attend the October 10, 2017 Zoning Hearing Board Meeting to oppose the following: APPEAL#3000 - The Applicant, 157-159 Garrett Avenue, property located at 157-159 Garrett Avenue and Zoned GH-CR, seeks a modification of the Zoning Hearing Board Appeal 2575. Applicant requests removal of the Board's condition which states, "In order to reduce noise emanating from the subject premises, the windows of the subject premises shall be kept closed at all times when the New Restaurant is open for business."

Peter Nelson gave a brief background of the above appeal. There was a brief discussion amongst the Commissioners and staff.

Commissioner Curley made a motion to send John Rice on behalf of the Board of Commissioners to oppose the appeal, seconded by Schaefer.

Public Comment

Sara Pilling, Garrett Avenue – She commented that the applicant has already made the change to their building and the noise carries down the road.

Jane Galli, Barcladen – She commented in support of the motion.

Commissioner Schaefer called the vote, motion passed 6-0 with Commissioner Ahr absent.

*J. Authorization to file an Enforcement Action Re: 134,144 Eachus Avenue*

Commissioner Curley made a motion authorizing to file an enforcement action regarding 134,144 Eachus Avenue, seconded by Commissioner Nagle.

There was a brief discussion amongst the Commissioners and Township Solicitor.

Commissioner Schaefer called the vote, motion passed 6-0 with Commissioner Ahr absent.

***PERSONNEL & ADMINISTRATION***

*None*

***PUBLIC SAFETY***

*None*

***LIBRARY***

Commissioner Booker commented that that there was a meeting held this past Thursday where QCI gave an update on the project.

***PUBLIC HEALTH***

*None*

***PARKS & RECREATION***

Commissioner Nagle commented that at the last Parks Board meeting they discussed the capital budget. He also commented that the Pumpkin Festival is this coming weekend at the Willows.

***Old Business***

Commissioner Schaefer commented that she is having a 4<sup>th</sup> Ward Town Hall meeting on Thursday at 7 PM at Presbyterian Children's Village. All are welcomed to attend.

***New Business***

*None*

***Public Participation***

Dan Sherry, Wayne – He commented regarding comments made earlier in the evening and the need to reorganize the Board.

*There being no further business, the meeting adjourned on a motion duly made and seconded.*

*Respectfully submitted,*

*Jennifer DeStefano*

**RADNOR TOWNSHIP POLICE DEPARTMENT**

**301 Iven Avenue**

**Wayne, Pennsylvania 19087-5297**

**(610) 688-0503 ■ Fax (610) 688-1238**

**William A. Colarulo  
Police Superintendent**

**TO:** A Staff Traffic Committee Meeting was held on September 20, 2017 and was attended by Deputy Superintendent Christopher Flanagan; Lieutenant Shawn Dietrich, Officers Alex Janoski, Ken Piree, Highway Patrol; William Gallagher, Supervisor of Parking; Steve McNelis, Interim Public Works Supervisor, Commissioner John Nagle; Commissioner Phil Ahr, Amy Kaminski, Gilmore and Associates Traffic Engineer; Vera DiMaio, Administrative Assistant, and Radnor residents.

**FR:** William A. Colarulo

**RE: STAFF TRAFFIC COMMITTEE MEETING HELD IN THE POLICE ROLL CALL ROOM, WEDNESDAY, SEPTEMBER 20, 2017, 10:00 AM.**

**NEW BUSINESS:**

1. Special Report - Speed Analysis on Lowrys Lane and surrounding streets.

Highway Patrol Officer Alex Janoski presented his special report on the speed analysis on Lowrys Lane. (See attachment)

2. Jennifer Felice Breen is requesting two (2) additional speed humps to be installed on South Lowrys Lane between Lancaster Avenue and Buckingham Road. This would calm traffic and provide a safer environment for the children and pets on the street.

Deputy Superintendent Chris Flanagan states that according to data collected, statistically the road does not warrant additional speed humps. Traffic traveling along that road are at reasonable speeds. Mrs. Breen also suggested street markings on the road and "Watch Children" sign be installed. Deputy Superintendent Flanagan stated that he didn't see that being an issue if approved. He also stated that Public Works will perform a sign assessment on that road including Watch Children signs.

3. Turkey Trot 5K Run/Walk on Thursday, November 23, 2017.

Staff Traffic Committee approves the Turkey Trot 5K Run/Walk on North Wayne Avenue, on Thursday, November 23, 2017.

4. A special report on bridge strikes at the Amtrak Bridge and King of Prussia Road.

Deputy Superintendent Chris Flanagan presented a PowerPoint on bridge strikes at the Amtrak Bridge and King of Prussia Road. From years 2008-2017 there were 37 bridge strikes. The bridge height is 10X10 which is clearly posted. Radnor Township Police have asked PennDOT and PA Truckers to help alert truckers of this information. Staff Traffic Committee suggests a solution to the bridge strikes – Overhead Vehicle Active System (laser beams). Officer Alex Janoski presented a powerpoint on the system which entailed its use and costs. The system would alert truckers whether or not they were safe to enter the bridge. If they did not meet the requirements, they would have an alternate route to take. This special report will be forwarded to Superintendent of Police and Township Manager for review.

5. Radnor Township School District (RTSD) Transportation Depot – line of sight.

Officer Ken Piree stated that the line of sight has improved and Radnor Township School District continues to monitor the situation.

6. Commissioner Clark requests a speed analysis in the area of 170 Woodstock Road.

Officer Alex Janoski stated that the speed analysis data collected showed no speeding problem along Woodstock Road. The counter was out from September 12-19, 2017 and it resulted in no speeding issues. It did, however, have stop sign violations. There was a volume issue as well. It was reported that over 4,000 vehicles traveled on this road. Twenty-four (24) miles per hour was the 85% percentile. Deputy Superintendent Chris Flanagan states that there will be added patrol to enforce the stop signs in this area.

7. Parking on Bellevue Avenue per Alfred Fuscaldo.

Al Fresco, attorney for Urban Outfitters spoke about the plans for Urban Outfitters to install an eatery and make changes to the Anthropology building as well as requesting 3-5 additional kiosk spaces on Bellevue Avenue. Please note that Urban Outfitters have not submitted any paperwork as part of the building permit bundle process. Deputy Superintendent Chris Flanagan states that any parking requests would require an Ordinance change. He further stated the process of the Petition and how it works. Staff Traffic will do an assessment of the street. Steve Norcini and Kevin Kochanski of the Codes Department would be alerted as to what is the proposed matter. Deputy Superintendent Chris Flanagan will email Attorney Fuscaldo a proposed Petition for him to begin the process.

8. Annual 5K for Elves for Shelves on Saturday, December 2, 2017.

Staff Traffic Committee approves the Annual 5K for Elves for Shelves on Saturday, December 2, 2017. Officer Janoski stated he has all the necessary paperwork.



9. Doug Ford requests a crosswalk be installed on Oak Lane at Walnut Avenue

Officer Alex Janoski did an assessment on this matter. Officer reports that when vehicles come around the corner off North Wayne, there is a blind curve. Officer stated that the reaction time of a driver, with the speed limit, would not give them ample time to see any pedestrian at a cross walk there. Staff Traffic Committee does recommend putting a crosswalk across Oak Lane. He also stated that Public Works paint "25 miles per hour" along the curve of the road. Mr. Ford also requests street markings with "Slow" on the road to try to help with speed. Amy Kaminski also states that perhaps street markings would help. Officer Alex Janoski will do a speed assessment on this street.

**OLD BUSINESS:**

1. County Line Road corridor

On September 20, 2017 Deputy Superintendent Flanagan met with Township Engineer, Steve Norcini who is placing a request for funding for County Line Road corridor study (Lancaster Avenue - Glenbrook Avenue) in the 2018 budget.

2. Aberdeen and Church Road (5-points) phase upgrades from Amy Kaminski.

Penndot did provide historical information and indicated a permit plan was prepared in 2008 but not implemented. Steve Norcini was contacted with no follow up; however, given this intersection is scheduled for improvements in 2019, the committee decided this would be upgraded under the 2019 budget.

3. Saint Katharine's school traffic updates.

Deputy Superintendent Chris Flanagan discussed school traffic issues and gridlock on Midland Avenue during the times of school dismissals. Officer Ken Piree and William Gallagher proposed recommendations for the following:

- Deputy Superintendent would like to get feedback from St. Katharines School about the congestion in this area.
- Officer Piree also recommended markings for driveways so they don't get blocked.
- Radnor Police along with Commissioner Clarke want to obtain feedback from residents on Midland
- Radnor Police report traffic flow is greatly improved on all surrounding streets. Further, the time of cars on Midland is between 10-20 minutes at point of school release. Radnor Police report better emergency vehicle traffic flow due to this change.

4. Braebank Lane - line of sight - update from Steve Norcini.

Officer Piree states there is no update on this matter from the Township Engineer.



## **South Lowry's Special Report**

### **Speeding Vehicles**

The following is a special report in regards to the complaints of speeding vehicles on S Lowry's Lane. The data gathered for this report has been collected from 2006 to the present date. South Lowry's Lane is located in the Villanova section of Radnor Township. Lowry's Lane is a local roadway that travels in a north/south orientation between County Line Rd and Conestoga Rd. Lowry's Lane is 3,365 feet in length with a posted speed limit of 25mph. The 25mph speed limit was established on October 27, 1959 and is ordained. Lowry's Lane is a 24-foot wide roadway with a right-of-way of 33 feet.

Records indicate that speed humps/tables were requested and placed on South Lowry's Lane in the spring of 2002. It does not appear that the current Radnor Township ordinance regarding traffic calming, namely "speed humps" was followed as set forth in PENNDOT Publication Section 212.9 and Radnor Township Ordinance #2005-05 Traffic Calming. In 2002, only a petition was circulated and no formal speed data was gathered to confirm or deny the need for traffic calming on South Lowry's Lane.

In October 2006, a request was made for the installation of additional speed humps/table on South Lowry's Lane. In April 2006, a traffic counter was placed in the area for a formal count. The ADT=2,059

vehicles, AVG Speed=26mph and the 85<sup>th</sup>%=31mph. Once again, in 2006, a second count was done as a request was submitted. The ADT=1,931 vehicles, AVG Speed=24mph and the 85<sup>th</sup>%=28mph. Based on the newly adopted traffic calming ordinance in 2005, Lowry's Lane did not meet the criteria for speed humps/tables. Another request was submitted in June 2007 for traffic calming measures. The above data was used in the study and speed humps/tables were denied.

In 2008, another request was submitted to RTPD in regards to speeding vehicles in the area of S Lowry's Lane. In March 2008, a formal traffic count was once again conducted. The following data was gathered ADT=1,807 vehicles, AVG Speed=24mph and the 85<sup>th</sup>%=29mph. Once again Lowry's Lane would not qualify for traffic calming installation.

In June 2016, a request was submitted to RTPD for traffic calming on S Lowry's Lane due to speeding vehicles. RTPD placed a traffic counter in the area on June 27, 2016. The following data was obtained. ADT=1,486 vehicles and the 85<sup>th</sup>%=30mph. Radnor Township Police Highway Patrol Unit conducted speed enforcement for a period of 6 hours over a 3-day period. Two citations were issued for a vehicle traveling 39mph and 40mph, respectively.

In August 2017, RTPD received a complaint about speeding vehicle on S Lowry's Lane, specifically vehicles traveling northbound towards E Lancaster Ave. RTPD Highway patrol placed a speed board in the area that did obtain data on vehicle traveling northbound in the area. Between August 17, 2017 and August 23, 2017, 527 vehicles were counted. Pursuant to the Pennsylvania Vehicle Code, vehicles being timed cannot be stopped until they exceed the posted speed limit by 11mph.

RTPD also received a complaint about vehicles “cutting through” the local neighborhood streets off of S. Lowry’s Lane, at high rates of speed. A traffic counter was placed on Fairfax Rd on August 14, 2017 to August 16, 2017. The following data was collected, AVG Speed=20mph and the 85<sup>th</sup>%=26mph. It should be noted the entire area of “Conestoga Village” has an improper posted speed limit of 15mph.

#### DATA

**2006 (April) AVG Speed=26mph, 85<sup>th</sup>%=31mph**

**2006 (October) AVG Speed=24mph, 85<sup>th</sup>%=28mph**

**2008 AVG Speed=24mph, 85<sup>th</sup>%=29mph**

**2014 AVG Speed=23mph, 85<sup>th</sup>%=28mph**

**2016 85<sup>th</sup>%=30mph**

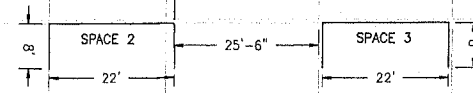
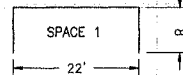
W. LANCASTER AVE.

S. BELLEVUE AVE.

ANTHROPOLOGIE  
EXISTING BUILDING

③

⑨



Number:		Date:		Revision:	
ANTHROPOLOGIE S BELLEVUE AVE, WAYNE, PA					
STREET PARKING PLAN					
<b>ADVANCED</b> <b>GeoServices</b> Engineering for the Environment. Planning for People. 1055 ANDREW DRIVE, SUITE A WEST CHESTER, PENNSYLVANIA 19380 Tel: 610.840.0100 Fax: 610.840.0109 Web: www.advancedgeoservices.com				Date: 11/16/2017 Drawn By: ALC Checked By: MJS Project No.: 17-001 Drawing Date: 03/16/2017 Sheet No.: 1 OF 1 Revision Number:	

FIGURE 1





King of Prussia Rd.

AMTRAK Bridge

Radnor/Paoli Station



# AMTRAK Bridge-Under-Pass



# Data and Facts: Bridge Strikes

## King of Prussia Rd AMTRAK Bridge

- ◆ Data Collected From Amtrak Police and RPD Records management system
- ◆ 2008 to 2017- 37 Trucks Have Struck The Bridge
- ◆ Damage has been caused to other vehicles and the bridge
- ◆ King of Prussia Rd. is State of Pennsylvania Rd (1038)
- ◆ AMTRAK Bridge is Federal property
- ◆ Pedestrians cross under the bridge as well
- ◆ Radnor Police have asked Penn Dot and P.A. Truckers Assoc. to help alert trucker's of this situation. Safety is our Top Priority!

# Area Is Clearly Posted

## Bridge Height 10'10"

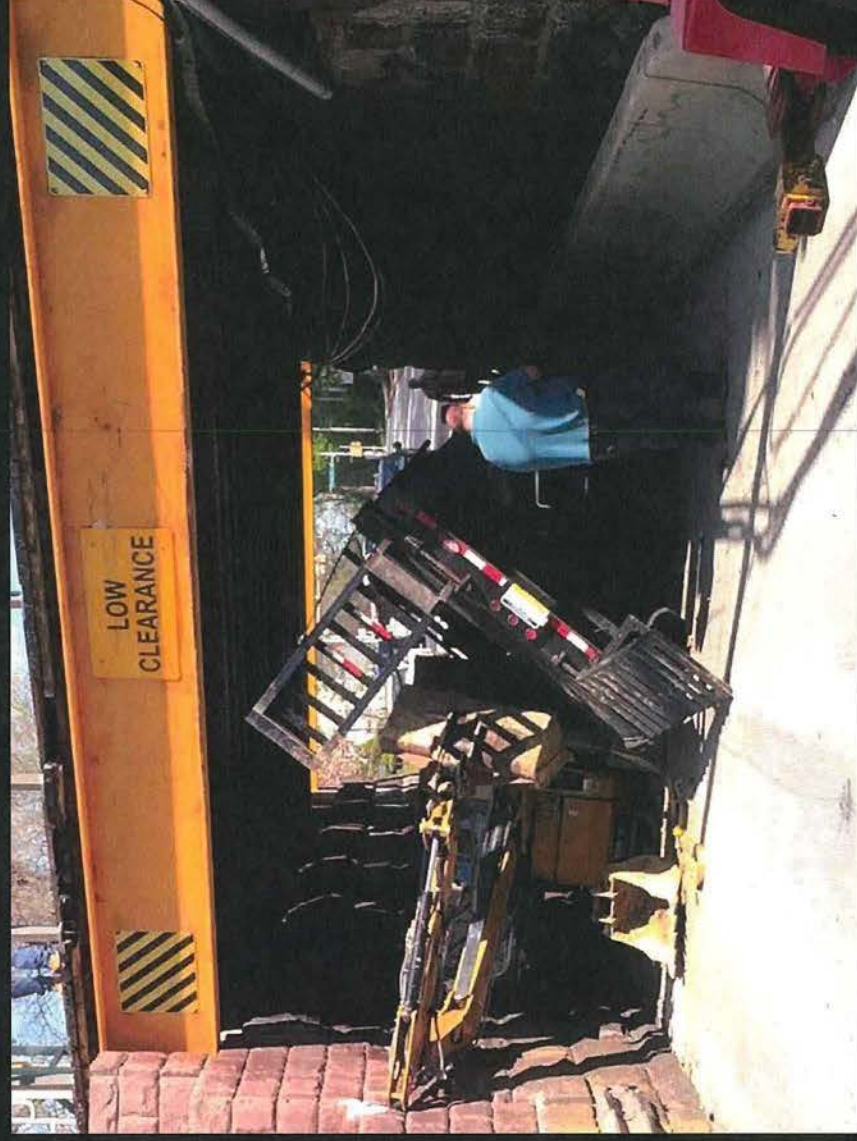


## Well In Advance

- ◇ N Radnor Chester Rd @ (SR0030)
- ◇ N Radnor Chester Rd @ K of P
- ◇ Matsonford Rd @ K of P



Trucks Are Still Striking!!!

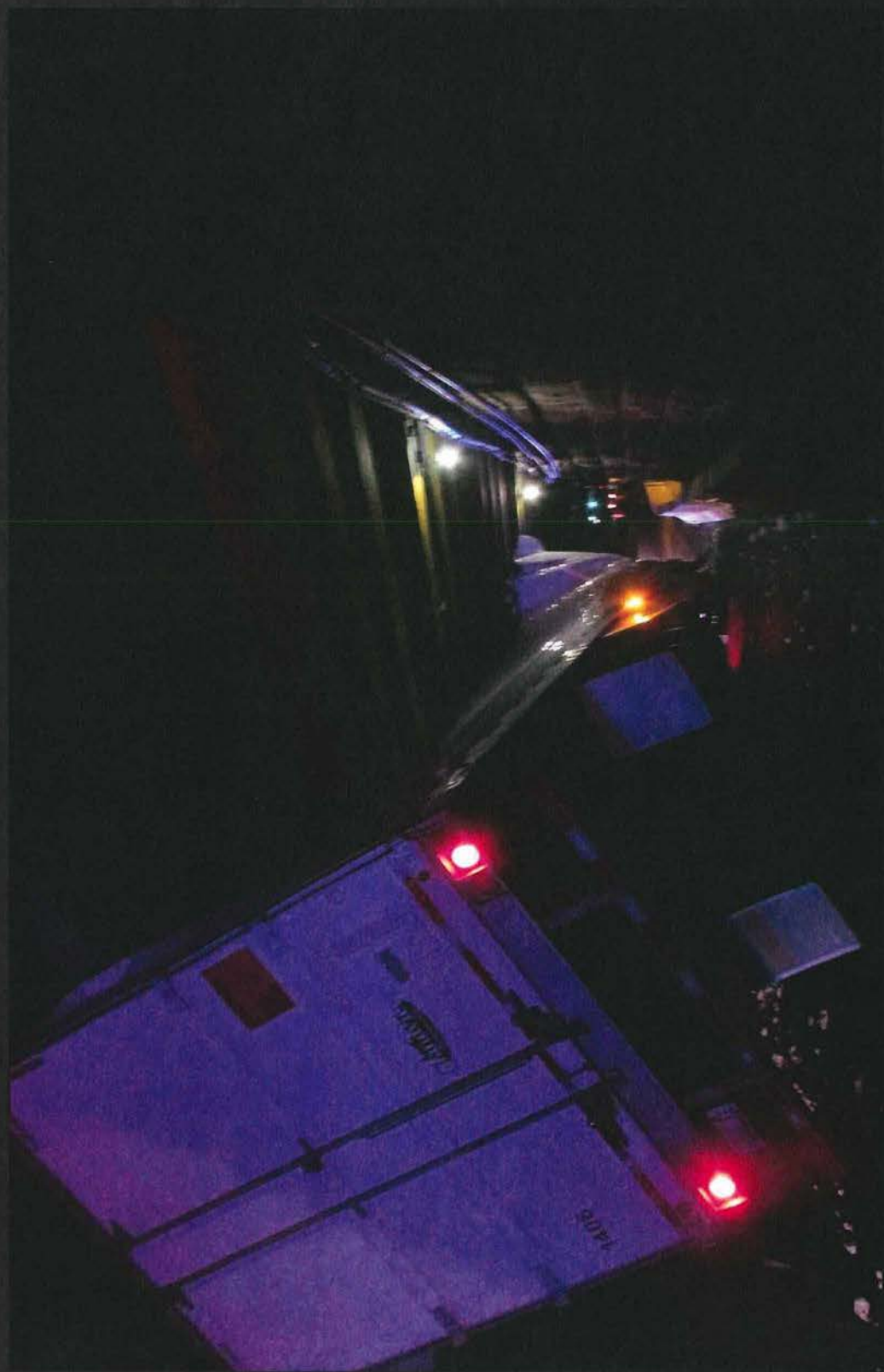


Strike!!!













# Solution?

- ◆ Do to State and Federal regulations, RPD is restricted with options
- ◆ Over Height Vehicle Detection (OHVD)




## BlinkerSign™ Low Speed Overheight Warning System

**Features**

- BlinkerSign™ Flashing LED Signs warn drivers day and night and in all weather conditions
- Works independently of power grid, effective even during power outages
- Detects overheight vehicles which triggers BlinkerSign™ LED Signs to warn drivers
- Sensor height tailored to each system
- For 25MPH roads or less
- Call for high speed applications

**Applications**

- Low bridges
- Tunnels
- Weigh stations
- Underpasses
- Facility truck bed entering
- Parking structures

**Low Bridge Warning System**



When the infrared beam (located at ground level) is broken by an overheight vehicle...



...a BlinkerSign™ is triggered to flash, alerting the driver that the vehicle will not clear the structure ahead.

**Parking Structure Warning System**








OVER-HEIGHT Vehicle

BlinkLink

System: 821 NB OFF 34 NW 106 Alert Time: 9/4/2019 10:55:45 PM Powered by TAPCO



# What Does OHVDS Do?

- Detects over height vehicles and activates visual and aural warnings
- Directs driver to take appropriate action
- Can notify traffic-monitoring stations, law enforcement or IT control points via landline or wireless





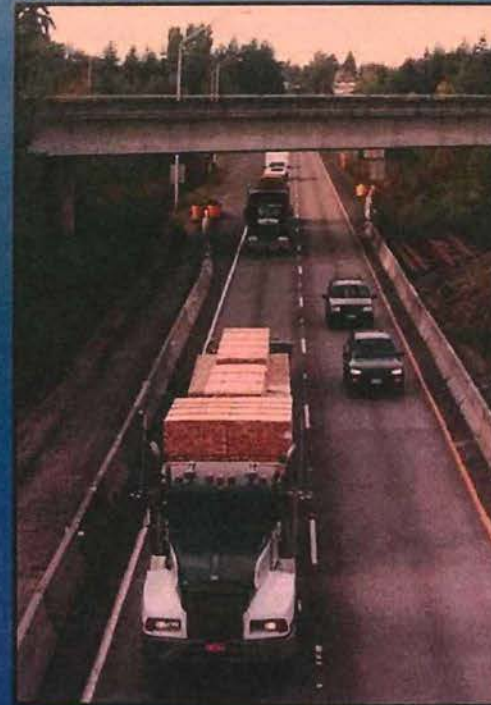
# Why use an Active System for Over Height Protection?

## Active Systems Provide

- Continuous active monitoring of traffic
- Warnings that are triggered only as needed
- Focused attention to hazard
- Protection against inaccurate load height determination and varying factors (resurfaced roadway, load protrusions, shock height, etc.)
- Secondary warning(s) beyond existing signage
- Reduced exposure to costs associated with incidents, emergency response, injury, traffic delays, loss of revenue, infrastructure repairs, administrative costs and publicity

## Our experience has shown

- The cost of one incident or accident almost always exceeds the cost of a Over Height Vehicle Detection System





# Types of Over Height Detection and Warning Systems

- Full range of choices for cost effective match of system to application
- Easy to install, detailed instruction manual, technical support as required
- Proprietary cabinet design, weather and vandal resistant
- Minimal or no maintenance required
- One Year Standard Warranty, extended warranties available

## Available Options Included

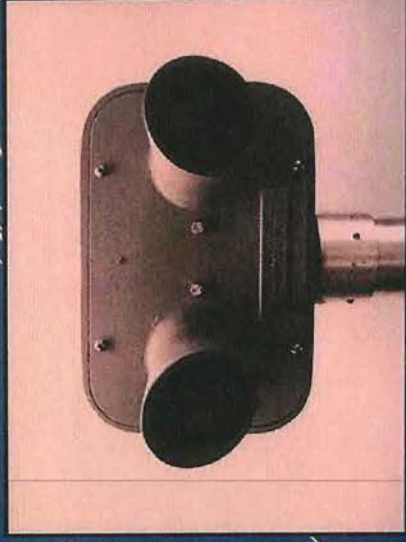
- Solar or AC
- Camera Notification
- BlinkerSign, Beacon or Blankout Warning for Vehicles





# Patented Dual Beam Z-Pattern Technology

- Most advance weather and environmental protection available
- Enhanced detection of small and fast moving objects
- Eliminates false alarms from sun blinding
- Rejection ambient, stray, or reflective light from emergency vehicle light systems
- Heaters prevent snow build-up on windows in front of transmitter and receiver eyes
- Transmitted signal strength and excess receiver gain allow systems to operate in challenging weather and dirty environments



# Estimated Cost and Considerations

- ◆ Equipment =\$60,000
- ◆ Install By GC =\$40,000
- ◆ Total Estimated Cost= \$100,000
- ◆ Who Can support this project financially?
- ◆ Penn Dot ??
- ◆ AMTRAK ??
- ◆ Grants??

# Additional Research

- ◆ Abhishek Singhal PhD.
- ◆ LaRa-OHVD
- ◆ Advise Penn Dot of plans
- ◆ Work with Radnor Public Works if this is a Township project

**RESOLUTION 2017-110  
RADNOR TOWNSHIP**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY,  
PENNSYLVANIA, AUTHORIZING THE TOWNSHIP TO PURCHASE AND  
REPLACE PLAYGROUND EQUIPMENT AT PETRIE PARK.**

**WHEREAS**, Radnor Township desires to replace the playground equipment and area at Petrie Park that includes the current see-saws as part of an improvement project to revitalize the site and furnishings there and to bring them into compliance with the current standards for safety; and

**WHEREAS**, the neighbors of Petrie Park have been engaged in the process and support all the park improvements that have been proposed; and

**WHEREAS**, the replacement equipment referenced in this resolution (the We-Saw) will allow for inclusive and collaborative multi-generational play, is compliant with the Americans with Disabilities Act, and meets all Consumer Product Safety Commission guidelines for safe play and installation; and

**WHEREAS**, Radnor Township has designated the appropriate funding for the purchase of the playground equipment for the park location; and

**WHEREAS**, the Board of Commissioners desires to approve the proposed contract for purchase from the Pennsylvania State Purchasing Contract (COSTARS) in accordance with the Home Rule Charter of Radnor Township.

**NOW THEREFORE, BE IT RESOLVED** that the Board of Commissioners of Radnor Township does hereby approve the purchase and replacement of the playground equipment for Petrie Park from General Recreation, Inc. through the Pennsylvania State Contract COSTARS as outlined below:

Vendor: General Recreation, Inc. - Vendor # 122659  
Contract #: Costars – 014-071  
Amount: \$15,660.00 (includes the We-Saw/four-seated unit; complete removal of current equipment; installation of new equipment and wood fiber)

**SO RESOLVED** this 9<sup>th</sup> day of October, 2017.

TOWNSHIP OF RADNOR

By: \_\_\_\_\_  
Name: Elaine P. Schaefer  
Title: President

ATTEST: \_\_\_\_\_  
Name: Robert A. Zienkowski  
Title: Township Manager/Secretary

# Radnor Township

## PROPOSED LEGISLATION



**DATE:** October 9, 2017

**TO:** Board of Commissioners

**FROM:** Tammy Cohen, Recreation & Community Programming Director

②

**LEGISLATION:** Resolution #2017-110 Authorizing the Township to Purchase and Replace Playground Equipment at Petrie Park.

**LEGISLATIVE HISTORY:** This is the first legislative action on this topic.

**PURPOSE AND EXPLANATION:** Request is being made to authorize the Township to purchase and replace the playground equipment at Petrie Park that includes the current see-saws as part of an improvement project to revitalize the site and furnishings and to bring them into compliance with the current standards for safety. The replacement park feature will consist of the We-Saw, an inclusive and collaborative four-seated see-saw unit that will allow for multi-generational play, will be compliant with the Americans with Disabilities Act (ADA) and will comply with the current standards for safety, per the Universal Construction Code and the recommendations of the Consumer Product Safety Commission. The project will include the removal of the current playground equipment in that particular area and installation of the new equipment along with engineered wood fiber surfacing. This purchase would be made from General Recreation, Inc. through the Pennsylvania State Purchasing Contract (COSTARS). Purchase and replacement of the playground equipment will provide a highly-utilized asset for the community at popular neighborhood park within Radnor Township.

**IMPLEMENTATION SCHEDULE:** Replacement of the playground equipment at Petrie Park will take place in the fall 2017. Shipping will take 4-6 weeks and the project is estimated to begin in November.

**FISCAL IMPACT:** The cost for the purchase and replacement of the playground equipment has been budgeted under Township Bond Issue - Ordinance 2015-18:

**Vendor:** General Recreation, Inc. - Vendor # 122659

**Contract #:** Costars – 014-071

**Amount:** \$15,660.00 (includes the We-Saw/four-seated unit; complete removal of current equipment; installation of new equipment and wood fiber)

**RECOMMENDED ACTION:** I would like to respectfully request that the Board approve Resolution #2017-110 authorizing the Township to purchase and replace the playground equipment at Petrie Park.

Quote



GENERAL | RECREATION, INC.

Quote

Please confirm billing and shipping addresses below:

I N V O I C E	Radnor Township <hr/> 301 Iven Ave <hr/> Wayne PA 19080 <hr/> Re: Petrie Park <hr/> <div style="text-align: right;">ZIP CODE</div>	S H I P T O	Petrie Park. C/O Tim Knupp <hr/> 106 Petrie Ave <hr/> Wayne PA 19087 <hr/> <hr/>
---------------------------------	--	----------------------------	---

PO#

Salesperson:

Net/30 Prepay

**Will Hemler**☒

Comm. Carrier

UPS

Prices are: Delivered

Plus Ship Charges

☒☒

Date Wanted:

ASAP

HOLD

Spec Date:

Ship:

Truckload

Comm. Carr.

☒
☐


☒

Freight: Prepay &amp; Add

Prepaid

C.O.D.

Call Before Delivery

☒**Tim Knupp 717.578.0530**

(Installer)

Customer Cost

Quan	Stock No.	DESCRIPTION	EACH	TOTAL
		<b>Petrie Park</b>		
		<b>Landscape Structures Inc.</b>		
1	186490A	We-Saw, 4 Seat/ADA seesaw, Direct Bury	\$8,850.00	\$8,850.00
		Freight	\$1,300.00	\$1,300.00
		Complete Installation. Includes Removal & Footers/ Excavation, Assembly of Play Equipment and Spread Wood Carpet		\$4,850.00
	20 Cu. Yrds	Engineered Wood Fiber, Delivered	\$33.00	\$660.00
		<b>Grand Total</b>		\$15,660.00

Terms: **X Net 30** 50% Depoist/Balnace 30 Days

Proposal does not include sales tax if applicable, unloading, storage or installation unless listed above.

Freight charge does not include liftgate service or expediated delivery if needed.

Lead Time: Will Advise.

Quote is valid 90 Days.

Proposal pricing as per Pennsylvania COSTARS-014-071 Recreational &amp; Fitness Equipment. Vendor #122659.

To confirm order, please sign and return to our office.

Signature \_\_\_\_\_ Date: \_\_\_\_\_

For Questions Regarding This Proposal, Please Call Will Hemler 610.304.1973

P.O. Box 440 Newtown Square, Pennsylvania 19073

Office: 800.726.4793 Fax: 610.353.5161

Email: will@gen-rec.com



**RESOLUTION NO. 2017-111**  
**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE**  
**COUNTY, PENNSYLVANIA, AWARDED THE**  
**CONTRACT FOR PERMITTING, ENGINEERING, AND**  
**DESIGN OF THE DARBY PAOLI MULTI-USE TRAIL TO**  
**MELIORA DESIGN, INCORPORATED**

***WHEREAS***, the Township, by work performed by Natural Lands has a conceptual design of the Darby Paoli Multi-Use Trail system

***WHEREAS***, the Township solicited proposals for the permitting, engineering, and design of said trail system through Penn BID e-bidding service

***WHEREAS***, Meliora Design, Incorporated a submitted a valid proposal in the amount of \$495,000

***NOW, THEREFORE***, be it ***RESOLVED*** by the Board of Commissioners of Radnor Township does hereby award the contract for Permitting, Engineering, and Design of the Darby Paoli Multi-Use Trail to Meliora Design, Incorporated, in the amount of \$498,500.

***SO RESOLVED*** this 9th day of October, A.D., 2017

**RADNOR TOWNSHIP**

By: \_\_\_\_\_

Name: Philip M. Ahr

Title: President

ATTEST: \_\_\_\_\_


Robert A. Zienkowski  
Manager/Secretary

# Radnor Township

## PROPOSED LEGISLATION

DATE: October 2, 2017

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer 

CC: Robert A. Zienkowski, Township Manager  
William M. White, Assistant Township Manager/Finance Director

LEGISLATION: **Resolution #2017-111:** Awarding the contract for Permitting, Engineering, and Design of the Darby Paoli Multi-Use Trail.

**LEGISLATIVE HISTORY:** Natural Lands provided a conceptual Trails Plan for the Darby Paoli Multi Use Trail. The proposed trails (please see the attached Natural Lands Draft – Conceptual Trail Corridors map) traverse Township owned lands including: the Rye Field, Quarry Tract, Skunk Hollow Park, Saw Mill Field, Saw Mill Park, and the Willows Park (the Willows is proposed as a trail head). The Darby Paoli Trails Plan by Natural Lands, dated May of 2015, can be viewed at <http://www.radnor.com/documentcenter/view/10619>. Based on the Conceptual Draft, a Request for Proposals was solicited on Penn BID, for Permitting, Engineering, and Design of the Darby Paoli Multi-Use Trail.

**PURPOSE AND EXPLANATION:** the Request for Proposals (RFP) outlined the required tasks required of the consultant. The larger of those tasks are listed below:

- Surveying
- Permitting
  - DEP
  - FEMA
  - DCCD
  - US COE
  - NPDES
- Engineering
- Geotechnical Testing & Engineering
- Bidding Documents
- Design
- Grading
- Stormwater Management
- Traffic Improvement Plans
- Construction Phasing Plan
- Meetings with:
  - Board of Commissioners
  - Residents
  - Planning Commission
  - Parks and Recreation Board
  - Township Staff
  - Regulatory Agencies
    - Penn DOT
    - PA DEP
    - DCCD
    - US COE

The RFP outlined the requirement to take the conceptual design by Natural Lands and create approved construction drawings.

Proposals were received from nine firms; their fees are outlined in the table on the following page.

Darby Paoli Multi-Use Trail RFP Respondents		
Firm	Fee	
Momenee, Incorporated	\$99,100	
JMT Engineering, Incorporated	\$295,975	
ACT Engineers, Incorporated	\$325,000	
Mainstay Engineering Group, Incorporated	\$329,820	
Jonathan Alderson Landscape Architects	\$471,705	
*Simone Collins, Incorporated	\$422,162	\$476,162
*Meliora Design, Incorporated	\$508,700	<b>\$480,500</b>
WRA Associates, Incorporated	\$495,500	
Gilmore & Associates, Incorporated	\$840,373	

\*Two of the three shortlisted firms were requested to revise their proposal in accordance with the RFP requirements. The fee in the right-hand column is the revised cost proposal.

The proposals were reviewed by Rick Tralies of Natural Lands, who prepared the conceptual trail design, Karen Clancy, also of Natural Lands, and myself (please see attached letter from Natural Lands outlining their recommendation). The review team chose three firms for "short list" interviews: Meliora Design, JMT Engineering, and Simone Collins. The review team's recommendation to the Board of Commissioners is unanimous; Meliora Design. The value provided by Meliora in their approach to the project, understanding of, and response to the RFP, success on similar projects, and subconsultants (McMahon for traffic/HOP and Cloud Geshan Design) are the factors that the group considered in our recommendation.

**IMPLEMENTATION SCHEDULE:** Pending Board of Commissioners approval, a requisition would be processed. Concurrently, Meliora would be provided a notice of intent to award. Upon receipt and review of the required insurance requirements and professional services agreement, Meliora would be issued a Notice to Proceed. Due to the many, and lengthy permitting processes, the estimate for completion is the end of June 2018. This is consistent with the other firm's timelines.

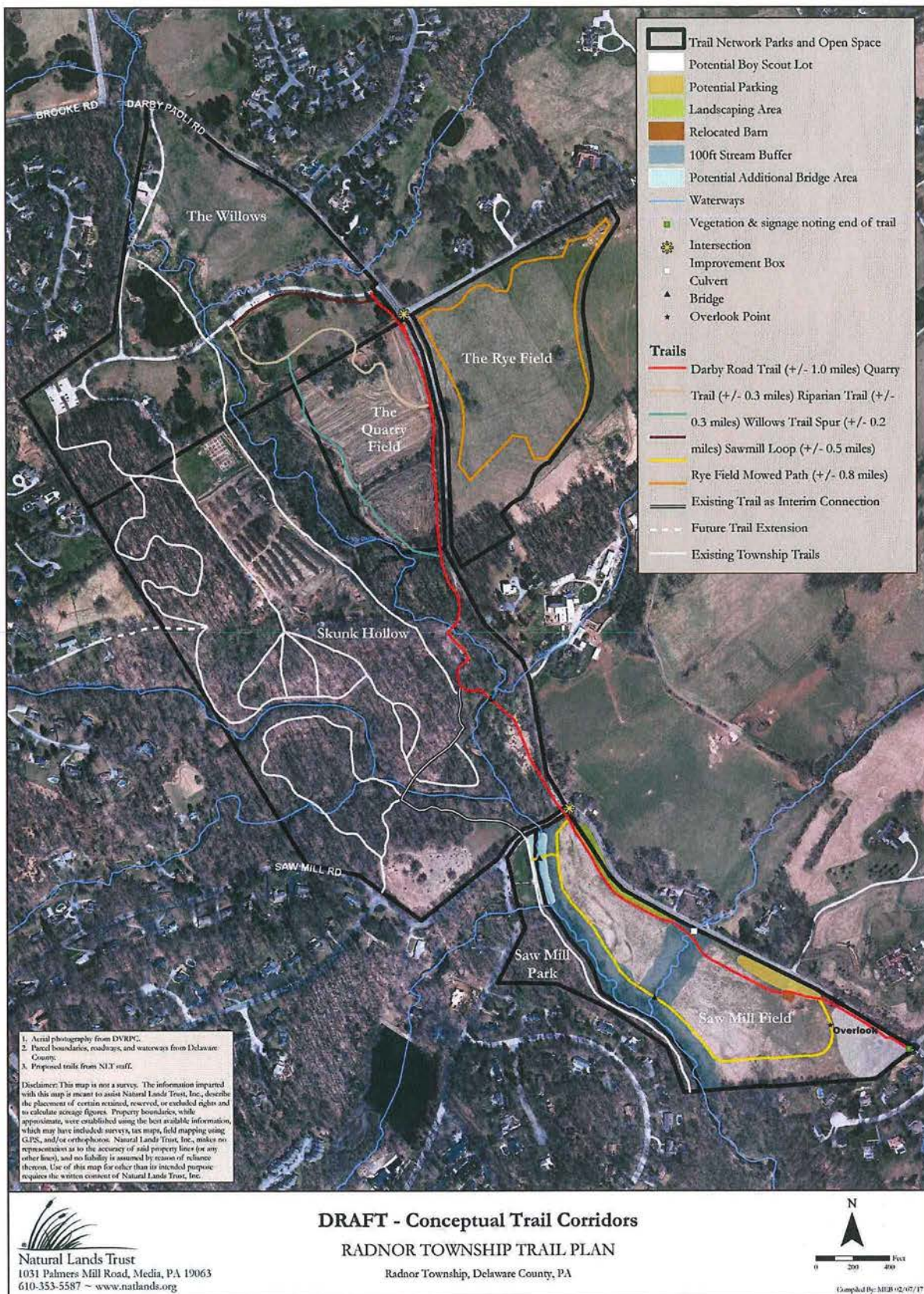
**FISCAL IMPACT:** The cost proposal from Meliora Design is in the amount of \$480,500. *Please note that wetlands delineation was not a requirement of the RFP. At our request, Meliora has provided a fee for Wetlands delineation of \$18,000, if needed. If there is no requirement of the delineation, the Township will not be billed. I respectfully request that the Board of Commissioners include this amount in the award.* If this so pleases the Board, the amount of the award will be \$498,500. The project will be funded by Park Improvements Fund, Ardrossan Trail Improvements, accounts 501-403-48110 and 48111.

**RECOMMENDED ACTION:** *I respectfully request the Board of Commissioners award the contract for Permitting, Engineering, and Design of the Darby Paoli Multi-Use Trail to Meliora Design, Incorporated, in the amount of \$495,500.*

**MOVEMENT OF LEGISLATION:** It is being requested the Board of Commissioners approve the award of the contract for Permitting, Engineering, and Design of the Darby Paoli Multi-Use Trail to Meliora Design, Incorporated, in the amount of \$498,500.

Enclosures: Natural Lands Recommendation Letter  
DRAFT-Conceptual Trail Corridors Plan  
Meliora Design, Incorporated Proposal





**DRAFT - Conceptual Trail Corridors**  
**RADNOR TOWNSHIP TRAIL PLAN**

**Natural Lands Trust**  
1031 Palmers Mill Road, Media, PA 19063  
610-353-5587 ~ [www.natlands.org](http://www.natlands.org)

Radnor Township, Delaware County, PA





# Natural Lands

Hildacy Preserve  
1031 Palmers Mill Road  
Media, PA 19063

610-353-5587

info@natlands.org  
natlands.org

## board of trustees

John A. Terrill, II  
chairman

William G. Warden, IV  
vice chairman

Barbara B. Aronson  
Lloyd H. Brown  
Jason Duckworth  
Robert I. Friedman  
Gail Harrity  
Peter O. Hausmann\*  
Jeffrey Idler  
John W. Lea  
Katharine F. Maroney  
Susan P. Mucciarone  
Stephan K. Pahides  
Jane G. Pepper  
Ann F. Rhoads, Ph.D.  
Robert K. Stetson  
Douglas W. Tallamy, Ph.D.  
Christopher H. Washburn  
Penelope P. Watkins  
William Y. Webb

\*chairman emeritus

## emeritus trustees

Henry E. Crouter  
Theodore V. Wood, Jr.

Molly K. Morrison  
president

September 28, 2017

Robert A. Zienkowski, Township Manager  
Radnor Township  
301 Iven Avenue  
Radnor, PA 19087

RE: *Consultant Selection – RFP for Professional Trail Design and Consulting Services*

Dear Mr. Zienkowski,

On behalf of Radnor Township, my colleague Karen Clancy, RLA, and I reviewed the nine (9) proposals received in response to the RFP issued by Radnor Township on August 21, 2017 for the design of the proposed Darby Paoli Multi-use Trail.

From the initial proposals, we, along with Steven Norcini, selected three respondents for an additional interview. Our recommendation is that Radnor Township work with the team led by Meliora Design. While not the least expensive proposal, we strongly believe they are the best value. This recommendation is based on the following proposal evaluation:

**Proposal Response - Overall**, we deemed the quality of Meliora Design's proposal to be higher than that of the other responses. It was complete, clear, and detailed, addressing every aspect of the requirements of the RFP in a thoughtful way.

**Understanding of Project** – Meliora's response showed a clear understanding of project scope, and our subsequent interview with the project team showed they had included and were evaluating issues not identified in the original RFP. They clearly communicated a reasonable project timeline, and the strong need for communication with all stakeholders.

**Experience** – Meliora Design is a local and well-regarding engineering firm, known for thoughtful and innovative design, particularly with regards to stormwater management, an important aspect of the trail project. They have a strong understanding of and familiarity with all anticipated permitting requirements. Their project experience in the area of trail design will be augmented by their choice of McMahon and Associates as a subconsultant. McMahon's transportation engineering experience with railway design and permitting is extensive. Both firms also expressed interest in aiding with finding and applying for funding sources to help implement the final project.

**Other subconsultants** – The proposal also showed forethought in suggesting Schmid & Co., ECS Mid-Atlantic and Cloud Gehshan Design as potential team members if aspects of environmental science (wetland delineation), geotechnical investigation or a desire for signage and wayfinding become part of the project.

Please don't hesitate to contact me if you have any questions.

Sincerely,

Richard M. Tralies, RLA, ASLA  
Senior Director of Landscape Planning





Meliora Design

Darby Paoli Multi-use  
Trail and Associated  
Amenities

*submitted to*

Radnor Township

September 18, 2017

---

**MELIORA DESIGN**

*Civil, Water Resources, and Structural Engineering*

259 Morgan Street, Phoenixville, PA 19460

P: 610.933.0123 F: 610.933.0188

[www.melioradesign.com](http://www.melioradesign.com)

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- Roles and Resumes
- Subconsultants
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- Project Summaries

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### Section 4 – Work Plan/Schedule

### Section 5 – Cost Proposal

### Section 6 – Method of Billing

### Section 7 – Billing Rates

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## **Section 1 – Cover Letter**



September 18, 2017

Mr. Robert A. Zienkowski  
Township Manager  
Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

RE: Darby Paoli Multi-use Trail and Associated Amenities

Dear Mr. Zienkowski:

Meliora Design, with McMahon Associates, is pleased to submit this proposal to provide Professional Design and Consulting Services for the Darby-Paoli Multi-use Trail and Associated Amenities. We are excited by the opportunity to support both Radnor Township and Natural Lands (NL) in this important effort that will expand the existing Radnor trail system, serve so many different users from Radnor and the surrounding communities, and provide a safe space for the pedestrians and recreational bicyclists who currently use Darby Paoli Road.

### Understanding of Work to be Performed

We understand that this work effort includes the engineering services necessary for the analysis, surveying and mapping, design, cost estimating, documentation, permitting, and bidding of the 1.1 mile Darby-Paoli Trail and the associated "soft" trails, as well as structures and supporting features, to be located on properties owned by Radnor Township. We also understand that this work will be based on the "Darby Paoli Trails Plan", May 2017 developed by NL and approved by the Radnor Board of Commissioners (BOC). We understand that NL will serve a dual role, providing guidance and approval of design components related to the trails and structures as an Owner's representative, as well as providing Landscape Architecture design and documentation for components such as site furnishings and planting. It will be important for the engineering design team to work closely with NL for a seamless and successful project.

We also understand that the work must occur in coordination and with the approval of various township boards, including the Radnor Shade Tree Commission with regards to the removal and replacement of trees, as well as the Radnor Historical Society because of the presence of historical ruins and the nature of the project area. The design must be approved by the Township Parks and Recreation Board, and will require Land Development review and approval by the Planning Commission and Board of Commissioners, meeting the Radnor Township ordinance requirements.

Although the Board of Commissioners has approved the conceptual plan, we anticipate that some additional preliminary design will be required to confirm issues such as the main trail width, as well as the alignment and trail materials for the less formal paths, and coordinated design of the cross-country courses. We recognize that community and neighbor input will be important to many design decisions. The Township has indicated that the trails are to meet ADA requirements where required, and to the greatest extent feasible elsewhere, which will also require preliminary design analysis and decisions.

The Township has indicated that the plan should provide stormwater pollutant reduction credit for the recently submitted Radnor Township Pollution Reduction Plan (PRP), and should include stormwater management design as discussed in the NL Plan.

We recognize that Radnor is seeking “turnkey” design services that include all mapping, analysis, design documentation, coordination, cost-estimating, permitting/approvals, and bid documentation and support (including reviewing bids) to allow Radnor Township to move this project forward to construction. Required permits, as discussed later in the proposal, will range from PennDOT approvals for the trail, intersection crossings, and structures; to state approved minor stream and wetland crossings, to state/federal Joint Permit applications reviews for the two major bridge structures across Little Darby Creek. Although state and/or federal funding is not currently a part of this project, such funding may be sought in the future for construction.

### Brief Overview of Team, Qualifications, Roles, and Similar Projects

We have assembled a team of experienced design professionals to successfully provide turnkey design, permitting, and bidding services to Radnor Township and NL. Meliora Design is a civil-engineering firm located in Phoenixville, PA with a strong foundation in water resources engineering and sustainability. As we have grown, our services have expanded to include structural engineering. Meliora will serve as the Prime Contractor.

McMahon Associates is a 130-person firm founded in southeastern Pennsylvania and specializing exclusively in transportation planning and design. McMahon has extensive experience with projects similar to the Darby Paoli Multi-use trail that involve multi-use trail design, trail bridges and structures, ADA compliant pedestrian crossings, and permitting. Professional expertise for this project is based in McMahon’s Exton, Chester County office, which is located in West Whiteland Township.

Additionally, several team members are avid cyclists and runners who regularly use the Chester Valley Trail and Schuylkill River Trail for both transportation and recreation purposes and our team brings a passion for expanding the region’s trail network, protecting open space, and improving water quality. Meliora and McMahon also have a long working history together.

Meliora Design will serve as the Prime Contractor and design lead, working in close coordination with McMahon, who will provide the topographic survey for the entire project, as well as design and PennDOT permitting for the Darby Paoli Road trail, intersection improvements, and driveway entrance at Sawmill Field. Meliora will provide overall Project Management and design documentation of the “soft” trail segments and structures, including site structures, the parking area, and the two bridges across Little Darby Creek. Meliora will coordinate preparation for all Township and community meetings, will prepare Land Development documentation and submissions in accordance with Radnor SALDO and other ordinances, and will prepare all non-PennDOT permits including the Joint Permit Stream Encroachment with supporting H&H analyses, Post-Construction Stormwater and Erosion & Sediment Control NPDES, and general permits. Meliora will also provide stormwater management design for the entire project, including quantifying and maximizing PRP credits for Radnor Township. The specific work approach is discussed in more detail within our proposal.



Our team also includes several consultants available to provide services as needed to facilitate a “turnkey” design, including Schmid & Company for wetland delineation, ECS Mid-Atlantic for geotechnical investigations related to bridges and structures, and Cloud Gehshan for supporting wayfinding and signage if desired.

## Experience

Both Meliora and McMahon have a history of successfully performing services on similar comprehensive projects. For the Meadow Expansion at Longwood Gardens, Meliora provided layout, engineering, and permitting for the new trails, including the design and permitting of the new bridges and structures, and municipal approvals through three (3) municipalities. We strive to provide engineering documentation that is sensitive to place and context. We provided similar services for the porous asphalt paths through the Wister Garden at Tyler Arboretum, and we are currently working on the design of trails and entrances for the Schuylkill Environmental Education Center in Roxborough. Our experience also includes “urban” trails such as Woodland and Locust Walks at the University of Pennsylvania, stormwater improvements along the Schuylkill Trail in Philadelphia, and sidewalk/stormwater/utility improvements in the Borough of Kennett Square. For the Pittsburgh Parks Conservancy’s Schenley Park, Meliora led a design team that included McMahon Associates in the evaluation and preliminary design of a multi-user trail intended to address both transportation issues and stormwater problems, requiring extensive consensus building among conflicting users.

McMahon team members relevant experience includes the Paoli Pike Trail, the East Branch of the Brandywine Trail Bridge, the Chester Valley Trail and crossing improvements, the Sumneytown Pike Trail, and others. Additional information regarding roles and experience are included within our proposal.

## Project Manager and Contact Information

Marc B. Henderson, P.E. will serve as the designated Project Manager and Michele Adams, P.E. will serve as the responsible Principal. His email address is [March@Melioradesign.com](mailto:March@Melioradesign.com) and his mailing address is:

Marc B. Henderson, P.E.  
Meliora Design  
259 Morgan Street  
Phoenixville, PA 19460  
(610) 933-0123

## Firm’s Relationship with Radnor Township and Natural Lands

Meliora’s current relationship with Radnor Township and township officials and/or employees includes our working relationship as the Prime Contractor for the Radnor Township Pollution Reduction Plan (PRP), permit application, and associated related tasks. We have also previously provided consulting services to the Delaware Riverkeeper Network regarding the Concept Design for the West Wayne Preserve in Radnor (a park and stormwater design concept), and technical consulting for Radnor citizens related to stormwater management. We have provided design and permitting services for properties within Radnor Township (Chanticleer, St. David’s Episcopal Church, etc.) and have interacted with Radnor staff.

Meliora is currently a design team member for NL's Stroud Preserve Public Entrance Design, led by The Olin Studio landscape architects. That work effort is just beginning.

We understand that this work effort has an aggressive timeline, with a goal of completion in April 2018. We have included a detailed schedule, including our thoughts on the timeline required for approvals and permitting.

We are excited by the challenge that this work effort represents, and look forward to the opportunity to support Radnor Township and Natural Lands in bringing this multi-use trail system to implementation. We thank you for your consideration, and if you have any questions or concerns, we can be reached at 610-933-0123, or [MicheleA@Melioradesign.com](mailto:MicheleA@Melioradesign.com) and [MarchH@Melioradesign.com](mailto:MarchH@Melioradesign.com).

Sincerely yours,



Michele C. Adams, PE, LEED AP  
Principal



Marc B. Henderson, PE  
Project Manager

## **Section 2 – Profile of Team**

- Firm Experience
- Project Manager Office Address
- Roles and Resumes
- Subconsultants
- Subconsultant Office Addresses
- References
- Resumes
- Project Summaries



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## ***Firm Experience***

### **Meliora Design**

**Committed to Sustainability Through Thoughtful Design** Founded in 2007 with a focus on sustainable site design and water resources management, Meliora Design's capabilities have expanded to provide a wide array of services to our clients. An award-winning engineering firm, Meliora specializes in **civil, structural, and water resources engineering**. Our commitment to sustainability, collaboration, and innovation spans across all disciplines and projects. Meliora Design's experienced team of fifteen engineers, scientists and planners values an integrated design process for creative and cost-effective solutions. We strive to provide engineering documentation that is sensitive to place and context.

**A Mission-Driven Organization Devoted to Finding Solutions for a Sustainable Future.** Meliora Design's Mission is to create better relationships with our environment by developing engineering solutions that build respectfully and enhance our communities, protecting and restoring our natural resources. We are privileged to serve a wide range of clients including government agencies, universities, commercial developers, institutions, community organizations, and advocacy groups. Meliora Design is a registered Woman's Business Enterprise (WBE) in the City of Philadelphia as well as Delaware, Georgia, New Jersey, New York, Ohio, and Pennsylvania.

Meliora has a history of successfully performing services on similar comprehensive projects such as the Meadow Expansion at Longwood Gardens. Meliora provided layout, engineering, and permitting for the new trails, including the design and permitting of the new bridges and structures, and municipal approvals through three (3) municipalities.

We provided similar services for the porous asphalt paths through the Wister Garden at Tyler Arboretum, and we are currently working on the design of trails and entrances for the Schuylkill Environmental Education Center in Roxborough.

Our experience also includes "urban" trails such as Woodland and Locust Walks at the University of Pennsylvania, stormwater improvements along the Schuylkill Trail in Philadelphia, and sidewalk/stormwater/utility improvements in the Borough of Kennett Square.

For the Pittsburgh Parks Conservancy's Schenley Park, Meliora led a design team that included McMahon Associates in the evaluation and preliminary design of a multi-user trail intended to address both transportation issues and stormwater problems, requiring extensive consensus building among conflicting users.

### **McMahon Associates**

McMahon Associates, Inc. (McMahon) is a 130-person firm specializing exclusively in transportation planning and design. McMahon was founded in southeastern Pennsylvania and has documented success in helping our clients develop and implement a variety of transportation projects since 1976. With thirteen regional offices along the east coast, McMahon has the talent, ability, and expertise to address any transportation assignment from planning to design and construction. Our experience includes working closely with PennDOT, DVRPC, counties, municipalities, institutions, permitting agencies, and private developers on a broad range of transportation planning, traffic engineering, and design projects. McMahon is committed to providing sustainable transportation solutions that are cost-effective, environmentally sensitive, and supportive of healthy and vibrant communities. McMahon has delivered results that resolve our clients' transportation needs for today, tomorrow, and years to come.

McMahon has extensive experience with projects similar to the Darby Paoli Multi-use trail that involve multi-use trail design, trail bridges and structures, and ADA compliant pedestrian crossings. Professional expertise for this



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project is based in our Exton, Chester County office, which is located in West Whiteland Township. In addition, our topographic survey group and specialized traffic operations staff are located in our Fort Washington office. Key staff in McMahon's Exton office have direct experience on similar multi-use trail design projects and a variety of transportation improvement projects within the county. We offer in-depth knowledge of the necessary environmental permits and PennDOT approvals for this project. Additionally, several team members are avid cyclists and runners who regularly use the Chester Valley Trail and Schuylkill River Trail for both transportation and recreation purposes and we bring a passion for expanding the Circuit and area's trail network.

The relevant services we provide include, but are not limited to, the following:

- Comprehensive data collection programs and transportation surveys, as well as transportation network forecasts and modeling.
- Transportation planning studies ranging from corridor-, neighbor- and city-wide to regional studies, including improvements feasibility studies, transportation alternatives analysis, interchange justification studies, traffic/bicycle/pedestrian studies, transportation master plan development, and comprehensive transportation modeling.
- Traffic impact and parking studies for all types of developments, including recreational, institutional, residential, office, commercial, and mixed-use developments.
- Traffic operations analysis, including traffic signal system analysis and optimization; pavement markings, signing, and maintenance of traffic plans; and parking and accident analysis.
- Transportation engineering design services, including highway access and traffic signal permits; conceptual, preliminary, and final roadway designs; pedestrian, bicycle and trail design; streetscape and enhancement design; traffic calming; traffic signal design; development driveway access, circulation; parking layout design, and construction documents.
- Public involvement and consensus building, as well as agency (PennDOT, DVRPC, municipality), community, and private sector coordination/collaboration.

The McMahon Team has the ability to work with Radnor Township during the design process to successfully complete topographic survey, trail design, and permitting for the Darby Paoli Multi-use Trail as described in the Request for Proposals. The McMahon Team offers the following qualifications:

- Multi-disciplinary team of professional planners, engineers, bridge inspectors, landscape architects, and environmental specialists with a solid understanding of trail design projects.
- Experience on similar multi-use trail design projects, including work on segments of the Chester Valley Trail, and projects that involve ADA compliant pedestrian crossings, trail bridges and other structures, utility coordination, and environmental permitting.
- Knowledge of PennDOT's transportation program development and project delivery process and preparing Plans, Specifications and Estimate (PS&E) packages through PennDOT's ECMS for state and federally funded projects.
- Knowledge of necessary environmental permits, PennDOT Highway Occupancy Permit (HOP) and traffic signal permit processes and approvals for projects involving multi-use trails, bridges over state roadways, and ADA compliant crossings at unsignalized and signalized intersections.
- Reputation for providing responsive solutions and completing projects on-time, within budget, and with high quality deliverables.
- Passion for bicycle and pedestrian enhancement projects that benefit our transportation system, expand recreation opportunities, and enhance quality of life

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## **Additional Team members**

We have shown some additional resources on our team that could support Radnor Township and NL if their services are needed. We have included James A Schmid, PhD of Schmid & Co. to provide wetland delineation if it is added to our scope.

We have also included Robert Jost, PE of ECS Mid Atlantic to provide Geotechnical services (soil borings and evaluations) if it is added to our scope.

Lastly, we have included Virginia Gehshan, FSEGD of Cloud Gehshan Design to provide wayfinding and signage assistance if it is added to our scope.

## ***Project Manager Address***

Our proposed Project Manager for this project is Marc B Henderson, PE. Michele C Adams, Pe will serve as Project Principal. Both work in Meliora's Phoenixville office located at:

Meliora Design  
259 Morgan Street  
Phoenixville, PA 19460  
(610) 933-0123

## ***Roles and Resumes***

Following is a brief description of the roles and responsibilities of the design team members. An organization chart and full resumes and Project Summaries are included at the end of this section.

### **Meliora Design**

#### ***Michele C Adams, PE, Project Principal in Charge and QA/QC***

Michele will serve as the Principal in Charge and will oversee the QA/QC for the overall project. Currently Michele has been leading the efforts to complete Radnor Township's PRP plan, and she is familiar with Radnor's regulations and procedures. For over 30 years, Michele Adams' work has encompassed environmentally sensitive site design and sustainable water resources engineering. With a focus on sustainability and regenerative design, her work includes both planning and engineering design for cities, urban and suburban restoration projects, campuses, research facilities, commercial, industrial and residential installations, parks, recreation centers, public facilities, non-profit headquarters, and environmental education centers. In all her work, Michele seeks to combine sound engineering science with an understanding of natural systems.

#### ***Marc B Henderson, PE, Project Manager***

Marc will serve as the Project Manager will be the point of contact for all project related communications, and be responsible for overseeing and reviewing the preliminary engineering, final design, and construction documents. Marc is a Water Resources Engineer with 10 years of water resources and environmental engineering experience. His primary focus at Meliora is full site/civil design and project management for projects of all sizes. This includes low impact development, stormwater design, stormwater retrofits, utility service design, sanitary pump (lift) station design and permitting, stormwater and erosion and sediment control permitting, and general utilities coordination for site improvements. Beyond design work, Mr. Henderson performs professional review of design, permitting, and/or policy issues and regulations related to stormwater and erosion and sediment controls for land development, oil and gas or other related various environmental advocacy groups. In the past, he has provided engineering support and guidance to interdisciplinary project teams for multiple large-scale wetland restoration, flood control,



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and water supply projects throughout Northeast and Central Florida. His graduate research focused on streambank stability and erosion processes.

### **James W Adams, PE, Structures Lead**

Jim will be leading the structural efforts for the bridge crossings over Little Darby Creek, required boardwalks and miscellaneous bridges and structures. He has been delivering civil/structural engineering and design for over 32 years. This experience includes full civil engineering, structural engineering and analysis, site structural engineering and design (retaining walls, duct banks, utility structures), structural evaluations, cost estimating, rail systems design, catenary engineering, traction power engineering, construction management, and project management. Jim’s extensive experience includes working as a project principal and/or project manager on multi-team, multi-disciplined projects. He has participated in sustainable site and structural design; boardwalk design; design, analysis and rehabilitation of residential, commercial, and industrial, buildings; geotechnical investigations; and the design of deep and shallow foundations. He also has substantial experience in the design and analysis of steel, concrete and timber bridges.

### **Altje M Macy, EIT, Permitting and Stormwater**

Altje will be leading the permitting efforts for the Corp of Engineers and for Pennsylvania DEP. She is a Senior Water Resources Designer at Meliora Design with experience in civil engineering, water resources management, and environmental science and policy. Altje specializes in green stormwater infrastructure planning and design, using her foundation in environmental science and policy to aid in decision making for sustainable water management. She develops sustainable site designs using green infrastructure for small and large-scale projects throughout the country, and has served as the Project Manager for a number of projects, consistently meeting budget and schedule goals. She has extensive experience in water resources planning and design for parks, public spaces, and streetscapes, including public outreach and engagement, and has contributed to several manuals and publications for stormwater.

### **Ken Tomczuk, Landscape Architecture Coordination**

Ken will be acting as a liaison between the design team and NL to ensure that the Landscape Architecture elements are coordinated within the entire design package. Ken has success in coordinating with various stakeholder groups and project partners to build consensus. His experience as a landscape designer includes project management, design/build, construction documentation, conceptual design, facilitation of community design workshops, and data mapping.

### **McMahon Associates**

#### **Stephen Giampaolo, P.E., McMahon Project Manager**

Steve has 23 years of experience with state highway design, intersection design, streetscape design, sidewalk/pedestrian facility improvements, multi-use trail design, parking improvements and traffic calming for state and municipal roadways. Additionally, he has extensive experience with public involvement, conceptual design for transportation feasibility studies, modern roundabout design, traffic operations evaluation, and ADA design. He is experienced with managing projects through PennDOT’s Transportation Program Development and Project Delivery Process for federal and state funded projects, and PennDOT’s Highway Occupancy Permit Process for local funded transportation projects. Steve’s relevant design project experience includes serving as a project manager or technical advisor for the following projects:

#### **Christopher Seaman, P.E., CBSI, Structures – Darby Paoli Trail Section**

Chris has over 17 years of experience designing bridges, retaining walls, sound walls, and other transportation structures, including bus stop shelters and sign structures. Chris has also performed inspections and evaluations of existing bridge structures to identify potential repairs. Chris has experience with both County and municipal bridge replacement and rehabilitation projects. His relevant project experience includes designing pre-fabricated trail structures for the Sumneytown Pike Phase II—Reconstruction and Commodore Bicycle Trail projects.



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## **James (Jamie) Kouch, P.E., Trail Design and Darby Paoli Trail Lead**

Jamie will serve as Darby Paoli Trail Design lead with responsibility for the multi-use trail design, including ADA accessibility, constructability and all pedestrian and bicycle shared-use design elements. Jamie has extensive experience in all aspects of transportation engineering projects, including state highway design, intersection design, sidewalk/pedestrian facility improvements, multi-use trails, and streetscape design. Additionally, his experience includes public involvement, facilitating steering committee project meetings, and conceptual design for feasibility studies and master plans. Jamie also has an extensive background with environmental permitting, right-of-way acquisition, utility relocation coordination, preparation of project schedules and cost estimates, and preparation of Plans, Estimates, and Specifications (PS&E) packages. Jamie's relevant project experience includes his current work for Chester County on the Chester Valley Trail crossing improvements as part of PennDOT's U.S. 202 Section 320 project, and at S.R. 100 Pottstown Pike in Whiteland Township, as well as leading design for the Philadelphia Zoo Greenway, Swarthmore Roundabout, and Sycamore Street Streetscape improvement projects. Jamie is an avid cyclist and enjoys riding on the Chester Valley Trail and Schuylkill River Trail.

## **Natasha Manbeck, P.E., AICP, Engineering Support**

Natasha will provide Engineering Support and will be responsible for coordinating landscape architecture, historic features, and environmental features into the trail design through coordination with Radnor Township, and the public. Natasha brings 13 years of experience in transportation planning and engineering, which includes extensive experience with planning, evaluating feasibility, and designing bicycle and pedestrian projects in Pennsylvania, Washington DC, and California. In her prior role as Director of Transportation Services for the Chester County Planning Commission, she was responsible for programming federal and state transportation funds, managing multiple planning grant projects, providing technical assistance to municipalities, and coordinating with the public and numerous transportation agencies. In particular, Natasha was involved with resolving planning, funding, and design issues related to Phase I and II of the Chester Valley Trail. Natasha's relevant project experience includes serving as project manager for the Village Transportation Plan and serving as transportation planner for the Paoli Roadway Improvement Feasibility Study and West Vincent Multi-Modal Study.

## **Kyle Kessler, P.E., Survey and Utilities**

Kyle will serve as the survey and utilities lead and will also responsible for coordinating survey and right-of-way acquisition. Kyle has 8 years civil/highway engineering experience, including state highway, municipal roadway and transportation enhancement projects. His responsibilities involve horizontal and vertical design, pavement design, subsurface utility exploration coordination, utility relocation coordination and engineering and preparation of construction plans, specifications and cost estimate (PS&E packages). Kyle has considerable experience with utility relocation engineering, modern roundabout design and transportation projects with complex right-of-way acquisition. Kyle's relevant project experience includes Marshallton Streetscape and Traffic Calming and Swarthmore Roundabout.

## **Subconsultants**

Meliora Design, a full service civil and structural engineering firm, will serve as the Prime Contractor and design lead, working in close coordination with our subconsultant McMahon, who will provide the topographic survey for the entire project, as well as design and PennDOT permitting for the Darby Paoli Road trail, intersection improvements, and driveway entrance at Sawmill Field. Meliora will provide overall Project Management and design documentation of the "soft" trail segments and structures, including site structures, the parking area, and the two bridges across Little Darby Creek. Meliora will coordinate preparation for all Township and community meetings, will prepare Land Development documentation and submissions in accordance with Radnor SALDO and other ordinances, and will prepare all non-PennDOT permits including the Joint Permit Stream Encroachment with supporting H&H analyses, Post-Construction Stormwater and Erosion & Sediment Control NPDES, etc. Meliora will also provide stormwater management design for the entire project, including quantifying and maximizing PRP credits for Radnor Township. The specific work approach is discussed in more detail within our proposal.

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Our team also includes several consultants available to provide services as needed to facilitate a "turnkey" design, including Schmid & Company for wetland delineation, ECS Mid-Atlantic for geotechnical investigations related to bridges and structures, and Cloud Gehshan for supporting wayfinding and signage if desired.

### ***Subconsultant Addresses***

McMahon Associates  
840 Springdale Drive  
Exton, PA 19341  
(610) 594-9995

Schmid & Co Inc Consulting  
1201 Cedar Grove Rd  
Media, PA 19063  
(610) 356-1416

ECS Mid-Atlantic, LLC  
2 Executive Drive, Suite 11  
Moorestown, NJ 08057  
(609) 832-3910

Cloud Gehshan Associates  
400 Market St, Suite 300  
Philadelphia, PA 19106  
(215) 829-9414

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## References for Meliora Design

### **Project: Longwood Gardens**

Paul Redman, Director  
Longwood Gardens  
P.O. Box 501  
Kennett Square, PA 19348  
P: (610) 388-5246  
E: [director@longwoodgardens.org](mailto:director@longwoodgardens.org)

### **Project: Schuylkill Center Rain Garden**

Mike Weilbacher  
Executive Director  
The Schuylkill Center  
P: (215) 482-7300 x125  
E: [mike@schuylkillcenter.org](mailto:mike@schuylkillcenter.org)

### **Project: West Cypress Street Green Infrastructure Improvements**

Joseph C. Scalise  
Director of Public Works  
Borough of Kennett Square  
120 Marshall Street  
Kennett Square, PA  
P: (610) 444-6020  
E: [jscalise@kennettsq.org](mailto:jscalise@kennettsq.org)

### **Project: Various Pittsburgh**

Susan M. Rademacher, Hon. ASLA  
Parks Curator  
Pittsburgh Parks Conservancy  
45 South 23rd Street, Suite 101  
Pittsburgh, PA 15203-2120  
P: (412) 682-7275 x 212  
E: [srademacher@pittsburghparks.org](mailto:srademacher@pittsburghparks.org)



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## **McMAHON REFERENCES**

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### **East Central Avenue Multi-Use Trail Project**

Stephen Burgo, P.E., Tredyffrin Township Township Engineer  
1100 Duportail Road, Berwyn, PA 19312  
Tel: (610) 408-3616

Ryan Gallagher, Consultant Project Manager - DVRPC  
190 N. Independence Mall W, Philadelphia, PA 19106  
Tel: (215) 238-2881

### **SR 0100, Sec VET Village of Eagle Pedestrian Path Project**

Cary Vargo, Upper Uwchlan Township Manager  
140 Pottstown Pike, Chester Springs, PA 19425  
Tel: (610) 646-7008

Ryan Gallagher, Consultant Project Manager - DVRPC  
190 N. Independence Mall W, Philadelphia, PA 19106  
Tel: (215) 238-2881

### **Paoli Pike Trail Project**

Mark A. Gordon, CFM, Director of Code Enforcement / Zoning Officer  
For East Goshen Township  
1580 Paoli Pike, West Chester, PA 19380  
Tel: (610) 692-7171

### **Schenley Drive Green Street Project**

Erin Copeland, Senior Restoration Ecologist, Pittsburgh Parks Conservancy  
45 South 23rd Street, Suite 101, Pittsburgh, PA 15203  
Tel: (412) 682-7275

### **Chester Valley Trail Experience**

David T. Stauffer, RLA, ASLA, Capital Projects Coordinator for Chester County Department of  
Facilities & Parks  
313 W, Market Street, Suite 5402, West Chester, PA 19380  
Tel: (610) 344-6445



# ***Organizational Chart***

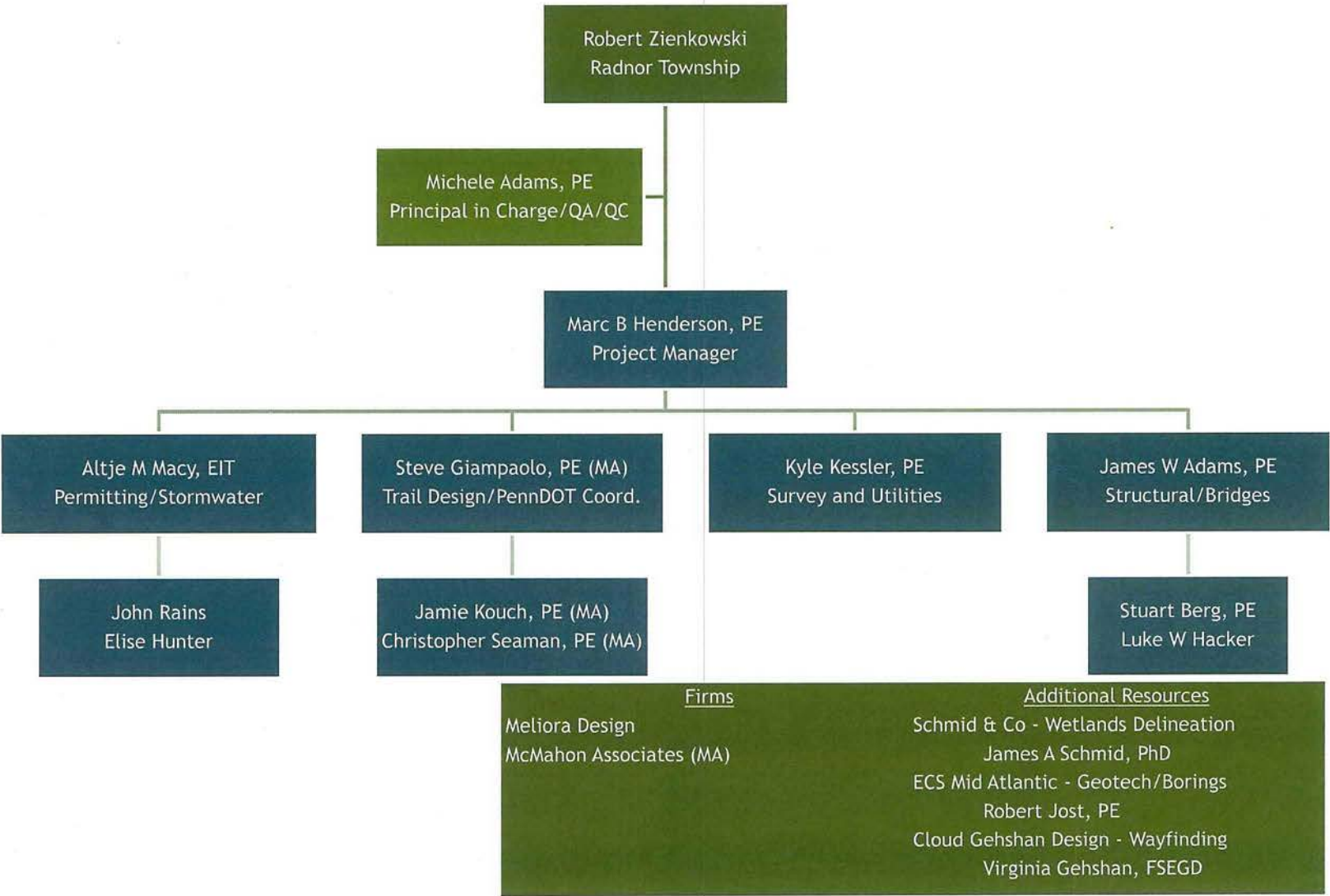
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Meliora Design - Organization Chart  
Darby Paoli Multi-use Trail



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# ***Meliora Resumes***

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## Michele C. W. Adams, PE, LEED AP, Principal in Charge, QA/QC

For over 30 years, Michele Adams' work has encompassed environmentally sensitive site design and sustainable water resources engineering. With a focus on sustainability and regenerative design, her work includes both planning and engineering design for cities, urban and suburban restoration projects, campuses, research facilities, commercial, industrial and residential installations, parks, recreation centers, public facilities, non-profit headquarters, and environmental education centers. In all her work, Michele seeks to combine sound engineering science with an understanding of natural systems.

Michele has been designing low impact development and green infrastructure projects for nearly three decades, with successful installations of rain gardens, porous pavements, green roofs, and restorative landscapes dating back to the mid-1980s. She has extensive built experience in virtually every type of "best management practice," from bioretention and streetscape landscape measures, to water harvesting and reuse, to retrofitting traditional detention basins in the suburban environment to promote infiltration and evapotranspiration. Many of her projects encompass a holistic approach to water management and ecological restoration, recognizing that water in all its forms is a resource, and that a system approach to site design is often the most sustainable and cost-effective design. She has provided engineering design for multiple LEED certified projects, including several LEED Platinum and SITES pilot projects.

Michele was one of the principal authors of the **Pennsylvania Stormwater Best Management Practices Manual** and the award-winning **NYC Department of Parks and Recreation High Performance Landscape Guidelines**, as well as several other stormwater and LID manuals throughout the country. She served on the U.S. Green Building Council's Technical Advisory Group for Sustainable Sites, working to develop the Rainwater Management credits for LEED V4, and serves on American Rivers Science and Technical Advisory Committee. In 2011, Michele co-authored with Donald Watson ***Design for Flooding: Architecture, Landscape, and Urban Design for Resilience to Climate Change*** (Wiley Publishing), which presents best practices and lessons to create buildings and communities that are more resilient in the face of climate change.

### Years of Experience: 30+

#### Areas of Expertise

- Water Resources Engineering, Planning, Policy Review and Recommendations
- Civil/Site Engineering
- Green Infrastructure Planning and Design
- Watershed Management Planning
- Integrated Resource Management Planning
- Sustainable Stormwater Planning and Design Analysis
- Site Design for LEED and SITES Criteria
- Sustainability and LID Manual Development
- Alternative Wastewater Systems
- Stream Daylighting and Restoration
- Water Balance Analysis
- Hydrologic and Hydraulic Modeling
- Water Quality Modeling and Monitoring
- Development Impact Review and Analysis
- Stormwater Plan Review
- Expert Testimony
- Regulatory Review and Comment

#### Education

- B.S., Civil Engineering, The Pennsylvania State University, University Park, PA, 1984
- Graduate Coursework, Water Resource Engineering, Villanova University, Villanova, PA, 1997-2001

#### Registrations

- Professional Engineer: DE, NY, MD, PA and VA
- LEED Accredited Professional

#### Affiliations

- U.S. Green Building Council, Sustainable Sites Technical Advisory Group, Stormwater Expert
- Member, American Rivers Science and Technical Advisory Committee
- Member, American Society of Civil Engineers,
- Environmental Water Resources Institute
- Member, American Water Resources Association

#### Guest Lecturer

Drexel University, Pennsylvania State University, Philadelphia University, Temple University, and University of Pennsylvania

**Publications:** Available upon request



# MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

## Marc B. Henderson, PE, Project Manager

Mr. Henderson is a Project Manager and Water Resources Engineer with 10 years of water resources and environmental engineering experience. His primary focus at Meliora is full site/civil design and project management for projects of all sizes. This includes low impact development, stormwater design, stormwater retrofits, utility service design, sanitary pump (lift) station design and permitting, stormwater and erosion and sediment control permitting, and general utilities coordination for site improvements. Beyond design work, Mr. Henderson performs professional review of design, permitting, and/or policy issues and regulations related to stormwater and erosion and sediment controls for land development, oil and gas or other related various environmental advocacy groups.

In the past, he has provided engineering support and guidance to interdisciplinary project teams for multiple large-scale wetland restoration, flood control, and water supply projects throughout Northeast and Central Florida. His graduate research focused on streambank stability and erosion processes.

### Relevant Experience

#### **Longwood Gardens, Meadow Expansion, Kennett Square, PA**

— Provided hydrologic and hydraulic analysis for several pedestrian foot bridges during the expansion of the Longwood Meadow. Analysis evaluated the placement of both existing and proposed bridges within the Longwood property for Ch. 105 permitting purposes.

#### **Upper Merion Township, Community Recreation Center, King of Prussia, PA**

— Provided site/civil services for a repurposed and expanded building and site improvement project that included major building upgrades; accessibility improvements for vehicles, pedestrians, and bicycles were a priority along with stormwater management improvements in the form of a 137-car pervious pavement parking lot. Permitting included NPDES approvals and a General Permit through PADEP.

#### **Erdenheim Farm Stormwater Consultation Services, Lafayette Hill, PA**

— Consulting services for stormwater issues impacting Erdenheim Farm. These issues include review of Whitemarsh Township stormwater ordinances, design plan review of nearby proposed development, and provide technical analysis and comment for client presentation at various municipal hearings.

#### **Stony Run Parking Lot Retrofit, Baltimore City, MD**

— Design of a parking lot stormwater retrofit to reduce runoff volume and improve runoff quality entering Stony Run from adjacent parking lots. Design utilizes a series of small landscape infiltration practices to infiltrate runoff volume and prevent erosion of an existing multi-use trail.

**Years of Experience:** 10

### Areas of Expertise

- Water Resource Management
- Civil/Site Engineering
- Green Infrastructure Design
- Stormwater Design & Permitting
- Utility Plans (Water Supply, Sewer)
- Site Layout (Pavement, Parking, Grading)
- Erosion & Sediment Control
- Construction Administration
- Hydrologic & Hydraulic Modeling
- Water Quality Modeling & Monitoring
- Sustainability & LID Manual Development
- Engineering Analysis & Reports
- Development Impact Review & Analysis
- Stormwater Plan Review

### Education

- M.S., Biological Systems Engineering, Virginia Tech, Blacksburg, VA, 2006
- B.S., Agricultural and Biological Engineering, University of Florida, Gainesville, FL, 2003

### Registrations

- Professional Engineer in PA, DE, NJ, MD, NC, FL, GA

### Affiliations

- Member, American Society of Civil Engineers

### Publications

- Available upon request



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## James W. Adams, PE Civil/Structural Engineer

Mr. Adams has been delivering civil/structural engineering and design for over 32 years. This experience includes full civil engineering, structural engineering and analysis, site structural engineering and design (retaining walls, duct banks, utility structures), structural evaluations, cost estimating, rail systems design, catenary engineering, traction power engineering, construction management, and project management. Jim's extensive experience includes working as a project principal and/or project manager on multi-team, multi-disciplined projects.

He has participated in sustainable site and structural design; boardwalk design; design, analysis and rehabilitation of residential, commercial, and industrial, buildings; geotechnical investigations; and the design of deep and shallow foundations. In addition, he has substantial experience in the design and analysis of steel and concrete bridges, surveying, design and layout of catenary systems (including light rail, commuter rail and heavy rail), and the design and analysis of railroad catenary, feeder, and high voltage support structures.

### Relevant Experience

**Longwood Gardens, Kennett Square, PA** - Structural engineer for three timber and steel bridges and several thousand feet elevated boardwalk. The bridges are a concrete barrel arch, a heavy timber tied arch/truss and a steel multi stringer bridge. All of the structural work was designed and staged to avoid wetland impacts and mitigation.

**Southeastern Public Transportation Authority (SEPTA), Philadelphia, PA - Media Elwyn Line Viaducts** - Structural engineer providing plans and specifications for structural repairs to the existing circa 1890 viaduct over Cobbs Creek. Repairs included: back wall replacement, rivet replacement, bearing replacements, concrete repair, lacing replacement, girder jacking under live load, foundation protection and construction related services. All repairs were/are to be completed during weekend outages while the line is kept in service.

**Bridge Street Retaining Wall, Phoenixville, PA** - Structural engineering design of a geo grid retaining wall and support of the civil design for a parking lot expansion within the Borough of Phoenixville.

**Temple University, Philadelphia, PA** Various structural and site projects including: **Edberg-Olson Hall** - A new rooftop Video Nest structure. The existing aluminum structure was replaced with a galvanized steel structure utilizing existing connection points. Existing framing was analyzed for the new loads and for conformance with the International Building Code. **Annenberg Hall** - A new masonry screen and retaining wall including automatic gates, new paving, sidewalks and planting beds. **Campus Bike Shelters** - Site/civil and structural design for four new bike shelters on Temple University's campus.

**Years of Experience:** 32

### Areas of Expertise

- Structural Engineering
- Site Structural and Civil Engineering
- Cost Estimating
- Value Engineering
- Duct Bank and Manholes
- Low- to Mid-Rise Buildings
- Highway and Bridge Structures
- Railroad Electrification

### Education

- Master of Engineering, Civil/Structural Engineering, The Pennsylvania State University, University Park, PA, 1999
- B.S., Civil Engineering, The Pennsylvania State University, University Park, PA, 1983

### Registrations

- Professional Engineer in CT, DC, DE, MD, MN, NJ, NY, PA, and TN

### Affiliations

- Member, American Concrete Institute
- Member, American Society of Civil Engineers
- Member, American Railway Engineering and Maintenance-of-Way Association, Committees 17 & 33



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## Altje M. Macy, EIT, LEED AP Senior Water Resources Designer/Permitting

Ms. Macy is a Senior Water Resources Designer at Meliora Design with experience in civil engineering, water resources management, and environmental science and policy. Altje specializes in green stormwater infrastructure planning and design, using her foundation in environmental science and policy to aid in decision making for sustainable water management. She develops sustainable site designs using green infrastructure for small and large-scale projects throughout the country, and has served as the Project Manager for a number of projects, consistently meeting budget and schedule goals. She has extensive experience in water resources planning and design for parks, public spaces, and streetscapes, including public outreach and engagement, and has contributed to several manuals and publications for stormwater.

### Relevant Experience

**Longwood Gardens Stormwater Analysis and Design, Kennett Square, PA** — Conducted stormwater site analysis for a large portion of the Longwood Gardens property to identify stormwater opportunity areas and repair erosion issues. Designed green stormwater infrastructure for areas identified in the stormwater analysis, and produced a Stormwater Analysis and Recommendations report. Coordinated township, county, state, and federal permitting.

**Mantua Greenway, Philadelphia, PA** — Integrated design of stormwater management systems with street and public amenity improvements along a highly used corridor in a Philadelphia Promise Zone neighborhood. New community spaces will make stormwater management visible and accessible, providing beautification and educational opportunities.

**West Cypress Street Gateway, Kennett Square, PA** — Design and construction oversight for the renovation of a major street corridor in Kennett Borough. The renovation of five new blocks connects and encourages new development to the main commercial corridor in downtown Kennett Square. The design incorporates stormwater management with new porous pavers that irrigate new street trees. It also includes a traffic calming island, numerous ADA ramps, and a new street surface.

**Tyler Arboretum Trail Design, Philadelphia, PA** — Design of accessible, porous path trail system through the wooded rhododendron area, joining various plant exhibits within one of the oldest arboreta in the region.

**Years of Experience:** 10

### Areas of Expertise

- Water Resource Management
- Environmental Science and Policy
- Regenerative Design
- Green Infrastructure Planning and Design
- Stormwater Design and Permitting
- Stormwater Master Planning for Campuses
- Sustainability and LID Manual Development
- Rainwater Collection and Reuse
- Sustainable Stormwater Planning and Design Analysis
- Site Design for LEED and SITES Criteria
- Site Layout (Pavement, Parking, Grading)
- Erosion and Sediment Control
- Soil Evaluation and Infiltration Testing
- Construction Administration
- Stormwater Billing Credit Evaluation
- Geographic Information Systems

### Education

- M.S., Environmental Policy, Bard College, Annandale-on-Hudson, NY, 2008
- B.S., Environmental Science, Hawai'i Pacific University, Honolulu, HI, 2004

### Registrations

- LEED Accredited Professional
- Engineer-in-Training, Delaware, 2014

### Affiliations

- Member, Pennsylvania Association of Environmental Professionals (PAEP)

### Recent Presentations

- Available upon request



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## Stuart Berg, PE, Civil/Structural Engineer

Stuart focuses on full site/civil design and is adept at modeling designs with multiple software applications. Prior to joining Meliora, he provided engineering and consulting services on green roof projects throughout the country, and provided civil engineering design on residential, institutional, and commercial land development projects throughout the Hawaiian Islands. Stuart is adept at coordinating permitting requirements in Philadelphia and elsewhere to meet project schedules and budgets, including Philadelphia Water Department, Streets Department, and Planning approvals.

### Relevant Experience

**University City Science Center, Innovation Plaza, Philadelphia, PA** — Creation of a new student commons area from a former city street. Design included art installations, upgraded lighting, park benches and moveable furniture, a porous paver stormwater system, utilities, and ADA ramps. Scope included permitting approvals from Philadelphia Streets and Water Departments as well as PennDOT.

**Temple University, Philadelphia, PA** Various structural and site projects including: **Broad and Norris Campus Park** — Permitting and approvals for a campus park. **Campus Bike Shelters** — Site/civil and structural design for four new bike shelters. **Wachman Hall Back of House Improvements** — Site/civil and structural design a loading dock rehabilitation. **Old Medical School Landscape Improvements** — Provided project management and site/civil design for a new park at the location of a demolished building. The design included asphalt walkways, new plantings, fence and screen wall, and foundations for lightpoles and other site furniture items.

**Department of Public Property, Bridesburg & Fishtown Pools, Philadelphia, PA** - Structural Design for a new pool support building, site walls, fence, and steel pergola for two city pools in Northern Philadelphia. Site/Civil design included site layout and utility design. Bid documents at Bridesburg Pool included design alternatives allowing the project to move forward without exceeding the allotted construction budget.

**SEPTA, Traction Power Substation Rehabilitation (Various Projects), Philadelphia Area, PA** — Currently providing structural engineering services for the rehabilitation of 16 electrical substation facilities. Designs include building structural retrofits to accommodate new equipment and/or current egress/OSHA requirements, building additions, and new equipment supports.

**SEPTA, 30<sup>th</sup> to Kay Overhead Catenary Structure Replacement Project, Philadelphia, PA** — Currently providing civil and site structural engineering services to support a major rehabilitation of SEPTA's primary train storage yard. Inspected and documented rehabilitation of over 40 retaining walls.

### Years of Experience: 9

### Areas of Expertise

- Water Resources Engineering
- Civil/Site Engineering
- Green Infrastructure Design
- Stormwater Design and Permitting
- Utility Design and Permitting  
(Water Supply, Sewer, Pump Station)
- Site Layout (Pavement, Parking, Grading)
- Erosion and Sediment Control
- Construction Administration
- Hydrologic and Hydraulic Modeling
- Water Quality Modeling
- Engineering Analysis and Reports
- AutoCAD Civil3D

### Education

- M.S., Environmental Science, Drexel University, Philadelphia, PA, 2011
- B.S., Civil Engineering, Pennsylvania State University, University Park, PA, 2008

### Registrations

- Member, American Society of Civil Engineers

### Publications

- Miller, C., Weeks, K, Bass, B. Berghage, R. Berg, S. 2010. *Stormwater Policy As A Green Roof (Dis)Incentive For Retail Developers*. Cities Alive 8th Annual Green Roof and Wall Conference, Vancouver.
- Miller et al., 2011. *The Benefits and Challenges of Green Roofs on Public and Commercial Buildings: A report of the United States General Services Administration*.
- Weeks et al., 2013. *Green Roof Performance: A cost-benefit analysis based on Walmart's Chicago Store*.



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## Ken Tomczuk, Landscape Architecture Coordination

Ken is a landscape designer focusing in public interest design and community engagement, empowering stakeholders to inform the design process. His experience includes project management, design/build, construction documentation, conceptual design, facilitation of community design workshops, and data mapping.

Prior to working in landscape design, Ken worked in government contracting for almost 10 years, shaping strategic business arrangements, performing cost analyses and market research, and monitoring legal, ethical, and environmental contract considerations.

### Relevant Experience

**Wissahickon Valley Watershed Association, Cedarbrook Passage, Blue Bell, PA** — Master planning of the Cedarbrook Passage portion of the Green Ribbon Trail, with consideration to the relationship between natural and built environments. This project received an Honor Award from the Pennsylvania-Delaware Chapter of ASLA in 2014

**Tookany/Tacony-Frankford Creek Watershed Partnership, Ethel M. Jordan Memorial Park, Abington, PA** — Illustrative and planting plans for a community park with various habitats, such as creekside buffer and floodplain forest with sub-canopy

**Southern California Association of Governments, GoHuman Campaign, Various Cities, Southern CA** — Design and implementation of multi-modal transportation activations, which built consensus and informed public works projects by allowing stakeholders to experience design interventions of walking trails, biking lanes, driving lanes, and signage in real-time.

**Years of Experience:** 2

### Areas of Expertise

- Public Interest Design
- Community Engagement
- Participatory Design
- Ecological Restoration
- Tactical Urbanism

### Education

- M.L.A., Landscape Architecture, Temple University, Philadelphia, PA, 2015
- B.S., Business Administration, Seton Hall University, South Orange, NJ, 2006

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# ***McMahon Resumes***

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## **Stephen C. Giampaolo, P.E.**

Project Manager

**Stephen Giampaolo** has 22 years civil/transportation engineering experience. He is experienced with PennDOT's transportation engineering project development process for highway projects, Transportation Alternative Projects (TAP) or Transportation Enhancement (TE) projects, as well as PennDOT's highway occupancy permit process for access design and municipal intersections. These transportation alternative/enhancement projects included sidewalk/pedestrian facility improvements, trail design, streetscape design, parking improvements and traffic calming for state and municipal roadways as it relates to downtown or local village revitalization and safe routes to schools. Mr. Giampaolo has considerable experience working with special project steering committees, governmental advisory groups, state DOT's, state and county environmental agencies and several municipal, county and private clients to facilitate project completion. He has also conducted numerous public presentations explaining project designs, impact, cost and construction issues to the local community.

### **Professional Qualifications**

#### **Education:**

Master of Science, Civil Engineering,  
Drexel University, 1999

Bachelor of Science, Civil Engineering,  
Drexel University, 1994

**Registrations:** Professional Engineer  
in PA, NJ, DE

**Affiliations:** American Society of  
Highway Engineers

### **Representative Projects**

East Central Avenue Multi-Use Trail, Tredyffrin Township, Chester County, PA

**Project Manager:** Responsible for the preliminary engineering and final design of the \$1.1 million dollar Transportation Alternative Project included the design of a 2,000 LF 8 foot wide multi-use trail including ADA compliant ramps, mid-block pedestrian crossings, and storm water infiltration features. Responsible for project management, budget and overseeing all technical aspects involving geometric and drainage design, right-of-way and utility coordination during preliminary engineering and final design. Responsible for public presentations, managing sub-consultants responsible for environmental studies (CEE Document), preparation of safety review, right of way and utility clearances, traffic control plans, pavement marking plans, NPDES permit, erosion and sediment control plans and submission of the PS&E package through PennDOT's Engineering and Construction Management System (ECMS).

SR 0100, Sec. VET Village of Eagle Pedestrian Path Upper Uwchlan Township, Chester County, PA

**Project Manager:** Responsible for the preliminary engineering and final design of the \$500,000 dollar Transportation Alternative Project included the design of a 1,500 LF 6 foot wide pedestrian trail including ADA compliant ramps, traffic signal modifications and storm water infiltration features. Responsible for project management, budget and overseeing all technical aspects involving geometric and drainage design, right-of-way and utility coordination during preliminary engineering and final design. Responsible for public presentations, managing sub-consultants responsible for environmental studies (CEE Document), preparation of safety review, right of way and utility clearances, traffic control plans, pavement marking plans, NPDES permit, erosion and sediment control plans and submission of the PS&E package through PennDOT's Engineering and Construction Management System (ECMS).

Schenley Drive Green Street Improvement Project, City of Pittsburgh, PA

**Project Manager:** This project included evaluating the alternatives for transforming a 4,000 foot stretch of Schenley Drive into a more bicycle/pedestrian friendly road including traffic calming and green storm water features. The alternatives evaluation process involved an extensive community outreach program. Preliminary engineering plans were prepared for the proposed improvements. Responsible for project management, public presentations, alternative concept design, preliminary engineering design and plan preparation involving off-road pedestrian trail, bike lanes, on-street parking, traffic calming at intersections including pedestrian crosswalks, mid-block crossings and roadside safety features.



## Stephen C. Giampaolo, P.E.

Project Manager

Greenway Intermodal Transportation Improvements, Philadelphia, PA

**Technical Adviser:** This estimated \$1.2 million dollar construction project consisted of the design of approximately 4,000 linear feet of a 10 foot wide multi-use trail from Mantua Avenue to Fairmount Park. The construction of this trail is the missing link of the current West Bank Greenway Facility which originates from Powelton Avenue. Provided senior technical support for the preparation of the erosion and sediment control plans in accordance with the Philadelphia Water Department's Storm water Management guidelines for Storm water Management, the Safety Review submission and the construction plans, specifications, and estimate (PS&E) package.

Brandywine Trail Transportation Enhancement Project, West Bradford Township, Chester County, PA

**Technical Adviser:** Responsible for the quality control and quality assurance of the overall design, preparation of plans and specifications and permit application submissions for the Brandywine Trail over Brandywine Creek steel beam bridge. Provided senior technical support for the submission of the PS&E package through PennDOT's Engineering and Construction Management System (ECMS).

SR 0162, Section WBT – Marshallton Streetscape and Traffic Calming Project, West Bradford Township, Chester County, PA

**Project Manager:** Responsible for the preliminary engineering and final design of the \$2 million dollar SMART Transportation project funded through the Pennsylvania Community Transportation Initiative (PCTI). Worked with a project team, that included sub-consultants, PennDOT and a Citizens Group in the development of sidewalk, "shared the road" cross section and traffic calming alternatives for the Historic District. Responsible for project management, budget and overseeing all technical aspects involving geometric and drainage design, right-of-way and utility coordination during preliminary engineering and final design. Prepared the safety review, environmental (CEE), right of way and utility clearances, post construction storm water management design, NPDES and General DEP permitting, erosion and sediment control plans and submission of the PS&E package through PennDOT's Engineering and Construction Management System (ECMS).

SR 0252 Providence Road, Section RTT, Upper Providence Township, Delaware County, PA

**Project Manager:** Responsible for the preliminary engineering and final design of this estimated \$5.0 million dollar urban arterial highway project included the widening of 3,000 linear feet of highway from a two lane cross section to a five lane cross-section. The project included coordination with the relocation of a historic tavern, five signalized intersections and the realignment of Rose Tree Road. Responsible for project management, budget and overseeing all technical aspects involving highway geometric and drainage design, post construction storm water management design, NPDES permit, erosion and sediment control plans, right-of-way acquisition plans and utility coordination during preliminary engineering and final design. Also responsible for preparation of safety review, design field view, and PS&E submissions and managing sub-consultants responsible for survey, geotechnical and environmental studies (CEE).

Sumneytown Pike, Phase II Reconstruction Project, Upper Gwynedd Township, Montgomery County, PA

**Project Manager:** Responsible for the final design of this \$7.0 million dollar municipal arterial roadway reconstruction project which included the design of 5,400 linear feet of highway widening and reconstruction for a four to five lane "shared the road" cross section, four signalized intersections, new pedestrian bridge, ADA compliant sidewalk system and curb ramps, installation of new highway drainage, new water main installation and extensive utility relocations (gas main, electrical multi conduit duct bank, sanitary sewer and utility poles). Responsible for project management, budget, environmental agency coordination and overseeing all technical aspects involving roadway geometric and drainage design, hydrologic/hydraulic design of culverts, right-of-way and utility coordination/relocation design and construction observation. Responsible for preparation of construction plans, specifications and bid documents, right of way acquisition plans and legal descriptions, erosion and sediment control and post construction storm water management plans, preparation of NPDES, Joint Permit and DEP General Permit applications and approval.



## **Christopher G. Seaman, P.E., CBSI**

### **Structures**

Mr. Seaman, P.E., CBSI has experience in the design of both pre-stressed concrete and steel bridges since 1999. His responsibilities have included the superstructure design, substructure design, and seismic design of both multiple and single span bridges throughout Pennsylvania. Mr. Seaman also has extensive experience in both the layout and design of both retaining walls and sound walls. Additional experience includes NBIS bridge inspections, sign inspections, sound wall & retaining wall inspections and shop drawing review.

### **Professional Qualifications**

**Education:** Master of Science, Civil/Structural Engineering, Villanova University, 2007

Bachelor of Science, Civil/Structural Engineering, Villanova University, 1999

**Continuing Education:** Amtrak Safety Training

**Registrations:** Professional Engineer in PA, NJ, MD, VA, FL

Certified Bridge Safety Inspector

**Affiliations:** American Society of Civil Engineers, Member

### **Representative Projects**

Villanova Pedestrian Bridge and Relocated Church Walk Access, Villanova University, Delaware County, PA

**Project Manager:** Responsible for preparing the TS&L and Final Design for the pedestrian bridge structure which consists of 7 components including a main span over Lancaster Avenue, three (3) secondary spans through the existing parking lot on the south side of SR 0030, two retaining structures on both sides of the main span, a middle pavilion with an elevator to accommodate non-ambulatory access to the top of the structure, a southern pavilion and a two span structure connecting to the SEPTA high speed line.

Brandywine Trail over East Branch of Brandywine Creek, East Brandywine Township, Chester County, PA

**Bridge Project Engineer:** Engineer responsible for the design of the replacement of a 60'-0" single-span bridge that carries a pedestrian trail (Brandywine Trail) over the East Branch of Brandywine Creek. The typical trail section includes a 10 foot wide trail with 1 foot shoulders on each side. The proposed design consisted of four steel I-beams, timber deck, timber railing and protective fencing utilizing PennDOT's BLC Standards.

Chestnut Street Bridge Replacement, Borough of Downingtown, Chester County PA

**Bridge Project Engineer:** Engineer responsible for the design of a 170'-0" long, 45'-0" wide three span structure over Amtrak and Norfolk Southern Railroads. The superstructure consists of a single span of prestressed adjacent box beams along with 2 spans of spread box beams supported on MSE abutments and hammerhead piers. The project required close coordination with both railroads to meet their design specifications and construction requirements.

Henry Woods Bridge Replacement, PennDOT District 5-0

**Bridge Project Engineer:** Engineer responsible for the design of an 82'-0" long single span prestressed concrete bridge. The bridge was 31'-6 1/2" wide and the substructures were skewed 80 degrees. The design consisted of five prestressed concrete box beams and two full height concrete cantilever abutments on spread footings. The design was accomplished using PennDOT's BRADD program.

**S.R. 0415, Sec. 303 over Toby Creek,** PennDOT District 4-0, Luzerne County, PA

**Project Manager:** As structural project manager, responsible for the preliminary and final design for a cast-in-place culvert wingwall replacement as part of an estimated \$3.5 million dollar "Dallas 5-Leg" intersection improvement project. The project tasks include environmental studies/clearance, utility coordination, preliminary engineering, final design, post construction storm water management design, permitting and preparation of construction plans, specifications, and estimate (PS&E package).



## James J. Kouch, P.E.

### Trail Design Lead

Jamie Kouch has 14 years civil/transportation engineering experience, including state highway, municipal roadway and transportation enhancement projects. The transportation enhancement projects include sidewalk/pedestrian facility improvements, trail design, streetscape design, roundabout design, parking improvements, bicycle facilities and traffic calming. Mr. Kouch's technical expertise includes all aspects of highway/roadway/intersection design, pavement evaluation and design, hydrologic/hydraulic design of culverts and storm sewers, design of post construction storm water management facilities, erosion and sediment control plans, environmental permitting, utility coordination, traffic control/detour plans, preparation of construction plans, specifications and estimates, and construction management. He has experience working with project steering committees, advisory groups, state DOT's, state and county environmental agencies and numerous municipal, county and private clients to streamline project completion. Mr. Kouch has also been involved with public outreach and presentations explaining transportation designs, impact, cost and construction issues to the local community.

#### Professional Qualifications

**Education:** Master of Science, Civil Engineering, Drexel University, 2014  
Bachelor of Science, Civil Engineering, Drexel University, 2003

**Registrations:** Professional Engineer in PA

**Affiliations:** American Society of Highway Engineers

American Society of Civil Engineers  
Drexel College of Engineering Alumni Association (COEAA)  
Bicycle Coalition of Greater Philadelphia

## Representative Projects

**Paoli Road Improvement Feasibility Study and Public Involvement Project, Tredyffrin Township, Chester County, PA**  
**Project Manager:** Responsible for the overall project management of the study and lead engineer for the development of the conceptual design alternatives for the study. The conceptual design alternatives were prepared for a one mile section of Route 30 Lancaster Avenue and the adjacent roadway network utilizing "Complete Street" and "Green Street" techniques, traffic calming, bicyclists and pedestrians accommodations and streetscape enhancements. The study included an extensive four phase public outreach program to engage the community and to guide and focus the technical aspects of the study. Conceptual design elements included conventional and roundabout intersection design improvements, traffic calming and multi-modal enhancements.

**Swarthmore Roundabout Intersection Improvement Project, Swarthmore Borough, Delaware County, PA**

**Project Manager:** This intersection improvement project was associated with Swarthmore College's plans to develop a mixed-use development consisting of a small hotel, restaurant, and college bookstore and is currently in final design. It is proposed to relocate existing Fieldhouse Lane to intersect SR 0320, opposite Rutgers Avenue. At the resulting intersection of SR 0320, Rutgers Avenue, Station Square East, and relocated Fieldhouse Lane, it is proposed to construct a single-lane roundabout. Additionally, it is proposed to realign the Station Square West approach to intersect SR 0320 north of the roundabout, permitting right-turn exiting traffic only. The proposed improvements are anticipated to improve the overall safety and operation of the intersection and increase multimodal accessibility to the college, the SEPTA Media/Elwyn Regional Rail Station and Swarthmore Borough's commercial business district. Responsible for project management, budget, property owner coordination, and overseeing all technical aspects involving geometric design, drainage design and utility coordination.

**Kennett Township Trail Feasibility Analysis, Kennett Township, Chester County, PA**

**Project Manager:** This project included evaluating the feasibility of several trail segments and connections along the Red Clay Greenway, a multimodal trail system for pedestrians and bicyclists in the Red Clay Valley within Kennett Township. The Red Clay Greenway trail is a major public-private partnership with the overall scope of completing a 12-mile multimodal backbone that loops around the Township, with spur connections to area neighborhoods. Responsible for project management, engineering concept design, feasibility analysis, cost estimates and grant funding application assistance. Coordinated all efforts with Kennett Township and The Land Conservancy for Southern Chester County, which owns a considerable amount of the property along the proposed trails.



## **Natasha G. Manbeck, P.E., AICP**

### **Engineering Support**

Ms. Manbeck has 13 years of experience in planning and engineering with a focus on coordinating land use and transportation systems. Ms. Manbeck's broad background includes developing local and regional transportation plans, preparing successful grant applications, managing multi-modal improvement projects, and facilitating public meetings. In her prior role as Director of Transportation Services for the Chester County Planning Commission, she was responsible for programming federal and state transportation funds, managing multiple planning grant projects, providing technical assistance to municipalities, and coordinating with the public and numerous transportation agencies.

### **Professional Qualifications**

#### **Education:**

Master of City Planning, University of California, Berkeley, 2004

Master of Science, Civil Engineering, University of California, Berkeley, 2004

Bachelor of Science, Civil Engineering, Georgia Institute of Technology, 2002

#### **Registrations:**

Professional Engineer in PA

American Institute of Certified Planners

#### **Affiliations:**

American Planning Association, Member  
Greater Reading Chamber of Commerce—  
Transportation Committee, Member  
Greater Reading Chamber of Commerce—Business  
and Community Advocacy Council, Member  
Institute of Transportation Engineers, Member  
Susquehanna Regional Transportation Partnership,  
Board Alternate

#### **Publication:**

Robert Cervero with G. B. Arrington, Janet Smith-Heimer, Robert Dunphy, et al. *Transit Oriented Development in the United States: Experiences, Challenges, and Prospects*. Transit Cooperative Research

Paoli Pike Trail Feasibility Study and Master Plan, East Goshen Township, PA

**Project Manager:** Led development of a multi-use trail feasibility study and master plan along a 2.7 mile section of Paoli Pike in East Goshen Township. Responsible for evaluation of potential trail alignments, development of a conceptual trail plan, and development of a detailed implementation plan and funding strategy. Facilitated three trail committee meetings, three public meetings, a property and business owners meeting, and a technical coordination meeting with PennDOT District 6-0 and the Chester County Planning Commission.

Village Transportation Plan, Upper Uwchlan Township, PA

**Project Manager:** Developed conceptual engineering plans for sidewalk and trail connections, streetscape enhancements, intersection upgrades, traffic calming measures, and access management improvements along Pottstown Pike (SR 100) within the Village of Eagle. Documented existing conditions, recommended design guidelines, performed traffic analysis, and evaluated a range of improvement alternatives. Facilitated meetings with the Township's Village Concept Committee, PennDOT, PA Turnpike, Chester County Planning Commission, and property and business owners. Assisted with a successful grant application resulting in the award of over \$560,000 in federal funds for construction of three priority sidewalk and trail connections identified in the plan.

Route 30 Multimodal Transportation Study, Six Municipalities in Western Chester County, PA

**Project Manager:** Leading development of a coordinated transportation and land use study for six municipalities in western Chester County. The study is focused improvements along the Business Route 30 Corridor and at six interchanges along the US 30 Bypass between US 322 and SR 10, as well as evaluating regional trail connections. Responsible for developing a corridor vision, concept plans for priority transportation improvement projects, and facilitating stakeholder and public involvement.

Patriots Path Concept Plan and Funding Strategy, East Whiteland Township, PA

**Transportation Planner:** Identified design options and a conceptual plan for a barrier-separated pedestrian facility along Lancaster Avenue (US 30), including a segment under an existing Norfolk Southern railroad overpass. Responsible for coordinating review and revisions to the concept plan with PennDOT District 6-0, Chester County Planning Commission, and SEPTA. Identified grant funding opportunities for design and construction.

# ***Meliora Relevant Projects***



# MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

## Longwood Gardens, Kennett Square, PA Meadow Gardens Expansion



*The Earth Bridge*

**Date:** 2011-2014

### Services Provided

- Sustainable Site Design
- Stormwater Management
- Ecological Restoration
- Hydrologic and Hydraulic Analysis
- Civil Engineering
- Utility Design (Water, Sewer, Elec.)
- Duct Bank Design
- Structural Engineering
- Zoning and Permitting

### Reference

Paul B. Redman  
Executive Director  
Longwood Gardens  
PO Box 501  
Kennett Square, PA 19348

P: 610.388.5246

E: [director@longwoodgardens.org](mailto:director@longwoodgardens.org)

Expanding the Meadow at Longwood Gardens from 40 to 86 acres, this project was designed to showcase sustainable and ecologically restorative landscapes. Meliora provided civil and structural engineering as well as full permitting for the Meadow Expansion.

Included in the scope were three new pedestrian bridges over streams and wetlands, several thousand feet of elevated boardwalk, heavy timber shelters as well as other site, utility (Water, Sewer, Electric/Communications duct bank), and grading improvements. Carefully crafted to protect sensitive wetland areas and to evoke a sense of historic Chester County structures – the bridges included a concrete barrel arch, a heavy timber tied arch/truss, and a steel multi-stringer bridge.

The National Historic designation of Longwood necessitated extensive permitting by state and local authorities, including three townships, and coordination to address archeological and Pennsylvania Historic Museum Commission requirements. Meliora provided hydrologic and hydraulic analysis for all stream crossings for the four bridges. Permits and approvals were obtained in a timely manner, with opening day occurring on schedule in June 2014.



*Beech Forest Boardwalk*

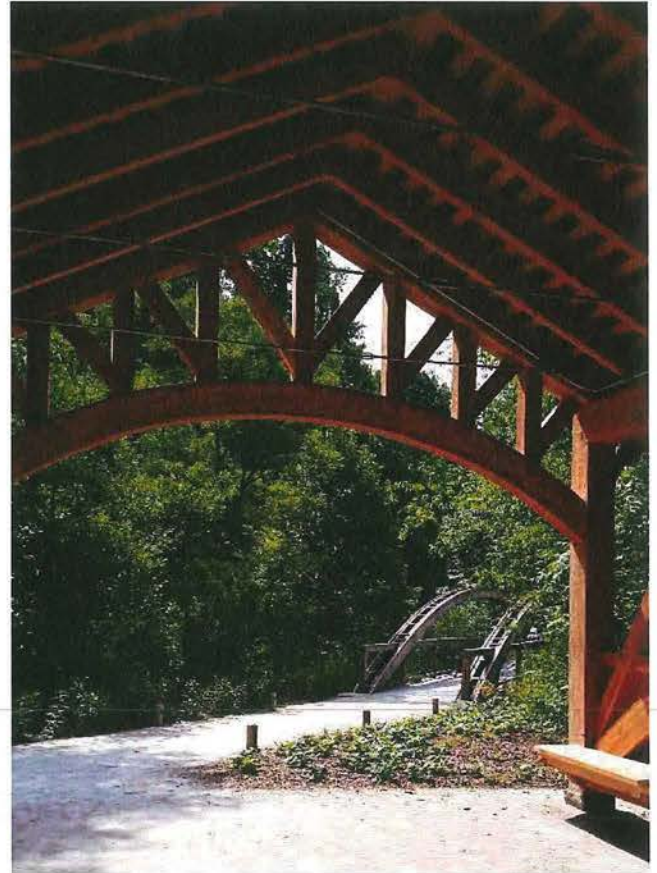
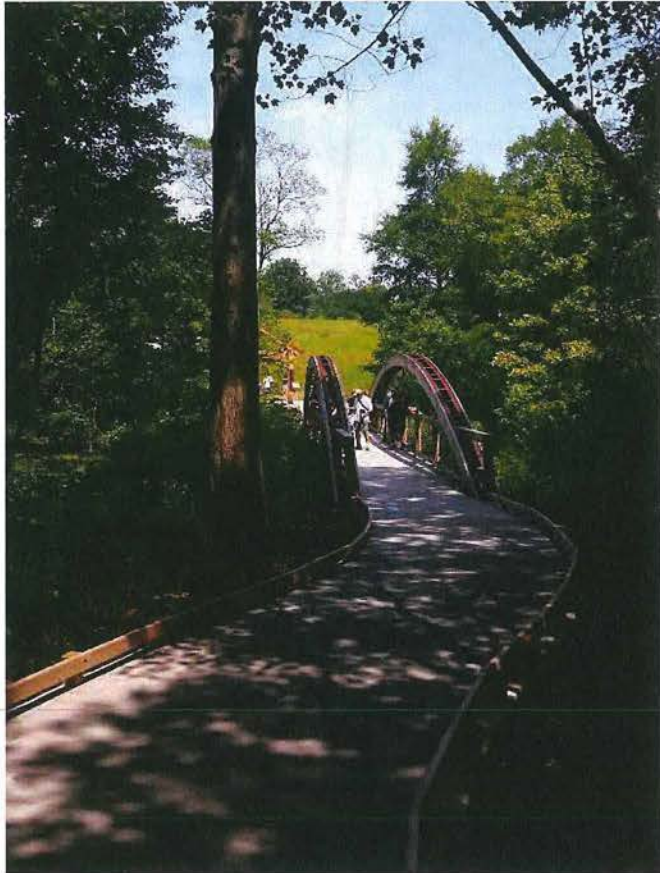


# MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

## Hourglass Lake Bridge and Pavilion

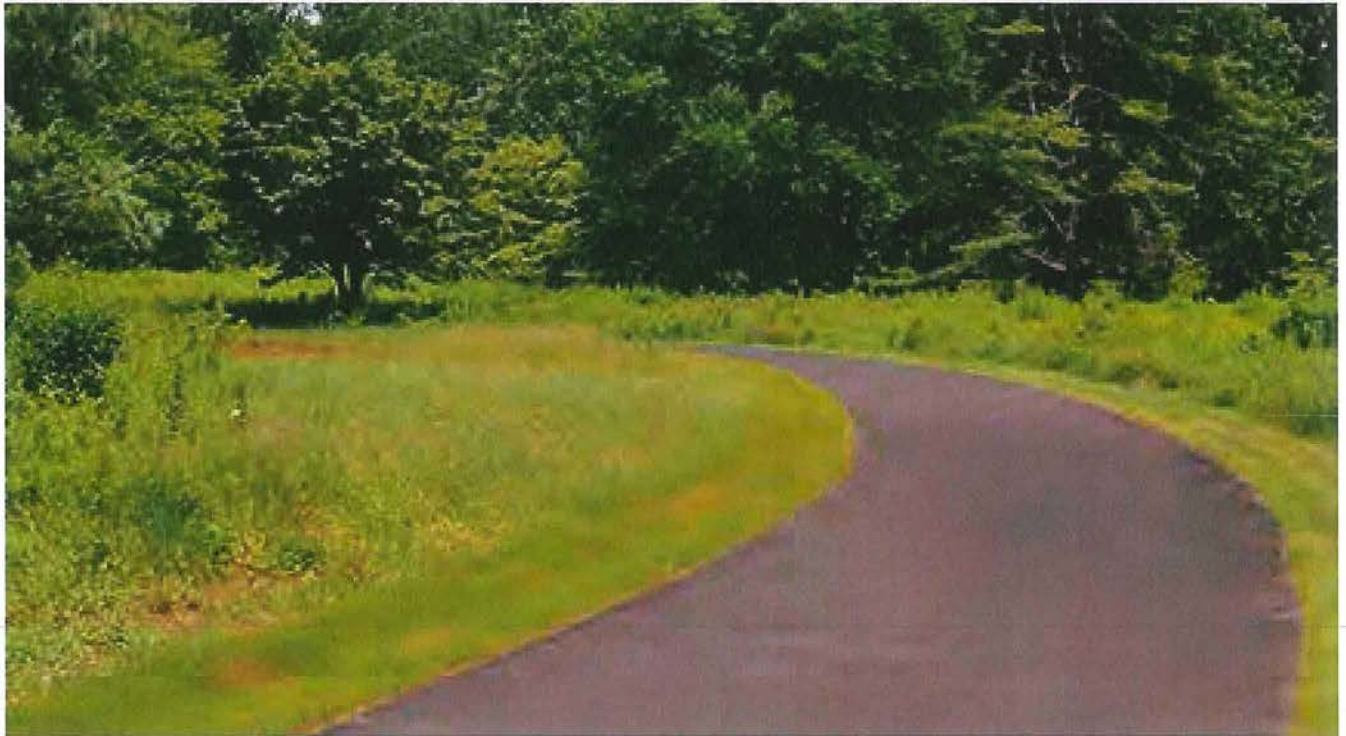


## Meadow Bridge





**Tyler Arboretum, Media, PA**  
**Wister Garden Paths—Stormwater Management**



**Date:** 2009–Current

**Services Provided**

- Sustainable Site Design
- Stormwater Management

**Reference**

Mike Karkowski  
Director of Horticulture  
Tyler Arboretum  
515 Painter Road  
Media, PA 19063

P: 610.566.9134 x 222

E: [mkarkowski@tylerarboretum.org](mailto:mkarkowski@tylerarboretum.org)

Tyler Arboretum is a non-profit public garden in Delaware County, Pennsylvania. Prior to forming Meliora, Michele Adams provided civil design services for the Tyler Arboretum Master Plan. Subsequently, Meliora Design was chosen to develop a porous pavement path system through the Arboretum's Wister Gardens.

The porous asphalt trail winds nearly 6,000 linear feet through the Arboretum's extensive rhododendron collection and around several important specimens within the collection. The design includes ADA accessible paths over varying terrain and corrects existing drainage and erosion problems while providing greater access to this important horticultural collection.

Currently, Meliora is working with Tyler on the design and construction of an Edible Garden project. Intended to demonstrate conservation practices and sustainable, organic and local strategies for gardening and site systems for homeowners, the new educational facility will contain a teaching kitchen and classrooms. Site improvements are also included in the work.



## Pittsburgh Park Conservancy, Pittsburgh, PA Green Stormwater Infrastructure Planning and Design



**Date:** 2012-Present

### Services Provided

- Watershed Studies Planning
- Ecological Restoration
- Green Infrastructure Design
- Hydraulic and Hydrologic Modeling
- Graphic Information Systems
- Water Resources Engineering
- Outreach and Engagement

### Reference

Susan M. Rademacher, Hon. ASLA  
Parks Curator  
Pittsburgh Parks Conservancy  
45 South 23rd Street, Suite 101  
Pittsburgh, PA 15203  
P: 412.682.7275 ext. 212  
E: [srademacher@pittsburghparks.org](mailto:srademacher@pittsburghparks.org)

For the Pittsburgh Parks Conservancy (PPC) in partnership with the City of Pittsburgh, Meliora Design is leading a design team for a series of Green Stormwater Infrastructure (GSI) projects in Schenley Park, one of the City's most highly used parks. This work effort began as a GSI and ecological restoration planning study for the Panther Hollow combined-sewer watershed, identifying a multitude of GSI locations, types, and sizes, with quantification of the hydrologic/ecological, social, and economic impacts for each GSI recommendation.

This led to the construction of two significant separate GSI projects in Schenley Park, including infiltration berms and trenches, demonstrating different practices within the constraints of the project budget and timelines for planning, design, and construction.

Meliora is now leading a third design effort for PPC, with McMahon Associates and Andropogon Associates, for a "Green Street" along Schenley Drive, connecting the communities and universities through the park and building upon recommendations identified in the original GSI plan. This design addresses issues of safety, ecological restoration stormwater, community connectivity, and transportation for a multitude of users (pedestrians, bicyclists, vehicles, and golfers).

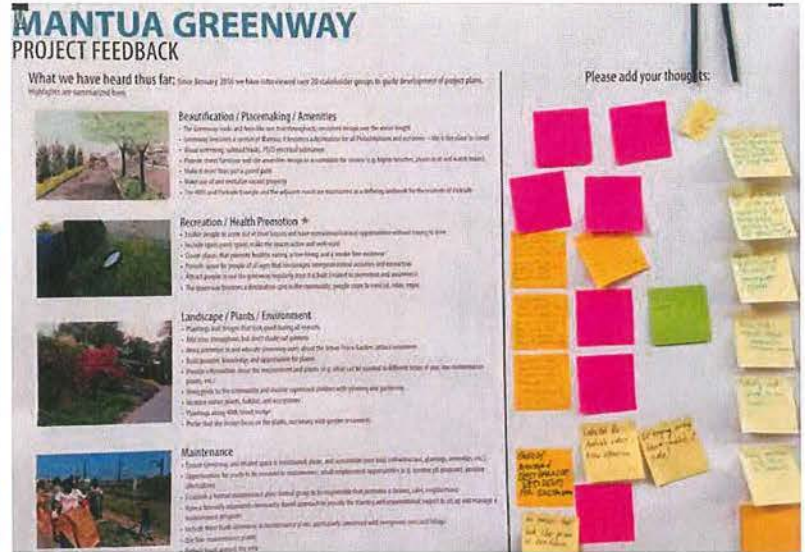


# MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

## Mantua Greenway, Philadelphia, PA Stormwater Management



**Date:** 2015-Current

### Services Provided

- Green Stormwater Infrastructure
- Stormwater Management
- Public Engagement

### Reference

Brian T. Wenrich  
City Planner - West Philadelphia  
One Parkway Building  
1515 Arch Street, 13th Floor  
Philadelphia, PA 19102  
P: 215.683.4620  
E: Brian.Wenrich@phila.gov

The Mantua Greenway is a community driven, complete street project along Mantua Avenue from 34th St. to 40th St. in west Philadelphia. Meliora Design is integrating green stormwater infrastructure (GSI) into the new street, which includes a multi-use trail, new street lighting, street trees, safe and accessible pedestrian crossings, and public gathering spaces.

Public engagement is integral to the design, with input from the public driving the aesthetics and functioning of the streetscape. Vegetated swales are proposed in the buffers separating the new trail from vehicular traffic, which will provide water quality treatment of runoff from the street and sidewalks. Rain gardens adjacent to a public gathering place, and stone storage beds throughout the streetscape will detain runoff from 5 acres of impervious surfaces.



## Schuylkill River Development Corporation, Philadelphia, PA Schuylkill River Trail Erosion Improvements



**Date:** 2015

### Services Provided

- Stormwater Management
- Green Infrastructure Design

### Reference

Joseph R. Syrnick, PE, PLS  
President & CEO  
Schuylkill River Development Corporation  
129 B South 30th Street  
Philadelphia, PA 19104

P: 215.222.6030 x 102  
E: [Joseph.syrnick@srdc.net](mailto:Joseph.syrnick@srdc.net)

Meliora Design developed solutions for portions of the Schuylkill River Trail suffering from erosion and associated safety hazards. Erosion due to stormwater runoff from an adjacent skate park and the impervious trail itself had created hazardous gullies on either side of the trail and frequently left sediment on the trail. The grass covered edge conditions on this popular portion of the trail were also deteriorating from heavy foot traffic.

The site improvements manage stormwater, prevent erosion, and encourage path users to remain on the paved Schuylkill River Trail. Stepped swales and check dams divert flow, and pockets of specialized soils were used to promote infiltration and control the runoff. Tall grasses stabilize conditions and safely provide visual encouragement for cyclists to remain on the trail. The design incorporates planting, recycled materials, rain gardens and infiltration beds adjacent to the trail to create a sustainable solution to the erosion and stormwater runoff issues. The system outflows to a level spreader that slowly releases any discharge from large storms.



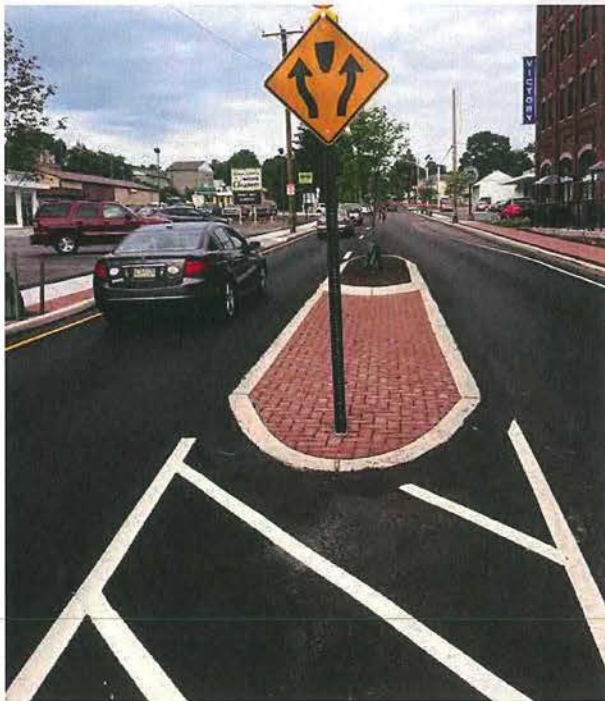


# MELIORA DESIGN

Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

## Borough of Kennett Square, Kennett Square, PA West Cypress Street–Sidewalks and Streetscape Improvements



**Date:** 2013-2015

### Services Provided

- Streetscape Design
- Stormwater Management
- Green Infrastructure Design
- Alternatives Analysis
- Water Main Design

### Reference

Joseph C. Scalise  
Borough Manager and  
Director of Public Works  
Borough of Kennett Square  
120 Marshall Street  
Kennett Square, PA 19348

P: 610.444.6020

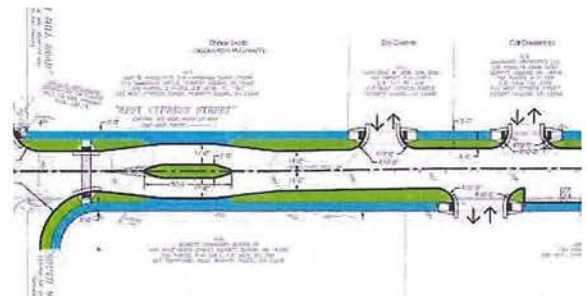
E: [scalise@kennettsq.org](mailto:scalise@kennettsq.org)

The Borough of Kennett Square Sidewalk and Streetscape Improvements Project connects an outlying redevelopment area of new businesses and residential developments (including a new brewery) to the vibrant center of the Borough. Meliora led a design team for the documentation of the streetscape and utility improvements, including porous sidewalks and street trees.

The project involved evaluation of the preferred alignment for connecting the redevelopment area to the center of town, including considerations and modifications to existing driveways, access areas to businesses, and on-street parking.

The four blocks of new and improved sidewalks and crossings improves pedestrian access to and from the town center. Porous paver sidewalks and street trees improve aesthetics and stormwater management.

On-street parking improvements, street repaving, and a new municipal water main replacement were also included.





## Southeastern Pennsylvania Transportation Authority (SEPTA) Media Elwyn Viaducts Superstructure Rehabilitation, Angora, PA



**Date:** 2009-2013

### Services Provided

- Structural Engineering
- Railroad Bridge Rehabilitation
- Crib Walls
- Site Grading
- Construction Related Services

### Reference

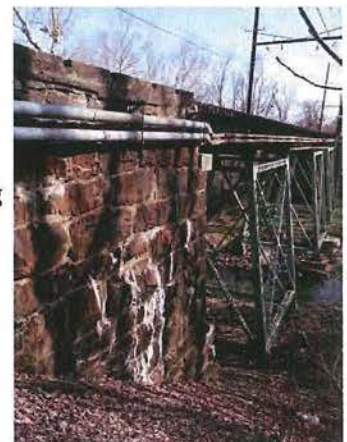
Robert Lund, Jr., PE  
SEPTA  
1234 Market St, 12th Floor  
Philadelphia, PA 19107

P: 215.580.8215

Meliora served as a subconsultant to Gannett Fleming who were tasked with rehabilitating three existing railroad bridges (Cobbs Creek, Ridley Creek and Darby Creek) on SEPTA's Media Elwyn line. Meliora was responsible for the structural rehabilitation on the Cobbs Creek Bridge including superstructure, towers, rebuilding the abutment back walls and repointing the existing masonry pier and abutments.

The Cobbs Creek Bridge dates to circa 1890, and is a wrought iron steel multi girder structure. The abutments and one pier are ashlar masonry while the remaining piers are wrought iron towers.

Meliora provided design services for structural rehabilitation and repair details to repair corroded and/or cracked members, replace the abutment back walls, replace the bearing pads and sliding surfaces, temporary shoring, retaining walls, repointing and repairing the ashlar masonry, pressure injecting the concrete pier cap, scour protection for piers near the creek, and regrading to expose buried base plates. Most repairs were completed during weekend outages.



# ***McMahon Relevant Projects***



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## RELEVANT EXPERIENCE

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McMahon provides transportation planning and engineering services to governmental, institutional, and private sector clients along the east coast. With thirteen regional offices, McMahon strives to provide locally based professional expertise. Our work and experience in Pennsylvania, and specifically the work managed by our Exton, Chester County and Fort Washington, Montgomery County offices, is most relevant for the Darby Paoli Multi-use Trail project.

McMahon provides a broad range of transportation planning, traffic engineering, signal operations, and roadway and bridge design services. Below is a list of McMahon's Pennsylvania municipal and county clients that we have served within the last three years.

Abington Township	Lower Providence Township	Straban Township
Caln Township	Lower Salford Township	Tredyffrin Township
Chester County	Lycoming County	Upper Darby Township
City of Allentown	Malvern Borough	Upper Dublin Township
City of Philadelphia	Montgomery County	Upper Gwynedd Township
East Coventry Township	New Garden Township	Upper Hanover Township
East Pikeland Township	New Hanover Township	Upper Merion Township
East Rockhill Township	Northampton Township	Upper Moreland Township
Easttown Township	North Coventry Township	Upper Providence Township
East Whiteland Township	North Wales Borough	Upper Uwchlan Township
Gettysburg Borough	Penn Township	Warwick Township
Greene Township	Perry Township	West Bradford Township
Hatfield Borough	Radnor Township	West Goshen Township
Hatfield Township	Solebury Township	West Vincent Township
Lower Gwynedd Township	South Coventry Township	Whitpain Township
Lower Moreland Township	South Heidelberg Township	Worcester Township

The table and detailed project profiles that follow showcase projects led by McMahon's talented professionals that are related to the Darby Paoli Multi-use Trail project. Our relevant experience includes:

- ⇒ **Multi-use Trail Projects**
- ⇒ **Pedestrian Crossing Projects**
- ⇒ **Trail Bridge Projects**
- ⇒ **Working for Montgomery County**
- ⇒ **Working on PennDOT Funded and Transportation Alternative Projects**





## RELEVANT EXPERIENCE

Project/Contract led by McMahon's Exton Office, Client	Bicycle & Pedestrian Facilities	Bridge & Structures	Roadway & Intersections	Stakeholder & Public Involvement
S.R. 0309, Section 330 – Upper Demunds Road Intersection Improvement Project, <i>PennDOT District 4-0</i>	✓		✓	✓
S.R. 0347, Section 207 – O'Neill Highway Signal Network and Intersection Improvement Project, <i>PennDOT District 4-0</i>	✓		✓	✓
S.R. 0415, Section 303 – Dallas Five-Leg Intersection Improvement Project, <i>PennDOT District 4-0</i>	✓	✓	✓	✓
Local NBIS Bridge Inspection Contract, <i>PennDOT District 5-0</i>		✓		
S.R. 1001 Easton Road Multi-Use Trail, <b>Doylestown Township</b>	✓			
Traffic Signal and Safety Services Contract, <i>PennDOT District 6-0</i>	✓		✓	
Traffic and ITS Open End Contract, <i>PA Turnpike Commission</i>			✓	
Traffic Signal Retiming Initiative, <i>City of Philadelphia</i>			✓	
Rehabilitation of County Bridge #254, <i>Chester County</i>		✓		
Rehabilitation of County Bridge #112, <i>Montgomery County</i>		✓		
Schenley Drive Green Street, <b>Pittsburgh, PA</b>	✓		✓	✓
Valley Creek Boulevard, <b>West Whiteland Township</b>	✓		✓	
Patriots Path Concept Plan, <i>East Whiteland Township</i>	✓			
North Wales Safe Routes to School, <i>North Wales Borough and Upper Gwynedd Township</i>	✓			✓
Greenway Intermodal Transportation Improvements, <b>Philadelphia Zoo</b>	✓		✓	
S.R. 0032, Section SGT, Solebury Gateway Trail, <b>Solebury Township</b>	✓			
S.R. 0252 (Providence Road, Section RTT), <i>Upper Providence Township</i>	✓	✓	✓	
East Central Avenue Multi-Use Trail, <b>Tredyffrin Township</b>	✓		✓	✓
Sumneytown Pike Phase II, <b>Upper Gwynedd Township</b>	✓	✓	✓	
Eagle Loop Road (Northern Link) and Park Road Extension, <i>Upper Uwchlan Township</i>	✓		✓	✓
Commodore Bicycle Trail—Multi-Use Path, <b>Coral Gables, FL</b>	✓	✓		
S.R. 0100, Section VET, Village of Eagle Pedestrian Path, <b>Upper Uwchlan Township</b>	✓		✓	✓
Kennett Township Trail Feasibility Study, <i>Kennett Township</i>	✓			✓
East Branch Brandywine Trail Bridge, <b>West Bradford Township</b>	✓	✓		
Marshallton Traffic Calming and Streetscape Project, <b>West Bradford Township</b>	✓		✓	
Multi-Modal Transportation Study, <i>West Vincent Township</i>	✓			✓
Brandywine Valley Scenic Byway Corridor Management Plan—Transportation Element, <i>Brandywine Valley Scenic Byway Commission</i>	✓		✓	
Bala Avenue Streetscape Improvement, <i>City Avenue Special Services District</i>	✓		✓	✓
Swarthmore Roundabout, <i>Swarthmore College</i>	✓		✓	✓
Villanova Pedestrian Bridge and Relocated Church Walk Access, <b>Villanova University</b>	✓	✓	✓	
Chester Valley Trail Experience, <b>East and West Whiteland Townships</b>	✓		✓	
Paoli Pike Trail, <b>East Goshen Township</b>	✓	✓		✓
<i>Projects highlighted in blue text are further described in the proposal.</i>				



## RELEVANT EXPERIENCE

### MULTI-USE TRAIL PROJECTS

#### Chester Valley Trail Experience *East and West Whiteland Townships, Chester County, PA*

The McMahon Team has first hand experience working on other phases and segments of the Chester Valley Trail. McMahon designed the mid-block crossing of the Chester Valley Trail at Valley Creek Boulevard, which included a landscaped median refuge island for trail users. Also, as Township Traffic Engineer for East Whiteland Township, McMahon



played a key role in reviewing and developing design solutions for the Chester Valley Trail crossing at Conestoga Road (S.R. 0401). McMahon designed improvements to the Chester Valley Trail crossing at Morehall Road (S.R. 0029) as part of PennDOT's US 202—Section 320 improvement project. The improvements include modifying a crosswalk location to improve sight distance, providing ADA compliant ramps, and enhancing safety for trail users at this busy intersection. This project involved coordination with PennDOT and Chester County Department of Facilities and Parks. McMahon is currently designing a modified trail crossing at the intersection of S.R. 100 Pottstown Pike and Commerce Drive in West Whiteland Township in Chester County.

#### Paoli Pike Trail *East Goshen Township, Chester County, PA*

McMahon worked closely with East Goshen Township officials, staff, and residents to develop the Paoli Pike Trail Feasibility Study and Master Plan. The purpose of the Feasibility Study and Master Plan was to translate the vision for the trail into an implementable plan with feasibility design solutions. McMahon completed the analysis of existing conditions, evaluation of alternative trail alignments, development of a trail conceptual plan, and development of an implementation plan and funding strategy. With a keen focus on implementation, McMahon divided the trail conceptual plan



into seven logical segments for the purpose of project phasing and financing. For each segment, the McMahon Team performed a funding viability analysis and provided guidance to the Township on potential grant pursuits. McMahon will lead the design and preparation of construction plans through PennDOT's Highway Occupancy Permitting process for sections with CFA Multi-Modal funding and through the Transportation Project Delivery process with DVRPC oversight for sections with state and federal funds. McMahon is currently completing the topographic survey and preparing right-of-way acquisition documents.



## RELEVANT EXPERIENCE

MULTI-USE TRAIL  
PROJECTS

### East Central Avenue Multi-Use Trail *Tredyffrin Township, Chester County, PA*

McMahon led a multi-disciplinary team to develop a range of multi-modal transportation improvement alternatives to accommodate existing transportation needs, as well as support access to the future SEPTA-Amtrak Paoli Intermodal Transportation Center and a proposed station area private development. The project involved close multi-agency coordination with the project partners including, Tredyffrin Township, PennDOT, Chester County, DVRPC, SEPTA and Amtrak. The project also included an extensive community and stakeholder outreach program, including a safety audit, stakeholder meetings, community visioning workshops, and an interactive project website with online surveys. McMahon developed conceptual designs for roadway and intersection improvements, multi-use trails, on-road bicycle lanes, streetscape improvements, as well as traffic calming and access management strategies. As a result of the study and successful applications, the Township was awarded several grants, including \$1.1 million through the statewide Transportation Alternatives Program (TAP) for construction of a multi-use trail along East Central Avenue between Bear Hill Road (S.R. 0252) and North Valley Road. McMahon completed the design and preparation of the PS&E, through PennDOT's project delivery process with DVRPC's oversight. The project was advertised for construction through PennDOT's Engineering and Construction Management System (ECMS). Construction will commence this spring.



### Villanova Pedestrian Bridge and Relocated Church Walk Access *Radnor Township, Delaware County, PA*

Villanova University is planning to enhance its campus along Route 30/Lancaster Avenue and turn the main parking lots into an attractive living and learning environment that will feature Collegiate Gothic style residential halls, University-operated student-centric retail, a Performing Arts Center, a parking garage and a pedestrian bridge. The pedestrian bridge is to provide a safe, direct and



pedestrian friendly connection between the Main Campus on the north side of SR 0030 and the students from the new residence halls and South Campus, commuters/visitors from the SEPTA station and surface parking lot. In addition, the relocated Church Walk access will further separate vehicular and pedestrian movements, and will provide vehicles with an efficient access location for the new residence halls and the surface parking to be developed concurrently by the University. The pedestrian bridge structure will consist of 7 components including a main span over Lancaster Avenue, three (3) secondary spans through the existing parking lot on the south side of SR 0030, two retaining structures on both sides of the main span, a middle pavilion with an elevator to accommodate non-ambulatory access to the top of the structure, a southern pavilion and a two span structure connecting to the SEPTA high speed line. The Villanova University Pedestrian Bridge Project is to be constructed using Transportation Infrastructure Investment Funds (TIFF). McMahon completed the design and preparation of the PS&E through a PennDOT's Highway Occupancy Permit process and a modified transportation project delivery process. The project was advertised for construction through PennDOT's Engineering and Construction Management System (ECMS). Construction will commence this spring.



## RELEVANT EXPERIENCE

MULTI-USE TRAIL  
PROJECTS

### Greenway Intermodal Transportation Improvements *Philadelphia, PA*

McMahon completed the design for 4,000 linear feet of a 10-foot wide multi-use trail providing connections to the West Bank Greenway Facility and Philadelphia Zoo. McMahon worked closely with the Philadelphia Streets Department, Fairmount Park, and PennDOT on the design of existing sidewalk reconstruction, an ADA compliant crossing with the I-76 off-ramp, and other ADA curb ramp and sidewalk improvements. McMahon prepared the Plans, Specifications, and Estimates (PS&E) package. The project was advertised for construction through PennDOT's Engineering and Construction Management System (ECMS) and construction was completed in 2013.



### S.R. 1001 Easton Road Multi-Use Trail *Doylestown Township, Bucks County, PA*

McMahon, as the lead consultant, completed the final design and preparation of the construction plans for this multi-use trail as part of the Doylestown Township Trail Program. The scope of improvements along this section of Easton Road included 1,465 feet of pavement construction and conversion of 265 feet of an existing shoulder on a bridge structure for the multi-use trail. In addition, concrete barrier was to be installed across the existing structure to provide a physical separation between trail users and vehicular traffic. The project included installation of new swales, storm water improvements, guiderail, and bridge railings.



### Schenley Drive Green Street *Pittsburgh, PA*

McMahon is currently designing an off-road pedestrian trail, on-road bicycle facilities, mid-block crossings, on-street parking, and traffic calming strategies along Schenley Drive in Pittsburgh, PA. The proposed improvements will provide better pedestrian connectivity to Carnegie Mellon University



and throughout Schenley Park, which is a daily destination for university students, commuters and outdoor enthusiasts, located in the Oakland neighborhood of the city. McMahon is working closely with the Pittsburgh Parks Conservancy, the City of Pittsburgh and a design advisory committee to provide a pedestrian friendly, Green Street design that incorporates all users of Schenley Drive. The project also includes an extensive community outreach program, stakeholder meetings, community workshops, and online project surveys. McMahon was responsible for the preparation of public presentations, concept design, and preliminary engineering, design and plan preparation.



## RELEVANT EXPERIENCE

MULTI-USE TRAIL  
PROJECTS

### S.R. 0100, Section VET Village of Eagle Pedestrian Path *Upper Uwchlan Township, Chester County, PA*

McMahon completed a multimodal transportation plan for the Village of Eagle to connect the bicycle and pedestrian network, provide a consistent streetscape, and support businesses and economic development. McMahon's feasibility evaluation included conceptual designs and cost estimates for a variety of bicycle and pedestrian facilities, including sidewalks, sidepaths, multi-use trails, medians, and mid-block crosswalks. Additionally, McMahon facilitated five meetings with the Township's Village Concept Committee, business and property owners, and coordinated with PennDOT, the PA Turnpike, and the Chester County Planning Commission on technical aspects of the plan. As a result of the plan and a successful application, the Township was awarded \$560,000 through the regional Transportation Alternatives Program (TAP) for construction of a pedestrian path along Route 100. McMahon completed the design and preparation of the PS&E through PennDOT's project delivery process with DVRPC's oversight. The project was advertised for construction through PennDOT's Engineering and Construction Management System (ECMS). Construction will commence this spring.



### SR 0032 Sec. SGT Solebury Gateway Trail *Solebury Township, Bucks County, PA*

This project includes the creation of the Solebury Route 202 Gateway Trail, a 10 foot wide multi-use trail within the footprint of S.R. 0032 (River Road) by eliminating and modifying the outer northbound lane of the current 2-lane roadway; the creation of a new segment of multi-use trail within Magill's Hill Park and Canal Park, both township-owned parks and recreational facilities; and the creation of trail connections to the existing Route 202 Cross-County Trail and the Delaware and Lehigh (D&L) National Heritage Trail in Solebury. The project also includes the construction of a new bioswale facility to treat highway storm water. The new asphalt trail will be in compliance with ADA (i.e. longitudinal grade, cross-slope, etc). ADA compliant ramps will be provided at each pertinent location for mid-block crossings and driveways. McMahon completed the design and preparation of the PS&E through PennDOT's project delivery process with DVRPC's oversight. The project was advertised for constructions through PennDOT's Engineering and Construction Management System (ECMS). Construction will commence this spring.





## RELEVANT EXPERIENCE

### TRAIL BRIDGE PROJECTS

#### East Branch Brandywine Trail Bridge *East and West Bradford Townships, Chester County, PA*

The East Branch of the Brandywine Trail is a rail-to-trail project that is part of the Brandywine-Struble Regional Recreation Corridor, BicyclePA- Route L, and the regional multi-use trail network in southeastern PA. McMahon led the design and environmental permitting for a key bicycle and pedestrian trail bridge over the East Branch of the Brandywine Creek for East and West Bradford Townships.

McMahon designed a steel beam bridge to replace the previous trolley bridge and designed the ten-foot wide multi-use asphalt trail connections on either side of the bridge. McMahon's services included a bridge inspection, initial cost estimates for bridge replacement alternatives, hydrologic and hydraulic report, submission of environmental permits, and final structural plans and specifications for construction. The project was funded by \$1.7 million in federal, state, and county grants and fulfilled requirements of the federal Transportation Enhancements program. Construction of the project was completed in June 2010.



#### Commodore Bicycle Trail—Multi-use Path *Coral Gables, Miami-Dade County, FL*

McMahon provided design services and construction plans for Bicycle Route No. 1. This three mile section of the bicycle route incorporated the design criteria for a multi-use path, bicycle lanes and shared use roadways. The project included designing footings for a multi-use bridge over the Coral Gables Waterway. Significant coordination was required with the City of Miami, City of Coral Gables, Miami-Dade County Metropolitan Planning Organization and Parks and Recreation Department.



#### Sumneytown Pike Phase II - Reconstruction Project *Upper Gwynedd Township, Montgomery County, PA*

McMahon led final design and preparation of the construction plans and specifications for a \$6.7 million roadway reconstruction project that was financed in part by a private/public partnership between Montgomery County, the Township and Merck & Co, Inc. In order to provide a safe pedestrian connection along the corridor, McMahon designed a 186-foot long prefabricated pedestrian bridge to accommodate pedestrians from West Point Pike to the existing sidewalk on the north side of the corridor at Dickerson Road. The pedestrian bridge was designed to maintain the existing 100-Year Storm elevation and not to encroach into the existing 100-Year floodplain. The construction cost of the bridge was \$300,000.





## RELEVANT EXPERIENCE

ADDITIONAL  
EXPERIENCE

### Marshallton Traffic Calming and Streetscape Project *West Bradford Township, Chester County, PA*

McMahon served as lead designer for a streetscape improvement project for a three-quarters of a mile segment of Strasburg Road (S.R. 0162) through the historic Village of Marshallton to create a more pedestrian friendly environment, calm traffic, and support local businesses. The design included consistent brick sidewalks, Americans with Disabilities Act (ADA) compliant curb ramps, colored and stamped asphalt crosswalks, designated on-street parking, sustainable storm water design features, and welcome gateway treatments at the village entrances. McMahon worked closely with PennDOT, the Township, and a citizens group to gather input and build consensus regarding context sensitive design features. Project funding of over \$2 million was provided by West Bradford Township and PennDOT through the Pennsylvania Communities Transportation Initiative (PCTI) program. McMahon was responsible for preliminary and final roadway design, environmental studies/clearance, utility coordination and preparation of Plans, Specifications, and Estimate (PS&E) package. The project was submitted and advertised for construction through PennDOT's Engineering and Construction Management System (ECMS) and construction was completed in 2012.



### Valley Creek Boulevard *West Whiteland Township, Chester County, PA*

McMahon, as lead highway/traffic engineering consultant, designed a \$4.0 million four-lane cross-section Valley Creek Boulevard associated with the Valley Creek Corporate Center. McMahon completed the traffic analysis for the entire corporate center and designed a new 3,500 foot four lane road to connect Swedesford Road and Lincoln Highway (U.S. Route 30 Business). The roadway design also included the re-alignment of Swedesford Road to create the proposed intersection with the Valley Creek Boulevard. The design elements included new horizontal alignment, roadway reconstruction, roadway storm drainage, pavement design, and traffic signals. The project also included design of a multi-use trail on the west side of Valley Creek Boulevard and a mid-block crossing for the Chester Valley Trail. The project was approved through PennDOT's HOP process and reviewed by the Township. Construction was completed in June 2002.



### Americans with Disabilities Act (ADA) Compliant Curb Ramps *Over 15,000 ramps throughout PA*

McMahon has completed topographic survey, horizontal and vertical design, preparation of design plans, quantifying materials required, and preparation of associated design documentation, including Technically Infeasible Forms, when necessary, for over 20,000 ADA compliant curb ramps in Pennsylvania. McMahon has invested significant resources to become experts in the current ADA requirements as they relate to design and construction. Our firm has worked with the current standards in both ongoing design projects and in the field on construction projects. We have become very familiar with the individual curb ramp requirements based on differing situations, as well as, installations as part of new construction and alteration projects.





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# ***Cloud Gesham Relevant Projects***

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# MELIORA DESIGN

*Civil, Water Resources, and Structural Engineering*

*Meliora (mel/ee/or/ah): Latin for "always better"*





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Design

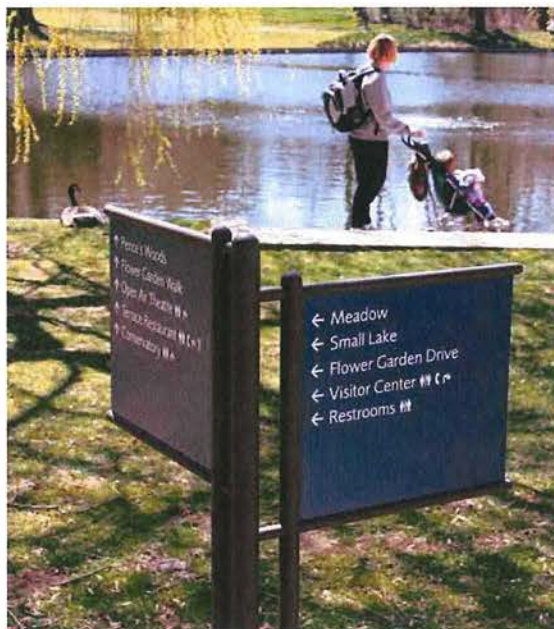
## FIRM PROFILE

**Cloud Gehshan** is a design consulting firm that offers the full range of services required for the development and implementation of comprehensive graphic programs. CG undertakes projects in identity and branding, interpretive and interactive communication and signage and environmental graphic design. Founded in 1986, we are in our 31st year of practice.

We design our work to integrate seamlessly into the landscape, providing information without overwhelming the environment. Our design vocabularies are developed after carefully studying the place, the audience and the client's mission. Our experience includes interpretive design, wayfinding, donor recognition programs and commemorative signs. Our staff has expertise in graphic design, industrial design, human factors, materials, detailing, model making, identity, map design and symbol development.

In our projects we represent the visitor and his or her need to be directed, informed and entertained. We combine award-winning planning and design with the practical tools of materials, fabrication techniques and thorough testing. Our clients have included Adkins Arboretum, Tyler Arboretum, Fairmount Park, Morris Arboretum, Philadelphia Water Department, Natural Lands Trust, Winterthur Museum & Gardens and Longwood Gardens.

Cloud Gehshan collaborates as part of a team with the client and other consultants. We are committed to a working process that involves open communication with all members of the team and creative and efficient management of budget and schedule.



Longwood Gardens



Cloud Gehshan  
Design

## THE SCHUYLKILL CENTER FOR ENVIRONMENTAL EDUCATION

Engaging nature lovers

The Schuylkill Center for Environmental Education is a Philadelphia gem, offering 340 magical acres of fields, forests, ponds, and streams within the city limits. CG is developing a signage master plan for the Center which will help their visitors access and interpret the site which includes, for the first time, a link to the 60-mile Schuylkill River Trail.

SCEE's many recreational opportunities are augmented by regular environmental art exhibits, educational programs, campouts and wildlife rehab services. Directional and interpretive signage will help their diverse audiences find this "hidden gem" and better understand its mission.







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## NATURAL LANDS TRUST

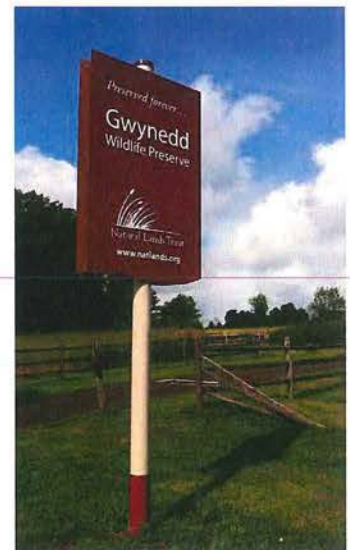
Signage program for natural areas

CGA has designed a sign system for Natural Lands Trust, the Delaware Valley's largest land conservation organization. Thousands of individuals and families visit NLT's 42 sites yearly for relaxation and recreation.

Since most visitor activities are unsupervised the signs play many important roles: they welcome visitors, provide site maps, communicate important rules and regulations, interpret special features, offer trail directions and display postings of numerous NLT events.

Answering the need to stretch the fabrication budget and prioritize sustainability, the sign design uses recycled wood and simple profiles. NLT continues to implement the sign system as their holdings grow, giving visitors the information they need to maximize their enjoyment and stewardship of these special places.

Like most parks NLT requested an easy-to-manage system that could be installed and maintained by staff. The design process was guided by the in-house NLT team and their knowledge of the public's requests and needs.





### Signage and Environmental Graphics

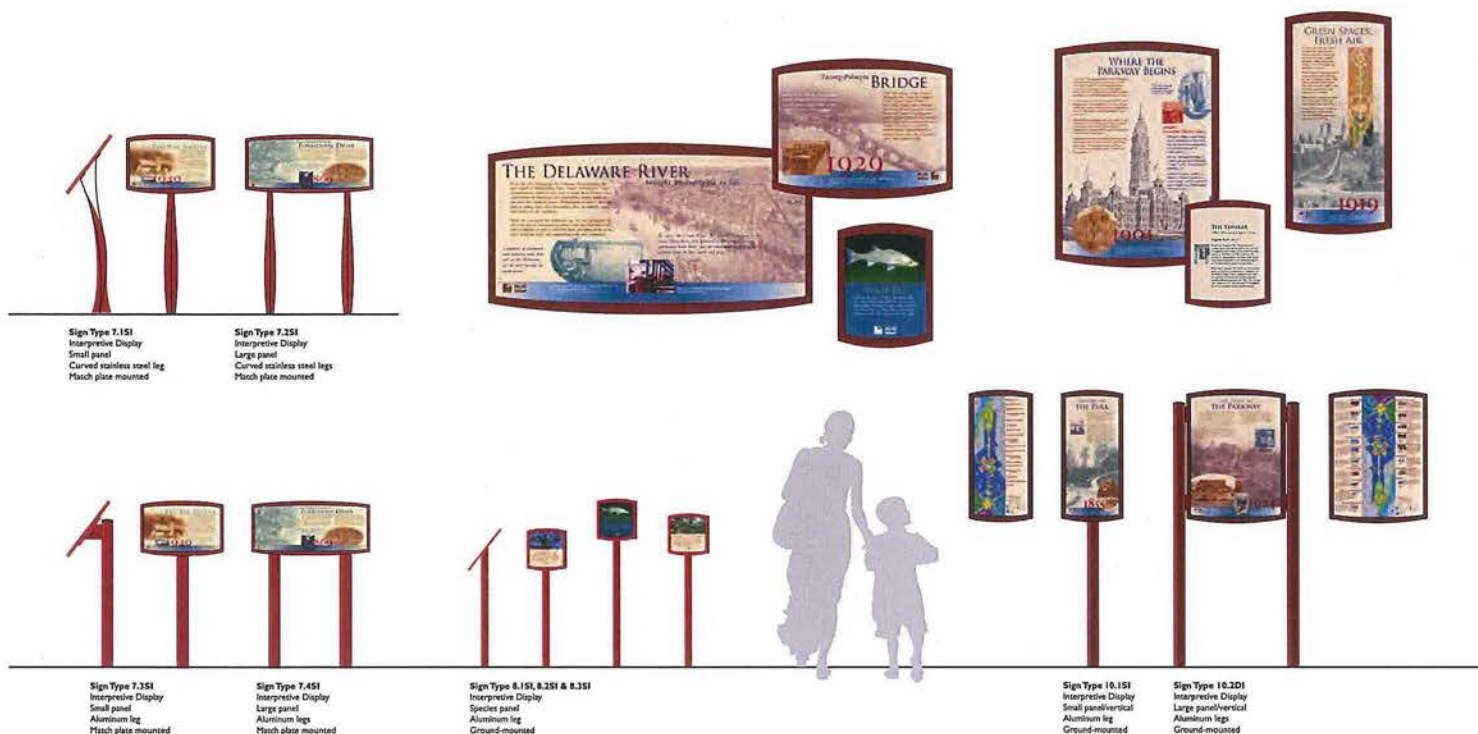
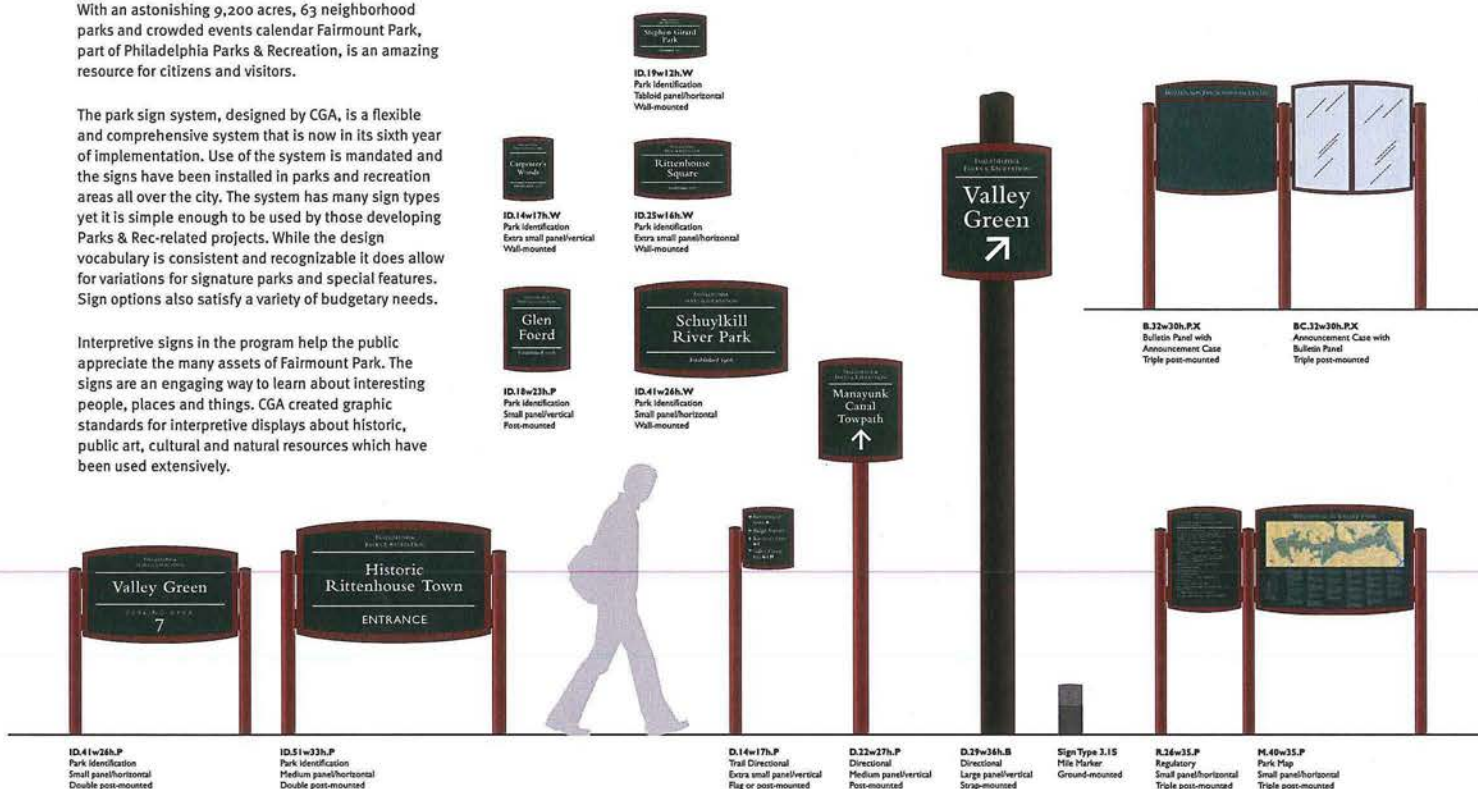
## FAIRMOUNT PARK SYSTEM

## Master Signage and Interpretive Guidelines

The park sign system, designed by CGA, is a flexible and comprehensive system that is now in its sixth year of implementation. Use of the system is mandated and the signs have been installed in parks and recreation areas all over the city. The system has many sign types yet it is simple enough to be used by those developing Parks & Rec-related projects. While the design vocabulary is consistent and recognizable it does allow for variations for signature parks and special features. Sign options also satisfy a variety of budgetary needs.

Interpretive signs in the program help the public appreciate the many assets of Fairmount Park. The signs are an engaging way to learn about interesting people, places and things. CGA created graphic standards for interpretive displays about historic, public art, cultural and natural resources which have been used extensively.

www.cloudehshan.com  
215 829 9414







Cloud Gehshan  
Design

## BOSTON PARKS & RECREATION

The Emerald Necklace and other charms

Boston enjoys hundreds of parks including famous public spaces such as Boston Common and the Public Garden, and less famous but beloved neighborhood parks, ball fields and golf courses.

CG is designing a new sign system to better identify and unify these assets. Whether marking public squares, playgrounds or urban wilds the signs need to be inviting and elegant, yet robust enough to hold up to heavy public use. Signs with the new profiles, colors and typography will be implemented in phases, and will offer a distinctive signature city-wide.



Large-scale  
park identification

Medium-scale  
park identification

Post-mounted  
rules

Fence-mounted  
park identification

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## Section 3 – Proposed Scope of Work

## Explanation of Work

The Darby Paoli Trails Plan provides a well-documented and Township approved concept plan for the Darby Paoli Trail, including identification of major supporting improvements such as bridges, culverts, boardwalks, parking areas, walls, fencing and gates, intersection improvements, pedestrian crossings, stormwater features, site furniture, and landscaping. The plan also identifies various design elements that require further evaluation and decision-making, such as the trail location in the Skunk Hollow Park riparian woodlands, design details and signage in the Meadow and Ruins area, and management of bicycle speeds from the parking area in Saw Mill Field, among others. In addition, ADA conditions must be evaluated, and trail widths, locations, slopes, and materials confirmed before detailed documentation can be done. Stormwater management and innovative trail design and materials are also important components of the documentation phase, including coordination for the 5K cross-country use.

In our initial site visit to the area, we noticed additional items that may also warrant further discussion and design clarification. For example, the connector trail at the Willows is proposed to follow the driveway to Paoli Darby Road. Starting the connector trail to Darby Paoli Road at the southeast corner of the parking lot may reduce wetland disturbance parallel to the parking lot (as an example). We also noted that the trails cross or are in proximity to the municipal sewer in many locations, especially through the Quarry Field and Skunk Hollow Field areas, and again down in the Saw Mill Field area. It might be beneficial for the trail design to consider future disturbance and access for sewer repairs.

Because there are various design components that require more detailed consideration before documentation and permitting, we are proposing several design "phases" during Plan Documentation as described below that encompass the specific tasks identified in the RFP. An initial Schematic Phase would provide an opportunity for design decisions and schematic trail documentation, meetings and input from residents, as well initial coordination meetings with both PennDOT and the PaDEP/Corps of Engineers to clarify any agency concerns or preferences. This Schematic Phase would occur concurrently with the detailed topographic survey and allow the project design to advance while the survey is completed. Most importantly, the Schematic Phase would provide an opportunity to obtain a refined construction cost estimate before proceeding to detailed documentation and permitting. This would allow the Township and NL to make decisions regarding elements that might be constructed at a later date, such as a bridge in the Skunk Hollow Woodlands.

We have presented a detailed work scope and schedule based on the specific tasks identified in the RFP, occurring within the context of Schematic, Preliminary, and Final design phases, followed by a Bidding Phase.

- A. Schematic Design and Detailed Survey, 2 months** In this initial phase, we will work with the Township and NL to refine and confirm the design, including items that were identified in NL's Trail Plan as requiring further consideration. We anticipate several working meetings with NL and the Township, as well as an initial meeting with Parks and Recreation, and two (2) resident meetings to obtain input and present the Schematic recommendations regarding trail locations, widths, and materials, as well as bridge and boardwalk styles, stormwater features, pedestrian crossings, etc.



This phase will also provide an opportunity for an initial meeting with PennDOT to review the plan. We will meet with PaDEP and the U.S. Army Corps of Engineers to review the stream and anticipated wetland impacts and permitting requirements, and we will identify and confirm other permitting and approval requirements.

For this initial design, we will use the existing Township GIS and LIDAR topographic information at 2' contours, supported by GIS information on the floodplain extents, sewer location, soils types, etc. The detailed topographic survey will occur concurrently with this initial Schematic Design.

At the conclusion of this Schematic Phase, we will prepare a Schematic Construction cost estimate to allow the Township and NL to make informed decisions regarding design components and potential construction phasing. We believe that a Schematic Design cost estimate, as well as an updated permit approval timeline, will be important for design decisions before proceeding to construction documentation and permitting.

- B. Preliminary Design Phase, 2 months** In this next phase, we will advance the plan documentation of the trail and all supporting components based on the topographic survey, documenting the design elements and incorporating design decisions from the Schematic Phase. Wetland delineation and geotechnical testing will occur in this phase, and clarification of all necessary permits will be made. We anticipate meetings with NL and the Township and various boards. "Line and grade" plans will be prepared for submission to PennDOT for their evaluation and in anticipation of the Highway Occupancy Permit application.

At the conclusion of the Preliminary Design Phase, a Preliminary Land Development package will be prepared for submission to Township.

- C. Final Design and Permit Applications Phase, 2 months** During this Final Design Phase, detailed documentation and preparation of Plans and Specifications will be completed for Final Land Development submission to the Township. All permit applications will be completed (PennDOT, PaDEP, US ACE, Conservation District, DCCD, etc.), and a Construction Sequencing Plan will be developed. The Township and NL may wish to submit the Final Land Development package once all major permits have been obtained, or agency comments substantially addressed.

We believe that the Darby Paoli Trail design can be completed and documented, and the permit applications submitted by April 2018, but we do not believe that the necessary permits and approvals can be obtained by this time. In our experience, PennDOT approvals for a project such as this will require a seven (7) month review period, the stream encroachment permits can require six

months (assuming there are no archeological or historic requirements, which can cause additional delays), and the NPDES Permit for Post-Construction Stormwater and Erosion and Sediment Control can require three to four months (unless formally expedited). We will work diligently to advance permitting approvals by meeting early and regularly with the agencies, and we will advise Radnor and NL regarding design decisions to expedite permitting. Our schedule reflects anticipated permit timelines based on our understanding of the work effort and regulatory requirements.

- D. Bidding Phase** In this phase, we will prepare all Plans and Specifications necessary for Bidding, including General and Special Conditions, and we will support the Township and NL through Bid Evaluation. The Bid Documents will be issued in Draft form, and finalized when all major permits have been obtained to allow the documentation to reflect any design changes from agency comments (and limit Bid Addendums or Change Orders).

With this in mind, our proposed Work Plan, Deliverables and Schedule are described in the next Section. In addition to the Work Plan, we have included the detailed Scope of Work prepared by McMahon Associates with regards to the design and PennDOT permitting of the Darby Paoli Trail and the Topographic Survey.

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## Work Plan and Schedule

### *Task 1 Review and Assimilation of Background Information*

The Meliora Team will begin by meeting with the Township representatives and NL within five (5) days of the NTP to review the goals, schedule, and deliverables for this work effort. We will seek to obtain all available information and data necessary for the work effort, and to understand the Township's and NL's design goals and priorities. We will review the available information and identify any gaps or necessary actions to meet deadlines. We will use existing GIS as a working base to advance design until the survey is complete.

#### *Tangible Work Products:*

- Kick-off Meeting with Township and NL representatives and gathering of available information
- Updating of existing GIS for Schematic Design
- Summary of initial analysis, findings and recommendations
- Summary of design decisions required for Design Plan documentation



## *Task 2 Preparation of Design Plans and Specifications*

In this task, we will work to develop all plans, views, elevations, and details to document the character and layout of all components of the project based on the concept plan, field reviews, meetings, and site data. We anticipate three (3) Design Plan and submission Phases as follows:

***Schematic Design*** will be based on the Concept Plan and include documentation of the final approved trail location, including the trail slopes, the number and type of structures, ADA compliance considerations, parking layout and driveway location, etc. The Schematic Plan documentation will be based on the GIS and supporting information, and will reflect design decisions and recommendations by the Township, Township Boards, and NL, informed by community input and initial regulatory agency conversations. These include design decisions regarding trail location, materials, structures, etc. The Schematic Design Plans will be used for initial regulatory agency discussions under Task 3, including PennDOT and PaDEP/COE.

*In this Phase, we will provide relevant precedent images and information to support decisions related to trail material, bridge types, structures, etc.*

***Preliminary Design*** The Preliminary Plans will advance the documentation to a Preliminary Land Development submission level, but will not include details and final specifications. The Preliminary Plans will be based on the detailed topographic survey prepared as part of this work effort to meet the requirements of Appendix B in the RFP. The Preliminary Plans will include “line and grade” documentation of the Darby Paoli Trail for submission to PennDOT.

***Final Design*** The Final Design Plans will advance documentation to Final Land Development submission level and will include details and specifications. The Final Land Development Plans will be used for permit applications and submissions.

*The project will be designed and documented to meet all applicable Township ordinances, and the regulatory and permitting requirements of PennDOT, PaDEP, and the US COE.*

*We have included a discussion on bridge structures at the end of this section, as well as McMahon’s detailed discussion regarding PennDOT design and permitting.*

*Tangible Work Products:*

- Plan Sheets to include:
  - Cover Sheet (Preliminary and Final Submissions)
  - Permit Sheet (Preliminary and Final Submissions)
  - Existing Conditions Plan
  - Material Plan (in coordination with NL)
  - Layout and Improvements Plan, including the Trail, parking (10-12 cars), etc.
  - Grading and Stormwater Plan with supporting PRP documentation
  - Sedimentation and Erosion Control Plan
  - Traffic Improvements and Road Crossing Plan, per ADA and PennDOT and MUCTD standards.
  - Demolition and Tree Removal Plan, with supporting tree replacement chart per Radnor Shade Tree Commission requirements (in coordination with NL)
  - Landscape Plan and Details prepared by NL
  - Maintenance and Construction Phasing Plan
  - Fencing Plan (in coordination with NL)
  - Details
  - Permit Plan Sheets as required for permit applications (PennDOT, PaDEP, US COE, etc.)
- Specifications (Planting and Site Furnishings to be provided by NL)
- Design Analysis and reports to include:
  - Stormwater Management Report, including trail and roadway design drainage and PRP credits
  - Erosion and Sediment Control Report
  - Hydrologic and Hydraulic (H&H) Analyses for Stream Crossings
  - ADA Curb Ramp and Pedestrian Facility Design
- PennBID line item sheet
- Prevailing wage rates for bid package.

We assume that all plans will be developed at 1"=25' for trail layout, parking, etc. and 1"=5' at critical locations such as bridge crossings.

Twenty-seven (27) printed sets of the Preliminary and Final Plan submission sets will be provided at full and half-size (11"x17"), including two (2) thumb drives of all documents.



### *Task 3 Identification and Coordination of Necessary Permitting*

We will identify and prepare any required permits and approvals for completion of the Darby Paoli Trail and associated improvements. In the Schematic Phase, we will confirm the anticipated permits, design requirements, and associated timeline implications. We will prepare all applications, supporting materials, required calculations and reports, associated material and will submit the materials to the relevant agencies on behalf of the Township. This includes preparation and submission of Preliminary and Final Land Development Plans and supporting material per the requirements of the Radnor Township ordinances.

A detailed description of anticipated PennDOT Highway Occupancy Permit application components is described in the attached proposal from McMahon Associates.

#### *Tangible Work Products:*

- Preliminary agency meetings at the Schematic Phase with PennDOT, PaDEP/US COE, and Delaware County Conservation District.
- Land Development applications and submissions for the Preliminary and Final Plan packages, including all required plans and reports.
- Preparation and submission of Joint Permit Application materials for major stream crossings (2), and General or Small Permits applications per agency recommendations for minor stream and wetland crossings (currently estimated as at least 7), with supporting reports and documentation.
- Preparation and submission of PennDOT Highway Occupancy Permit application and supporting materials.
- Preparation and submission of Post-construction Stormwater and Erosion and Sediment Control NPDES permit application.

### *Task 4 Preparation of Construction Estimate*

We will prepare three (3) cost estimates:

- Schematic Design – Following confirmation of the Schematic Design, we will prepare a Schematic Level Cost Estimate to allow the Township and NL to confirm the design and phasing decisions, and confirm design.

- Preliminary Design/Bid Documents - We will prepare an itemized engineer's estimated probable cost of construction, including quantities, units, unit costs for each item including labor, permitting and materials. The Cost Estimate will include construction costs, inspection costs, construction management costs and a 15% contingency.
- Final Design/Bid Documents - We will prepare an itemized engineer's estimated probable cost of construction, including quantities, units, unit costs for each item including labor, permitting and materials. The Cost Estimate will include construction costs, inspection costs, construction management costs and a 15% contingency.

*Tangible Work Products:*

- Schematic Design Construction Cost Estimate
- Preliminary Bid Document Construction Cost Estimate
- Final Bid Document Construction Cost Estimate

*Task 5 Preparation of Construction Sequencing Plan*

We will prepare a Construction Sequencing Plan for construction. We will also prepare a Permit Timeline and update this timeline to indicate the anticipated schedule of permit applications and estimated permit approvals. As previously discussed, we do not anticipate that permit approvals can be obtained within 175 calendar days after award of Contract. Design documentation can occur within 175 days if design decisions by the Township and NL are made in a timely manner and unforeseen design conditions are not encountered.

*Tangible Work Products:*

- Construction Sequencing Plan
- Permit Application and Anticipated Approval Timeline

*Task 6 Meetings and Final Design Package Presentation*

*We have assumed preparation for and attendance at the meetings identified below, including bi-weekly coordination meetings with NL and the Township. We have assumed that some bi-weekly meetings can be web-based (i.e. GoTo or WebEx). We have also assumed that preparation of materials such as agendas, reference images, powerpoint presentations, boards, and other supporting materials will be necessary for public and Board meetings, and we will prepare these. We have included anticipated agency meetings.*



*For similar projects, we have conducted resident / stakeholder meetings outside or on-site, and can engage residents in a meeting at the site as appropriate or beneficial.*

*Tangible Work Products:*

- Board of Commissioners      2 meetings
- Residents      4 meetings
- Planning Commission      2 meetings
- Parks & Recreation      2 meetings
- Township Manager & staff      2 meetings
- Bi-weekly NL/Staff      Assume 13 meetings, 6 in person
- Regulatory Meetings      6 meetings (2 PennDOT, 2 PaDEP/COE, 1 DCCD, 1 other)

*Task 7 Preparation of Construction Bid Documents*

We will prepare the Final Construction and Bid Documents, including General and Special Conditions, for posting on PennBID. We anticipate that the Construction Bid Documents may be finalized after all regulatory agency and Township approvals.

*Tangible Work Products:*

- Final Construction and Bid Documents to include:
  - Table of Contents
  - Advertisement and Notice to Bidders
  - Information for Bidders
  - Bid Form (xls format)
  - Form of Proposal
  - Form of Contract
  - Bond Forms
  - General Conditions
  - Special Conditions
  - Technical Specifications
  - Appendices
- Addendum if applicable
- Twenty-seven (27) printed and bound bid documents
- Two (2) thumb drives of all documents.

### *Task 8 Project Bidding Process*

We will support the Township and NL through the Bid Process by scheduling and attending pre-bid meetings, answering questions and responding to Requests for Information (RFIs), confirming that all potential bidders receive timely responses, and addressing all applicable questions from PennBID.

Following the Bid Solicitation, we will analyze and compare bids and the Construction Cost Estimate. We will contact bidder references and prepare a memo recommending the best qualified bidder to the Township BOC for bid award.

#### *Tangible Work Products:*

- Scheduling and attendance at Pre-Bid
- Response to questions and RFIs
- Coordination of PennBID responses
- Review and comparison of qualified bids
- Recommendation memo for Bid Award



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### Main Bridges

We understand that the proposed Multi-use main trail follows Darby Paoli Road, but in one location this route requires a new bridge to cross Little Darby Creek. The Saw Mill Field loop will also require a connecting bridge to Saw Mill Park spanning Little Darby Creek. Both of the bridges will be in the floodplain, and most probably within the existing floodway. This will require close coordination with the trail civil design and location to obtain the appropriate permits from the Corps of Engineers and Pennsylvania DEP.

The first bridge, on the main trail, is proposed to cross Little Darby Creek near an existing sanitary sewer crossing. This sewer crosses the creek and sits roughly on the stream bottom and is concrete encased. When we visited the site, we noticed that this sewer pipe effectively dams the creek here, and the water is flowing along the pipe towards the north and has created extensive erosion at the north end which has severely undercut the stream bank. It appears that a reasonable approach to this bridge crossing would be to stabilize the erosion along the sewer crossing and restore the streambank to its original location. This would allow new bridge abutments to be constructed in the restored area and the required span length would be reduced. We propose two soil borings at this location (one on each bank of the creek). The purpose of the borings would be to determine the soil properties and the depth to any underlying bedrock. If the bedrock is sufficiently deep, we would design the foundations as a concrete pier cap supported on screw anchors to minimize excavation and possible wetlands impacts. If the bedrock is shallow, the bridge abutments will need to be founded on the bedrock.

This bridge will also have to be designed to provide a large enough hydraulic opening for water/floods. There is an existing concrete box culvert style bridge just upstream of this location with a moderate size opening. The choice of bridge will have an effect on the profile and opening of the proposed crossing. One option could be a through weathering steel truss structure with a timber deck that would be ideal in this location. The materials will blend with the surroundings, and the weathering steel will provide years of relatively maintenance free service. The deck could also be lightweight concrete. We will work to provide information and recommendations to support decisions by NL and the Township.

The bridge will be designed for pedestrian load, and we understand that the Township would also like them to support HS10 loads. To support HS10 loads, the bridges will need to be 10 to 12 feet wide. The pedestrian loading for this will be just as much, if not more than the HS10 load, so there will be no issues for the extra required loading.

The second bridge, connecting the Saw Mill Field loop to Saw Mill Park, will share some of the design aspects of the first bridge. We will perform two soil borings here as well, and propose the same foundations types as above. However, this bridge crossing will be located higher above the creek elevation due to the streambank cross section here. This allows a greater variety of bridge types that could be constructed here. A through truss similar to the first crossing could work, but immediately upstream there is a stone/concrete arch bridge (for Saw Mill Road) that evokes a historic feeling and the new bridge might fit the surroundings better if it was an arch like structure (either concrete or steel). Whichever style of bridge is constructed, it will also be sized for hydraulic openings based on its location in the floodplain.

We understand that the type, style and material chosen for the new bridges will have an effect on the construction schedule and cost, and we will work with Radnor Township and NLT to guide the designs to meet the objectives and budget of the project. We also understand that a pre-fab style bridge may be appropriate for these locations and will assist the Township and NL with these decisions.



### **Loop trail structures**

The Saw Mill Field loop trail and the spur trails through the Quarry filed will require some structures to span some small streams/tributaries.

One of these crossing in the Quarry filed is an existing pipe culvert. The upstream end of this stream passes under Darby Paoli Road in a box culvert. We will use the results of the design for the box culvert (extension or new small bridge) to determine if the existing pipe culvert can remain. If it must be replaced, we would suggest a crossing/bridge similar in style to a board walk structure. It would be supported on screw anchors to eliminate excavation and impacts to any possible wetlands.

The Saw Mill Field loop trail crossing nearer to the creek is ideally suited for a boardwalk style bridge as mentioned above.

### **Boardwalk structure**

The proposed alignments of the main, loop and spur trails may encounter wetlands. As mentioned in other sections of this proposal, wetland areas will be mapped to determine any impacts to the trails and alignments. If it is determined that the best solution is to pass the trails through wetland areas, we propose to construct a board walk structure founded on screw anchors in these areas. This would minimize the impacts during construction and provide a final alignment/trail that will not affect the wetlands.



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September 18, 2017

Ms. Michele C. Adams, P.E.  
Meliora Design  
259 Morgan Street  
Phoenixville, PA 19460

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RE: **Darby Paoli Multi-use Trail and Associated Amenities**  
McMahon Scope of Services  
Radnor Township, Delaware County, PA  
McMahon Project No. 917673.2P

Dear Michele:

McMahon Associates, Inc. (McMahon) appreciates the opportunity to submit this proposal to provide engineering services to Meliora Design for portions of the multi-use trail proposed along Darby Paoli Road (S.R. 1015) between Willows Road and Lawrence Lane. As discussed and for the purpose of this proposal, the proposed McMahon engineering services will include the following:

- Provide topographic survey for the entire project limits.
- Provide design for the trail along Darby Paoli Road.
- Provide design assistance to Meliora for two (2) boardwalk structures adjacent to PennDOT's Right-of-Way along Darby Paoli Road.
- Provide design for a new low volume driveway at Sawmill Field.
- Provide design for ADA curb ramp facilities and a flashing pedestrian crossing system for the proposed crossing of Paoli Darby Road to the Rye Field path
- Provide design for ADA curb ramp facilities at the crossings of Sawmill Road, the new driveway at Sawmill Field, and Lawrence Road.
- Coordinate with PennDOT for a Highway Occupancy Permit (HOP) for the items listed above.\*

As discussed, Meliora will design the two additional "off-road" stream crossings near Skunk Hollow. Meliora will also handle all environmental permitting (NPDES, GP-7s, E&S plans, etc.), hydrologic and hydraulic analysis, and geotechnical (bridge foundation report) services.

\* Should Radnor Township receive Transportation Alternative (TA) federal or PennDOT Multimodal Transportation (MTF) funds for the project, the design and plans will be required to be completed in accordance with *PennDOT's Transportation Program Development and Project Delivery Process, Design Manual 1, September 2015*. For the TA process, all engineering work will be coordinated with the assigned Project Implementation Coordinator at the Delaware Valley Regional Planning Commission (DVRPC) and with the assigned PennDOT Project Manager for the MTF process. The specific tasks and milestones for both processes include a scoping field view, environmental clearance, right-of-way clearance, utility clearance, safety review, traffic review, construction review and the submission of the Final Plans, Specification and Estimate (PS&E). If it is determined that these additional scope of services are required, then an addendum proposal will be provided for approval.

Corporate Headquarters: Fort Washington, Pennsylvania

Serving the East Coast from 12 offices throughout the Mid-Atlantic, New England, and Florida



**Please note that this proposal is the product of McMahon Associates, Inc. and it has been prepared exclusively for review only by Meliora Design. Further distribution of this proposal or any portion of its contents to anyone else is not authorized without the written consent of McMahon Associates, Inc.**

### *Scope of Services*

The services to be performed pursuant to this agreement are strictly limited to those expressly set forth herein. No additional services will be provided unless requested and agreed to in writing. The specific tasks to be completed as part of this proposal are as follows:

#### *Task 1 – Topographic Survey and Base Plan*

McMahon's subconsultant, ProMaps, Inc. will obtain aerial survey data utilizing aerial photography. Due to the presence of dense vegetation cover throughout the project limits, we anticipate that it will be necessary to supplement the mapping with ground survey, even with an aerial survey flown in winter. The aerial and ground survey will be performed as follows.

- 1) An aerial survey will be performed of the overall park area where the trail system is proposed, including the Willows, the Rye Field, the Quarry Field, Skunk Hollow, and Saw Mill Field areas. McMahon highly recommends the aerial flight take place in winter when the least vegetation is present. Performing the flight at the appropriate time will increase the accuracy of the map and reduced ground based measurements in obscured areas. ProMaps Inc. will prepare the aerial survey.

The ground survey will be performed in the following areas.

- 2) The area in proximity of the existing parking area in the Willows Park along the proposed route of the Willow Trail Spur: Wetlands are expected in this area and McMahon will locate the delineation flagging.
- 3) An area along the proposed Quarry Trail Road near the parcel boundary between the Willows and the Quarry Field site: The topography drops off steeply, and due to the dense vegetation, the aerial survey may not acquire accurate data in this area.
- 4) The intersection of Darby Paoli Road and Newtown Road: McMahon will pick up detailed ground data for 200 feet in each direction at this intersection to ensure accurate data for the proposed pedestrian crossing on Darby Paoli Road. Detailed ground shots will be taken on the western side of Darby Road.
- 5) The area along the proposed Riparian Trail where it will cross the existing swale: Detailed ground shots of the water feature will be performed in this area. Wetlands are anticipated in this area and McMahon will locate the delineation flagging.
- 6) The area along Darby Paoli Road where the proposed Darby Road Trail crosses an existing culvert: Detailed ground shots of the water feature will be performed in this area. Wetlands are anticipated in this area and McMahon will locate the delineation flagging.

- 7) The area of the proposed Darby Road trail at the Little Darby Creek: 1000 feet of stream cross-sections for Hydrology and Hydraulic analysis will be obtained from 500 feet in each direction of the proposed trail. Detailed ground shots of the water feature will be performed in this area. Wetlands are anticipated in this area and McMahon will locate the delineation flagging.
- 8) The area of the existing bridge that crosses the Little Darby Creek in the Skunk Hollow section: 1000 feet of stream cross-sections for Hydrology and Hydraulic analysis will be obtained from 500 feet in each direction of the proposed trail. Detailed ground shots of the water feature will be performed in this area. Wetlands are anticipated in this area and McMahon will locate the delineation flagging.
- 9) Approximately 1,700 feet of topographic survey along Paoli Darby Road north from Sawmill Road along the route of the proposed Darby Road Trail: This is a heavily wooded area and therefore, supplemental ground survey is anticipated.
- 10) The intersection of Darby Paoli Road and Sawmill Road: McMahon will pick up detailed ground data for 200 feet in each direction at this intersection to ensure accurate data for the proposed pedestrian crossing on Sawmill Road. Detailed ground shots will be taken on the roadway.
- 11) The area of the proposed Sawmill Loop trail crosses the Little Darby Creek near the existing Saw Mill Park: 1000 feet of stream cross-sections for Hydrology and Hydraulic analysis will be obtained from 500 feet in each direction of the proposed trail. Data for the hydraulic opening of the existing concrete arch bridge along Sawmill Road and detailed ground shots of the water feature will be collected in this area. Wetlands are anticipated in this area and McMahon will locate the delineation flagging.
- 12) The area along Darby Paoli Road where the proposed Darby Road Trail crosses an existing culvert: This area is approximately 990 feet south from Sawmill road. Detailed ground shots of the water feature will be performed in this area. Wetlands are anticipated in this area and McMahon will locate the delineation flagging.
- 13) The area along the proposed Sawmill Loop Trail where it crosses an existing culvert leading to Darby Creek: This area is approximately 1500 feet south from the existing concrete roadway bridge on Sawmill Road. Detailed ground shots of the water feature will be performed in this area. Wetlands are expected in this area and McMahon will locate the delineation flagging.
- 14) The ground survey will include trees, located at average breast height, with descriptions of the trunk caliper and species to the best of McMahon's abilities as surveyors. Trees will only be located within 50' of the proposed trail route.

#### Procedures

- The Horizontal and Vertical datum will be established using GPS-RTK.
- The topographic survey will be performed by aerial and ground based measurement techniques.



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- Horizontal location of topographic features on roadways will extend approximately 25 feet beyond the existing edge of roadway, within supplemental ground based limits.
- The Right-of-Way lines will be reconstructed utilizing public records and resources. AutoCAD Civil 3D will be used to prepare the survey. All drawing files will be in an AutoCAD Format (DWG) with a base point of 0,0,0 and a North Rotation of 0 degrees.

#### **Requirements**

- Roadway and Trail cross sections will be obtained on station at 50-foot intervals in the areas of supplemental survey. Additional cross sections will be obtained where there are grade breaks or a change in the terrain within the specified limits.
- Edge of road and edge of shoulder locations within the specified limits.
- Curbs, sidewalks and curb ramp locations.
- Drainage inlets and end walls manhole covers within the specified limits.
- Visible utilities including water and gas valves, junction boxes and any other utility structures on or near the roadway or proposed trail area within the specified limits.
- Location of underground utilities which are identifiable from utility markings and/or plan information from the results of PA One Call inquiry. The locations of underground utilities are only approximate.
- Stream centerline will be located within the specified limits.
- Any other topography within the specified limits which may interfere with grading, construction, or paving operations.

#### **Boundary**

McMahon Associates will show the property lines determined from the recorded deed information. This estimate is not for a boundary survey.

#### **Access**

This access is limited to only the areas near the project scope and will occur during normal business hours. We assume that Radnor Township will coordinate with all property owners.

#### **Research**

Deed and plan research will be conducted on the park parcels within the limits outlined above: Right-of-way research will be performed utilizing PennDOT, County and local township public records and resources provided by the client.

#### **Plan of Survey**

Final mapping will include the required information. In addition, property owner names, block numbers, unit numbers and tax parcel numbers will be shown on the AutoCAD drawing.

#### **Exclusions**

No Sanitary manhole inverts will be obtained.

### *Task 2 – Schematic Phase (20% Design)*

As discussed with Meliora, the team will prepare a detailed preliminary plan during the schematic phase while the topographic survey is being completed. The preliminary plan will be prepared based on available aerial and GIS data. McMahon will focus on the horizontal geometry for the proposed multi-use trail along Darby Paoli Road, including the following:

#### **Preliminary Highway Occupancy Permit Plans**

- Preliminary trail improvement (geometric) plans, drawn to 1"=25' scale
- Preliminary layout of the proposed boardwalk structures and flashing pedestrian crossing system
- Preliminary profile for the proposed trail based on available 2-foot contours
- Preliminary typical roadway sections at critical locations, indicating lane, shoulder, buffer, trail widths and boardwalk structures
- Preliminary Cross-sections at critical locations (1"=5' scale)
- Preliminary Pavement marking plans
- Preliminary Truck turning templates

The preliminary plans will be submitted to PennDOT and will include a cover letter summarizing the project, and the targeted permitting and construction schedules. McMahon will also prepare a preliminary Engineer's opinion of construction cost estimate based on the preliminary plans.

### *Task 3A – Highway Occupancy Permit (HOP) Plans*

The specific work to be completed for this task will include the preparation of "line and grade" plans and the final design plans for the proposed trail and associated improvements described above and preparation of the HOP submission package.

After finalizing the topographic survey and receiving feedback from PennDOT, the Township, and the project stakeholders on the preliminary plan prepared during the schematic phase, McMahon will prepare a "line and grade" submission for PennDOT. After getting additional feedback, the plans will be refined into a final design and a complete HOP submission package will be submitted to PennDOT. The HOP submission package will include plans for construction, design reports, supporting analysis, and documentation. The Highway Occupancy Permit Plans will be prepared in accordance with **Pennsylvania Code Title 67, Transportation, Chapter 441, "Access to and Occupancy of Highways by Driveways and Local Roads", Publication 282, "Highway Occupancy Permit Handbook", Publication 13M, "Design Manual (Part 2)", and any available District 6-0 Highway Occupancy Permit procedures and guidelines.** The HOP submission package will include the following:

#### **Highway Occupancy Permit Plans**

- Trail and roadway improvement (geometric) plans, drawn to 1"=25' scale
- Trail grading plans, drawn to 1"=25' scale
- Low-volume driveway grading plan, drawn to 1"=25' scale



- Profile for the proposed trail and new low-volume driveway
- Trail and roadway drainage requirements, including existing drainage features, proposed drainage swales, proposed inlet and pipe layout, pipe profiles, adjacent storm water management facilities (designed by Meliora) and standard details, as necessary
- Typical trail, boardwalk and road sections, indicating pavement structure type and depths
- Cross-sections at 50-foot intervals (1"=5' scale) as needed for the proposed trail.
- List of standard details from PennDOT RC-drawings and appropriate construction notes.
- Maintenance and Protection of Traffic Plans (Publication 213 figures only).
- Pavement marking and signing plans
- Plans will include standard District 6-0 HOP notes and sight distance analysis
- Engineer's opinion of construction cost estimates (two estimates in addition to the schematic estimate)

### **Design Analysis and Reports**

- **Roadway Drainage Design** – We assumed that Meliora will design all trail drainage facilities (infiltration trenches, amended soil grass buffers, etc.) and modifications to the existing drainage facilities along Darby Paoli Road to accommodate the storm water runoff from the proposed multi-use trail. PennDOT will require that the drainage analysis include drainage area/runoff calculations, inlet spread analysis, capacity calculations for existing and proposed swales and storm pipe, as necessary. The drainage design must be in accordance with PennDOT Publication 13M, Design Manual, Part 2, Chapter 10 and PennDOT Publication 584, PennDOT Drainage Manual.
- **ADA Curb Ramp and Pedestrian Facility Design** – PennDOT will require new curb ramps to be designed in accordance with the current ADA standards. It is anticipated that a total of eight (8) curb ramps will need to be designed. McMahon will prepare ADA curb ramp plans and details in accordance with current PennDOT standards, drawn to 1"=5' scale (including the preparation of Technically Infeasible Forms, if necessary) for these curb ramps. *If additional ADA facilities are required, then an addendum proposal for the extra ADA curb ramp design work will be provided for your approval.*

McMahon will assist with required Highway Occupancy Permit documentation as described below.

- **PennDOT Electronic Permitting System (EPS)** – On November 1, 2011, PennDOT implemented a new web-based HOP application system. All HOP plans, reports and documentation will need to be uploaded electronically to the EPS. The applicant will need to complete PennDOT's M-950AA "Applicant's Authorization for Agent to Apply for Highway Occupancy Permit" Form. Additionally, the applicant must apply for a Business Partner ID (BPID) prior to the issuance of the Highway Occupancy Permit. The BPID will be used in the establishment of a billing account for the invoicing of construction inspection costs. McMahon will assist with the registration and submission process.
- **Shared-Use Trail Agreement** – McMahon will coordinate with PennDOT to obtain the required agreement documentation. McMahon will provide the PennDOT forms to the Township for execution. McMahon will submit the forms to PennDOT. The Township and

McMahon will be required to coordinate directly with PennDOT Central Office to finalize the documentation. It is noted that PennDOT will likely require the Township to maintain all aspects of the trail, center median and any associated storm water improvements.

- **Adjacent Property Owner Coordination** – Notification will be necessary to adjacent property owners where improvements occur along their frontage. McMahon will prepare the notification letters for your review and McMahon will send them to the property owners via certified mail.

Our office anticipates that five (5) submissions to PennDOT will be necessary, including the preliminary (schematic) submission, “line and grade” submission, and three (3) final submissions. The specific work to be completed for this task will include coordinating with PennDOT District 6-0’s Engineering and Permits Units throughout the resubmissions to discuss plan and report information required as part of the HOP application. This will include coordination (written and verbal correspondence) with units such as Traffic, Operations, Drainage, Right-of-Way and Plans. McMahon will copy the Township on all HOP submission. Upon receipt of review comments from PennDOT and the Township, revisions to the plans will be completed and resubmitted for approval. If PennDOT requests any major or unreasonable design revisions, McMahon will meet with you to discuss the review letter and determine the scope of services and fee required to address those comments.

### ***Task 3B – Boardwalk Design Assistance***

We understand that the Township prefers a pedestrian bridge structure that will be cost-effective and fit within the natural setting of the existing woodlands and wetlands. As discussed with Meliora, we recommend a timber boardwalk structure on helical piles. We have experience using this type of pedestrian structure in similar park settings, as it is cost effective, can support an emergency vehicle, and can minimize disturbance to vegetation and wetlands during and after construction. Additionally, a timber structure can be maintained by the Township’s Public Works staff.

As discussed, we assume that Meliora will complete all structural design, environmental permitting, hydrologic and hydraulic analysis, and geotechnical (bridge foundation report) services for the pedestrian boardwalks. With Meliora’s oversight, McMahon will prepare a preliminary structure plan which will be included with the “line and grade” HOP submission. The plan will include a general plan and elevation sheet, typical section, and general notes sheet. McMahon will also provide a preliminary cost estimate. McMahon is assuming one round of comments for the preliminary structure submission. McMahon will address the comments and coordinate with PennDOT, as necessary, for preliminary approval before proceeding to final design. The final design plans will include specifications and details for all structural lumber, decking, and railings, as coordinate with Meliora. We will submit the plans to PennDOT as part of the HOP application.

### ***Task 3C – Pedestrian Flasher Design***

This task consists of the preparation of the required analysis and signal plans for the proposed flashing pedestrian crossing system for the trail crossing of Paoli Darby Road to the Rye Field path.



McMahon will complete a pedestrian flasher warrant analysis for the proposed crossing, in accordance with procedures outlined in the Manual on Uniform Traffic Control Devices, FHWA, 2009 edition, and PennDOT Publication 212, Official Traffic Control Devices - Chapter 212. The analysis will include a sight distance evaluation and an ADA pedestrian study. The pedestrian study will include an evaluation and documentation of pedestrian needs and functionality of any existing facilities at the project intersections. McMahon will complete and submit the Pedestrian Accommodation at Signalized Intersections Checklist (Publication 149, Chapter 19 – *Traffic Signal Design Handbook*).

If the signal is warranted, McMahon will prepare a flasher permit plan that will be consistent with PennDOT District 6-0 standards for the intersection. The plan will be generated utilizing the trail construction plans prepared in Task 3A. The plan will be presented at 1"=25' scale, and will illustrate right-of-way, locations of supports, traffic signs, pavement marking, and trail and roadway widths. We will submit the plans to PennDOT 6-0 for review as part of the HOP application.

### ***Task 3D – Utility Coordination***

The design of the proposed trail will attempt to minimize utility pole relocations where feasible. However, some relocations or guy wire adjustments may be unavoidable. McMahon will notify the Pennsylvania One Call System of design and construction activity for the project and will send plans and request markups and as-built plans from utilities with involvement at this location. As utility plans are received, they will be checked against the field data to verify utility locations and will then be plotted on the project construction plans. During the design phase of the project, we will attempt to avoid utility conflicts with the resources that are available to us. Our office will identify all known utilities that will need to be relocated to the best of our ability. Based on the existing utility information received for the project area, it may be recommended to perform test holes to determine existing utility depths and locations that may be in conflict with the proposed roadway improvements. McMahon can provide a separate proposal for existing utility exploration as deemed necessary during the design phase of the project, and as requested by you. Please refer to the Exclusions section below for additional information regarding utilities.

If relocations are necessary, McMahon will identify the facility owners and coordinate with them for their required relocation documents and fees, as necessary. McMahon will forward the relocation documents to the Township for execution. Please note that relocation payment is typically required before the relocation work can be scheduled and performed by the utility company. However, if there are underground facilities that cannot be relocated and a design change is required, McMahon will coordinate with you to discuss the redesign and determine the scope of services and fee required to revise the plans.

Since it is difficult to determine the level of effort required to coordinate with each facility owner, the services described in this task are on a time-and-materials, estimate basis. At the approach of the limit, we will contact you to determine if authorization for further services are necessary. McMahon will send a utility status update once the Highway Occupancy Permit is issued. At that point, the client, their construction manager or their contractor will need to take on any remaining utility coordination that may be necessary to finalize relocation contracts or schedule relocation work.

#### *Task 4 – Meetings and Correspondence*

As discussed with Meliora, McMahon will attend the following meetings:

- Two (2) Board of Commissioners Meetings (one preliminary, one final)
- Four (4) Neighbor Meetings, to present concepts and ideas to residents and interested parties
- Two (2) Planning Commission Meetings (one preliminary, one final)
- Two (2) Parks and Recreation Meetings (one preliminary, one final)
- Biweekly, web-based “Go-To” meetings (up to 12 meetings total)

#### *Task 5 – Bid Document Preparation*

This task involves preparation of contract documents for the bidding of the construction work associated with project scope included in this proposal. The efforts associated with this task include:

##### **Construction Bid Documents**

McMahon will provide you with specifications adequate to clarify the contract documents associated with the Highway Occupancy Permit Plans. McMahon will provide the contract documents to you and the Township in order for you to compile the complete project package. We will incorporate equipment preferences of the Township into the construction specifications for the pedestrian flasher. The bid documents will consist of a construction documents memorandum that includes the following, as necessary:

- Summary of proposed roadway improvements
- List of contract drawings and permit documents
- List of applicable PennDOT and Township publications and construction specifications
- Special provisions, if necessary
- Summary of utility coordination status and associated contractor responsibilities

At your request, McMahon will respond to inquiries made by Contractors regarding the construction plans associated with McMahon’s portion of the scope of work.

#### *Exclusions*

**Underground Exploratory Work for Utilities** – During the topographic survey and utility coordination tasks, McMahon will make every attempt to avoid utility conflicts with the resources that are available to us. Our office will identify all known utilities that will need to be relocated to the best of our ability. *McMahon Associates, Inc. is not liable for any unmarked utilities. All design will be based on field mark-outs, utility as-built plans and notification responses. In many cases, subsurface utility engineering (SUE) involving underground exploratory work is highly recommended or required by law; however, our office will only provide these services under a separate addendum as authorized by you. If the facility owners cannot provide sufficient as-built plans, subsurface exploration work may be necessary to determine the depth and location of the utilities.*

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Right-of-Way Plans and Coordination – Based on the information included in the RFP, it appears that the proposed improvements may be constructed on lands owned by Natural Lands Trust and Radnor Township. Therefore, this proposal assumes that no Right-of-Way acquisition/dedication or easements will be required. If it is determined during the design phase that Right-of-Way or easements will be needed, McMahon can provide a scope of services and fee estimate.

Additionally, this proposal does not include design related to any traffic analysis, major design revisions, pavement cores, CBR testing, coordination with property owners, preparation of plats and legal descriptions, wetland delineation, environmental studies or permits, E&S plans, storm water management design, erosion and sediment pollution control plans, soil testing for infiltration, subsurface utility exploration work, construction coordination, construction oversight and inspection, survey during construction and design revisions during construction. The services to be performed pursuant to this agreement are strictly limited to those expressly set forth herein. No additional services will be provided unless requested and agreed to in writing.

#### *Fee*

The total fee for the foregoing scope of work is being provided under separate cover. Please refer to the attached cost breakdown for additional information.

#### *Conditions*

The conditions of this agreement call for the signed execution of this contract. This agreement and Exhibits hereto sets forth the entire understanding between the parties with respect to the subject matter hereof, supersedes any and all prior understandings whether written or oral with respect to the subject matter hereof and may not be altered, modified, changed, amended, or waived in any manner, except in a writing signed by all of the parties hereto. The conditions of this agreement call for the execution of this contract with the understanding that **invoices for services will be submitted monthly and are payable within 30 days of issuance**. All projects with overdue invoices exceeding 90 days will be subject to a stoppage of all work. Any changes in the specific work program described above will result in an adjustment of the conditions and fees. If the terms of this contract, as contained herein, and in the attached Standard Provisions for Professional Services are agreeable to you, please execute both copies of the agreement below in the space provided and return one signed copy to our office.

If you should have any questions, or require further information, please feel free to contact me.

Sincerely,



Steve Giampaolo, P.E.

Regional Highway Design Service Leader



Ms. Michele Adams, P.E.

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cc: Jamie Kouch, P.E., McMahon Associates, Inc.  
Ken Swift, PLS, McMahon Associates, Inc.

**Accepted by Meliora Design:**

**I have reviewed all terms of this contract, and I am authorized to sign in the space below for execution of this contract.**

By: \_\_\_\_\_  
(Signature of Authorized Representative)

\_\_\_\_\_  
(Printed Name of Authorized Representative)

Title: \_\_\_\_\_

Date: \_\_\_\_\_

**Please provide your Accounts Payable contact information:**

Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

In the space below, please provide any details, including the date invoices are due each month for prompt payment:

# MELIORA DESIGN

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*Civil, Water Resources, and Structural Engineering*

*Meliora (mel/ee/or/ah): Latin for "always better"*

## **Section 4 – Work Plan/Schedule**

## MELIORA DESIGN

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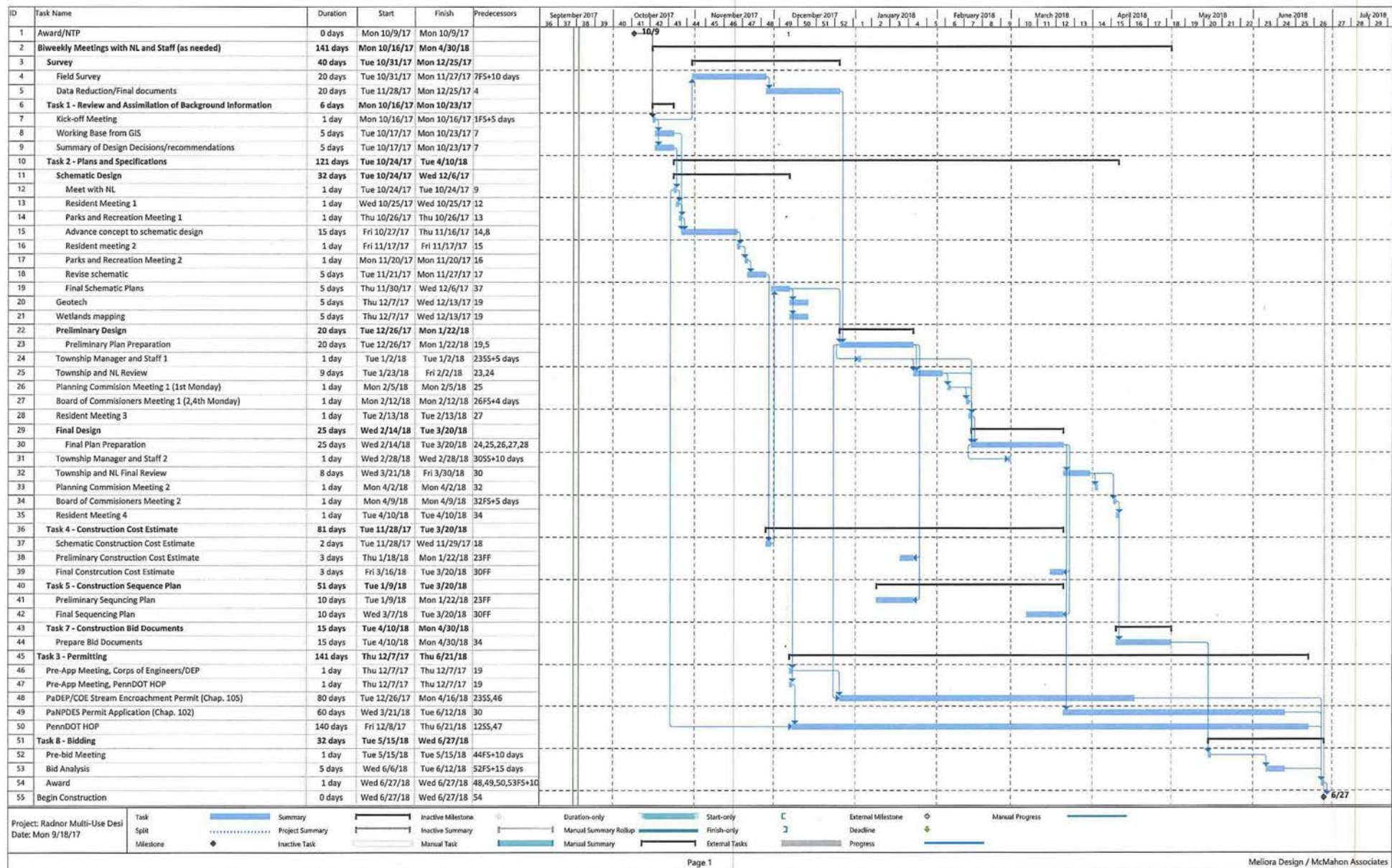
*Civil, Water Resources, and Structural Engineering*

*Meliora (mel/ee/or/ah): Latin for "always better"*

Our Proposed work plan is described in Section 3 within our discussion of the scope of work.

We have prepared the following schedule to show the timetable of how we will accomplish the work and to show the relationships between all of the proposed meetings and the Tasks and deliverables.







# MELIORA DESIGN

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*Civil, Water Resources, and Structural Engineering*

*Meliora (mel/ee/or/ah): Latin for "always better"*

## **Section 5 – Cost Proposal**



Darby Paoli Trails  
Meliora Detailed Fee Estimate  
Prepared for Radnor Township  
September 18, 2017

**Meliora Design - Fee Estimate - Summary**

Task 1 Review and Assimilation of Background Information	Hours	Labor	Expenses	Total Fee
Task 1 Review and Assimilation of Background	44	\$ 5,540	\$ 120	\$ 5,660
Task 2 Preparation of Design Plans and Specifications				
Task 2 Preparation of Design Plans and Specifications	1004	\$ 127,400	\$ 2,550	\$ 129,950
Task 3 Identification and Coordination of Necessary				
Task 3 Identification and Coordination of Necessary	208	\$ 22,900	\$ 460	\$ 23,360
Task 4 Preparation of Construction Cost Estimate				
Task 4 Preparation of Construction Cost Estimate Total	62	\$ 7,180	\$ 150	\$ 7,330
Task 5 Preparation of Construction Sequencing Plan				
Task 5 Preparation of Construction Sequencing Plan Total	32	\$ 3,520	\$ 80	\$ 3,600
Task 6 Meetings and Final Design Package Presentation				
Task 6 Meetings and Final Design Package Presentation	212	\$ 30,920	\$ 620	\$ 31,540
Task 7 Preparation of Construction Bid Documents				
Task 7 Preparation of Construction Bid Documents Total	72	\$ 8,560	\$ 180	\$ 8,740
Task 8 Project Bidding Process				
Task 8 Project Bidding Process Total	58	\$ 6,930	\$ 140	\$ 7,070
Subconsultants				
McMahon - Survey and Trail Design/Permitting				\$ 275,450
Printing \$4 per sheet (27 sets at 75 sheets per set x 2)				\$ 16,000
Totals	Hours	Labor	Expenses	Total Fee
Totals	1692	\$ 212,950	\$ 4,300	\$ 508,700

Mellora Design - Fee Estimate - Detailed

Title	Principal Engineer	Engineer	Structural Engineer	Water Resources Engineer	Technical Aide	Senior Structural Engineer	Total Hours	Total Fee
Billing Rate	\$190.00	\$125.00	\$110.00	\$95.00	\$85.00	\$190.00		
<b>Task 1 Review and Assimilation of Background Information</b>								
Kick-off Meeting	4	4					8	\$ 1,260
Update GIS for Schematic Design		8		8			16	\$ 1,760
Summary of initial analysis, findings, recommendations	4	8		8			20	\$ 2,520
<b>Task 1 Review and Assimilation of Background Information Hours</b>	<b>8</b>	<b>20</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>44</b>	
<b>Task 1 Review and Assimilation of Background Information Total</b>	<b>\$ 1,520</b>	<b>\$ 2,500</b>	<b>\$ -</b>	<b>\$ 1,520</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ 5,540</b>
<b>Task 2 Preparation of Design Plans and Specifications</b>								
Schematic Design analysis and documentation	24	40	80	40		40	224	\$ 29,760
Preliminary Land Development Plan Design and Documentation	8	40		80	80		208	\$ 20,920
Plan Sheets							0	\$ -
Specifications							0	\$ -
Draft SW, E&S reports							0	\$ -
Structures			120			80	200	\$ 28,400
Final Land Development Plan Design and Documentation	8	24		40	40		112	\$ 11,720
Plan Sheets							0	\$ -
Specifications							0	\$ -
SW, E&S, H&H reports							0	\$ -
Structures			160			100	260	\$ 36,600
<b>Task 2 Preparation of Design Plans and Specifications Hours</b>	<b>40</b>	<b>104</b>	<b>360</b>	<b>160</b>	<b>120</b>	<b>220</b>	<b>1004</b>	
<b>Task 2 Preparation of Design Plans and Specifications Total</b>	<b>\$ 7,600</b>	<b>\$ 13,000</b>	<b>\$ 39,600</b>	<b>\$ 15,200</b>	<b>\$ 10,200</b>	<b>\$ 41,800</b>		<b>\$ 127,400</b>
<b>Task 3 Identification and Coordination of Necessary Permitting</b>								
Regulatory meetings included under Task 6							0	\$ -
NPDES application and supporting materials and reports		8		24			32	\$ 3,280
PaDEP/COE Joint Permit applications and H&H analysis	4	80		80			164	\$ 18,360
Application materials for Township submittals		4		8			12	\$ 1,260
							0	\$ -
<b>Task 3 Identification and Coordination of Necessary Permitting Hours</b>	<b>4</b>	<b>92</b>	<b>0</b>	<b>112</b>	<b>0</b>	<b>0</b>	<b>208</b>	
<b>Task 3 Identification and Coordination of Necessary Permitting Total</b>	<b>\$ 760</b>	<b>\$ 11,500</b>	<b>\$ -</b>	<b>\$ 10,640</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ 22,900</b>
<b>Task 4 Preparation of Construction Cost Estimate</b>								
Schematic Cost Estimate	2	8		8			18	\$ 2,140
Preliminary Cost Estimate	2	8		8			18	\$ 2,140
Bid Document Cost Estimate	2	8		16			26	\$ 2,900
							0	\$ -
<b>Task 4 Preparation of Construction Cost Estimate Hours</b>	<b>6</b>	<b>24</b>	<b>0</b>	<b>32</b>	<b>0</b>	<b>0</b>	<b>62</b>	
<b>Task 4 Preparation of Construction Cost Estimate Total</b>	<b>\$ 1,140</b>	<b>\$ 3,000</b>	<b>\$ -</b>	<b>\$ 3,040</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ 7,180</b>
<b>Task 5 Preparation of Construction Sequencing Plan</b>								
Construction Sequencing Plan		8		16			24	\$ 2,520
Permit application and approvals timeline		8					8	\$ 1,000
							0	\$ -
<b>Task 5 Preparation of Construction Sequencing Plan Hours</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>32</b>	
<b>Task 5 Preparation of Construction Sequencing Plan Total</b>	<b>\$ -</b>	<b>\$ 2,000</b>	<b>\$ -</b>	<b>\$ 1,520</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ 3,520</b>
<b>Task 6 Meetings and Final Design Package Presentation</b>								
Pre-application meeting PaDEP/COE		4				4	8	\$ 1,260
PaDEP/COE Meeting		4					4	\$ 500
DCCD Meeting		4					4	\$ 500
Addl regulatory/agency meetings		4					4	\$ 500
BOC Meetings (2)		8					8	\$ 1,000
Resident Meetings (4)	8	16			8	8	40	\$ 5,720
Planning Commission Meetings (2)		8					8	\$ 1,000
Parks & Recreation Meetings (2)	4	8				8	20	\$ 3,280
Township & Staff Meetings (2)	4	8				8	20	\$ 3,280
NL & Staff (assume 13 meetings, 6 in person)	16	24	16	16		24	96	\$ 13,880
<b>Task 6 Meetings and Final Design Package Presentation Hours</b>	<b>32</b>	<b>88</b>	<b>16</b>	<b>16</b>	<b>8</b>	<b>52</b>	<b>212</b>	
<b>Task 6 Meetings and Final Design Package Presentation Total</b>	<b>\$ 6,080</b>	<b>\$ 11,000</b>	<b>\$ 1,760</b>	<b>\$ 1,520</b>	<b>\$ 680</b>	<b>\$ 9,880</b>		<b>\$ 30,920</b>
<b>Task 7 Preparation of Construction Bid Documents</b>								
Construction Bid Document Preparation		24	16	24		8	72	\$ 8,560
							0	\$ -
<b>Task 7 Preparation of Construction Bid Documents Hours</b>	<b>0</b>	<b>24</b>	<b>16</b>	<b>24</b>	<b>0</b>	<b>8</b>	<b>72</b>	
<b>Task 7 Preparation of Construction Bid Documents Total</b>	<b>\$ -</b>	<b>\$ 3,000</b>	<b>\$ 1,760</b>	<b>\$ 2,280</b>	<b>\$ -</b>	<b>\$ 1,520</b>		<b>\$ 8,560</b>
<b>Task 8 Project Bidding Process</b>								
Pre-Bid meeting		6					6	\$ 750
RFIs, etc		8	4	16		4	32	\$ 3,720
Review and recommendation of bids		4	4	8		4	20	\$ 2,460
							0	\$ -
<b>Task 8 Project Bidding Process Hours</b>	<b>0</b>	<b>18</b>	<b>8</b>	<b>24</b>	<b>0</b>	<b>8</b>	<b>58</b>	
<b>Task 8 Project Bidding Process Total</b>	<b>\$ -</b>	<b>\$ 2,250</b>	<b>\$ 880</b>	<b>\$ 2,280</b>	<b>\$ -</b>	<b>\$ 1,520</b>		<b>\$ 6,930</b>

**Darby Paoli Trails  
Meliora Detailed Fee Estimate  
Prepared for Radnor Township  
September 18, 2017**

**Meliora Design - Fee Estimate - Detailed**[illegible]



# MELIORA DESIGN

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*Civil, Water Resources, and Structural Engineering*

*Meliora (mel/ee/or/ah): Latin for "always better"*

## **Section 6 – Method of Billing**

We understand that Radnor Township prefers to pay upon completion of Tasks outlined in our proposal.

While we understand Radnor's preference, it is our experience that unforeseen delays can cause some tasks to take much longer to complete than expected. Therefore, Meliora Design prefers the Method of Billing for this project be monthly invoices (labor and expenses) based on percent complete of Tasks and subtasks listed below. This would result in partial payments each month, but it will facilitate cash flow for Meliora and our team members.

Task 1 – Review and Assimilation of Background Information

Schematic Design

Survey

Task 2 – Plans and Specifications

Preliminary Design

Final Design

Task 3 – Permitting

Task 4 – Construction Cost Estimate

Schematic Design

Preliminary Design

Final Design

Task 5 – Construction Sequence Plan

Task 6 – Meetings

Task 7 – Construction Bid Documents

Task 8 – Bidding

# MELIORA DESIGN

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## Section 7 – Billing Rates



## MELIORA DESIGN

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Civil, Water Resources, and Structural Engineering

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### 2017 Professional Billing Rates

<i>Category</i>	<i>Billing Rates</i>
Principal	\$190.00
Senior Structural Engineer	\$190.00
Senior Engineer	\$135.00
Engineer	\$125.00
Staff Engineer	\$110.00
Water Resources Engineer	\$95.00
Structural Engineer	\$110.00
Senior Water Resources Designer	\$120.00
Water Resources Designer	\$95.00
Structural Designer	\$90.00
Water Resources Planner/ GIS Specialist	\$85.00
CAD Technician	\$75.00
Technical Aide	\$85.00
Designer	\$55.00 - \$60.00

**McMAHON ASSOCIATES, INC.**  
**STANDARD PROVISIONS FOR PROFESSIONAL SERVICES**  
**JANUARY 1, 2017**

**SERVICES**

McMahon Associates, Inc. reserves the right to make adjustments for individuals within these classifications as may be desirable in its opinion by reason of promotion, demotion, or change in wage rates. Such adjustments will be limited to the manner in which charges are computed and billed and will not, unless so stated in writing, affect other terms of an agreement, such as estimated total cost. The following rates will apply to actual time devoted by McMahon Associates, Inc. staff to this project computed to the nearest one-half hour.

<b><u>PERSONNEL</u></b>	<b><u>HOURLY RATES</u></b>
Field Traffic Count Personnel	\$ 50.00
Survey Technician	\$ 75.00
Technician/Word Processor I	\$ 80.00
Technician/Word Processor II	\$ 85.00
Technician/Word Processor III	\$ 90.00
Technician/Word Processor IV	\$100.00
Engineer I	\$110.00
Engineer II	\$115.00
Engineer III	\$125.00
Engineer IV	\$130.00
Engineer V	\$140.00
Engineer VI	\$150.00
Party Chief	\$120.00
Traffic Control/Construction Specialist	\$135.00
Chief of Surveys	\$140.00
Senior Engineer/Planner I	\$155.00
Senior Engineer/Planner II	\$165.00
Senior Engineer/Planner III	\$170.00
Senior Engineer/Planner IV	\$180.00
Senior Engineer/Planner V	\$190.00
Senior Engineer/Planner VI	\$200.00
Senior Engineer/Planner VII	\$210.00
Senior Engineer/Planner VIII	\$220.00
Associate	\$230.00
Senior Associate	\$240.00
Principal	\$250.00

**TERMS**

1. **Invoices** - Invoices will be provided on a monthly basis and will be based upon percentage of completion or actual hours, plus expenses. Payment is due to McMahon Associates, Inc. within 30 days of the invoice date. Unpaid balances beyond 30 days are subject to interest at the rate of 1.5% per month. This is an annual percentage rate of 18%.
2. **Confidentiality** - Technical and pricing information in this proposal is the confidential and proprietary property of McMahon Associates, Inc. and is not to be disclosed or made available to third parties without the written consent of McMahon Associates, Inc.
3. **Commitments** - Fee and schedule commitments will be subject to renegotiation for delays caused by the client's failure to provide specified facilities or information, or any other unpredictable occurrences.
4. **Expenses** - Automatic Traffic Recorder equipment usage will be billed at \$25.00 per 24-hour count. Incidental expenses are reimbursable at cost, plus an administration fee of 10%. These include subconsultants, reproduction, postage, graphics, reimbursement of automobile usage at the IRS-approved rate, parking and tolls. Expenses which by company policy are not billed as reimbursable expenses to clients and therefore, will not be billed as part of this contract include the following: air travel, rental car, lodging, meals, and long distance phone charges between McMahon Associates offices. If it becomes necessary during the course of this project to travel elsewhere, those travel costs will be treated as reimbursable expenses. These expenses will be reflected in the monthly invoices.
5. **Attorney's Fees** - In connection with any litigation arising from the terms of this agreement, the prevailing party shall be entitled to all costs including reasonable attorney's fees at both the trial and appellate levels.
6. **Ownership and Use of Documents** - All original drawings and information are to remain the property of McMahon Associates Inc. The client will be provided with copies of final drawings and/or reports for information and reference purposes.
7. **Insurance** - McMahon Associates, Inc. will maintain at its own expense Workman's Compensation Insurance, Comprehensive General Liability Insurance and Professional Liability Insurance and, upon request, will furnish the client a certificate to verify same.
8. **Termination** - This agreement may be terminated by the authorized representative effective immediately on receipt of written notice. Payment will be due for services rendered through the date written notice is received.
9. **Binding Status** - The client and McMahon Associates, Inc. bind themselves, their partners, successors, assigns, heirs, and/or legal representatives to the other party to this Agreement, and to the partners, successors, assigns and legal representatives of such other party with respect to all covenants of this Contract.

## MELIORA DESIGN

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Civil, Water Resources, and Structural Engineering

Meliora (mel/ee/or/ah): Latin for "always better"

September 28, 2017

Stephen F. Norcini, PE  
Township Engineer  
Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

RE: Darby Paoli Multi-use Trail and Associated Amenities  
Adjusted Fee

Dear Mr. Norcini:

Please find attached Meliora's Fee Proposal for the Darby-Paoli Multi-use Trail, which includes all items per our discussion. Specifically, the proposed fee includes all requested work items as identified in the RFP and described in our Proposal to provide "turnkey" services, including:

- Geotechnical Testing for structures and stormwater systems
- As-built surveys for FEMA MT2 application (if needed)

Our Fee Proposal is **\$480,500**. Additionally, we have also estimated \$18,000 for wetlands delineation and associated wetland reports required for the trail permitting, as shown on the attached Fee Proposal.

We are very, very excited by the opportunity to support Radnor Township and Natural Lands in bringing this multi-use trail system to implementation. We thank you for your consideration, and if you have any questions or concerns, we can be reached at 610-933-0123, or [michelea@melioradesign.com](mailto:michelea@melioradesign.com) and [march@melioradesign.com](mailto:march@melioradesign.com).

Sincerely yours,



Michele C. Adams, PE, LEED AP  
Principal



Marc B. Henderson, PE  
Project Manager



Darby Paoli Trails  
Meliora Detailed Fee Estimate  
Prepared for Radnor Township  
September 18, 2017

Revised 9/28/17

Meliora Design - Fee Estimate - Summary

Task 1 Review and Assimilation of Background Information	Hours	Labor	Expenses	Total Fee
<b>Task 1 Review and Assimilation of Background Information Total</b>	44	\$ 5,740	\$ 120	\$ 5,860
Task 2 Preparation of Design Plans and Specifications				
<b>Task 2 Preparation of Design Plans and Specifications Total</b>	924	\$ 116,440	\$ 2,330	\$ 118,770
Task 3 Identification and Coordination of Necessary Permitting				
<b>Task 3 Identification and Coordination of Necessary Permitting Total</b>	200	\$ 23,060	\$ 470	\$ 23,530
Task 4 Preparation of Construction Cost Estimate				
<b>Task 4 Preparation of Construction Cost Estimate Total</b>	62	\$ 7,420	\$ 150	\$ 7,570
Task 5 Preparation of Construction Sequencing Plan				
<b>Task 5 Preparation of Construction Sequencing Plan Total</b>	32	\$ 3,680	\$ 80	\$ 3,760
Task 6 Meetings and Final Design Package Presentation				
<b>Task 6 Meetings and Final Design Package Presentation Total</b>	196	\$ 30,040	\$ 610	\$ 30,650
Task 7 Preparation of Construction Bid Documents				
<b>Task 7 Preparation of Construction Bid Documents Total</b>	64	\$ 7,920	\$ 160	\$ 8,080
Task 8 Project Bidding Process				
<b>Task 8 Project Bidding Process Total</b>	58	\$ 7,110	\$ 150	\$ 7,260
Subconsultants				
McMahon - Survey and Trail Design/Permitting				\$ 270,000
Printing \$1.25 per sheet (27 sets at 75 sheets per set x 2)			\$ 5,020	
<b>Totals</b>	<b>Hours</b>	<b>Labor</b>	<b>Expenses</b>	<b>Total Fee</b>
<b>Totals</b>	1580	\$ 201,410	\$ 9,090	\$ 480,500
Wetlands Delineation and Report (J. Schmid)			\$ 18,000	
<b>Grand Total</b>	1580	\$ 201,410	\$ 27,090	\$ 498,500

**RESOLUTION NO. 2017-113**  
**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE**  
**COUNTY, PENNSYLVANIA, AWARDING THE**  
**PROFESSIONAL SERVICES CONTRACT FOR THE**  
**ENGINEERING, DESIGN, PERMITTING, AND**  
**CONSTRUCTION DRAWINGS FOR THE SKUNK**  
**HOLLOW EMERGENCY SANITARY SEWER TRUNK**  
**LINE REPLACEMENT TO MELORIA DESIGN,**  
**INCORPORATED**

***WHEREAS,*** the sanitary sewer trunk line at Skunk Hollow was temporarily repaired under a Pennsylvania Department of Environmental Protection Emergency permit

***WHEREAS,*** it is imperative to replace portions of the trunk line and restore the streambank to affect a permanent repair.

***WHEREAS,*** Meliora Design, Incorporated has submitted a cost proposal to perform the necessary survey, design, engineering, and permitting in the amount of \$63,285

***NOW, THEREFORE,*** be it ***RESOLVED*** by the Board of Commissioners of Radnor Township does hereby award the Professional Services Contract for the Engineering, Design, Permitting, and Construction Drawings for the Skunk Hollow Emergency Sanitary Sewer Trunk Line Replacement to Meliora Design, Incorporated in the amount of \$63,285

***SO RESOLVED*** this 9th day of October, A.D., 2017

**RADNOR TOWNSHIP**

By: \_\_\_\_\_

Name: Philip M. Ahr

Title: President

ATTEST: \_\_\_\_\_

Robert A. Zienkowski


Manager/Secretary

# Radnor Township

## PROPOSED LEGISLATION

DATE: October 3, 2017

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer 

CC: Robert A. Zienkowski, Township Manager  
William M. White, Assistant Township Manager/Finance Director  
John Rice, Township Solicitor

LEGISLATION: **Resolution #2017-113:** Awarding the Professional Services Contract for the Engineering, Design, Permitting, and Construction Drawings for the Skunk Hollow Emergency Sanitary Sewer Trunk Line Replacement

**LEGISLATIVE HISTORY:** This item has not been before the Board of Commissioners previously.

**PURPOSE AND EXPLANATION:** During the afternoon of September 13<sup>th</sup>, 2017, the Township was notified of an odor of sewage in the area of Little Darby Creek, in Skunk Hollow Park. Township personnel responded immediately, and found that the stream, due to an exposed concrete sewer encasement, had eroded the stream bank and undermined approximately thirty linear feet of the trunk line. The undermined asbestos cement (AC) pipe sheared, and sanitary sewer discharged into the stream. The Pennsylvania State Department of Environmental Protection (DEP) was notified immediately. That evening, we met with contractors (GodwinXylem for bypass pumping, Seifert Construction and ProPipe for the repair). Meliora Design prepared the DEP Emergency Permit Application for further remediation work. The next day, the contractors were able to “band-aide” the pipe to stop the leak. Shortly thereafter, the “band-aide” repair was replaced with a new section of pipe.

To address the situation permanently, I intended to use CIPP (Cured In Place Pipe), a process where a resin impregnated fiberglass liner is inserted, and heated, to provide a rehabilitated pipe. While the by-pass pumping of the trunk line was in place, Township personnel were able to televise the trunk line. Upon viewing the televising of the trunk line, it was determined that the condition of the AC pipe was unsuitable as a host pipe for the CIPP. To further complicate the situation, the exposed concrete encasement, which was acting as a dam in Little Darby Creek, was also in poor condition, and the AC pipe encased was in poor condition.

A meeting was held at the site with a representative of DEP, Marc Henderson of Meliora Design, and myself. The issues discussed were: the replacement of the concrete encasement in a fashion that does not dam Little Darby Creek, permanent stream bank restoration of the area where the pipe was undermined, and replacement of the pipe. Based on the outcome of that meeting, it was determined that the permitting process would take months to complete. Since the encasement would remain unchanged during that time through the winter, we are installing a HDPE liner in the pipe that is encased, to reduce the probability of a failure (and subsequent sanitary sewer discharge into the creek) during the design and permitting period.

To perform the necessary survey, design, engineering, and permitting, Meliora Design, Incorporated has submitted a cost proposal.



**IMPLEMENTATION SCHEDULE:** Pending Board of Commissioners authorization, a requisition would be entered into our financial system. Upon receipt of a purchase order number, Meliora Design would begin work immediately. It is anticipated that the permit from DEP would be obtained in four months of the Notice to Proceed. After speaking to the solicitor, the construction phase of the work would not be able to be performed on an emergency basis. My plan would be to have the bidding documents prepared to be released as soon as the permit is received, and request the Board of Commissioners authorize the receipt of sealed bids for the construction process.

**FISCAL IMPACT:** This project will be funded from the "02" Sewer Fund. The base price of the proposal is \$51,885. The pipe will not be replaced in its existing location. This provides two areas of savings: 1.) bypass pumping will be kept at a minimum and 2.) the cost of disposing of the asbestos cement pipe (except for the stream crossing) will be eliminated. If we need to move the installation of the new pipe well away from the existing location, additional survey and environmental work will be required, at a cost of \$11,400. I respectfully request the Board of Commissioners award the contract on the base and additional work; \$63,285. *If this work is not needed, the Township will not be invoiced for it.*

**Recommendation:** *Staff respectfully recommends that the Board of Commissioners Award the Professional Services Contract for the Engineering, Design, Permitting, and Construction Drawings for the Skunk Hollow Emergency Sanitary Sewer Trunk Line Replacement to Meliora Design, Incorporated, in the amount of \$63,285.*

**MOVEMENT OF THE LEGISLATION:** Due to the precarious condition of the Skunk Hollow Sanitary Sewer Trunk Line, it is imperative that design begin as soon as possible. I respectfully request that the Board of Commissioners approve the attached Resolution.

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## MELIORA DESIGN

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*Civil, Water Resources, and Structural Engineering*

*Meliora (mel/ee/or/ah): Latin for "always better"*

October 3, 2017

Mr. Stephen F. Norcini  
Township Engineer  
Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

RE: Emergency Sewer Repair Design and Permitting Services

Dear Mr. Norcini:

Meliora Design is pleased to submit this proposal to provide Professional Design and Consulting Services for Emergency Sewer Repair Design and Permitting Services. We appreciate the opportunity to support Radnor Township to remedy this emergency.

### Project Understanding

We understand that this work effort is being conducted under an Emergency Authorization due to an unexpected sewer break related to an exposed section of sewer in Little Darby Creek. Radnor Township has already begun the repair work to stop the sewer leak and clean up the stream impacted by sewage. Due to the proximity of this sewer to the Little Darby Creek, an emergency permit is required by PaDEP to conduct work in and around the stream. This includes the installation of temporary bypass piping, excavation, and placement of fill. Because the sewage leak has only temporarily been halted, a permanent solution will need to be found to ensure that a more leaks do not occur in the future. This scope and fee assumes a base scope that includes work related to replacing the existing sewer in place (or very closely offset from the existing sewer location) and only restoring the stream channel in the immediate vicinity of the stream being impacted by the current sewer crossing. An alternate or additional two tasks have been included if modifications to the existing sewer do not provide the best permitting, construction, and sewer capacity feasibility following the Task 2 Alternatives Analysis.

This alternate or additional scope would include sewer pipe design and stream restoration in a secondary location that does not overlay with where the base scope is assumed. Because the stream restoration and sewer abandonment would need to be accomplished, .

### Scope of Work and Deliverables by Task

For this work effort, Meliora Design will provide much of professional services. Because of the emergency nature of this proposal, we have included detailed fees for subconsultants that may become necessary for specific portions of the work. This work includes wetland studies and topographic survey. We would propose to use several of the same consultants included in our Radnor Trail Proposal for these services. Detailed information on the qualifications and experience of these consultants can be found in that previously submitted proposal. Cost estimates/proposals from each consultant are attached or included in our proposal. The following are the six tasks we've identified for the project based on available information.

### Task 1 – Sewer Survey and Sewer Alternatives Analysis (Base Scope)

In this task, Meliora Design will review existing sewer information, assemble publicly available GIS topography, and gather survey information to inform the existing condition of the sewer pipe between the two manholes upgradient and three manholes down gradient from the stream crossing. This information will be used to determine if alternatives to replacing the sewer at the existing crossing are possible to provide more cover over the pipe and avoid continued impact to Little Darby Creek. As a part of this analysis, one other crossing location will be studied using 2-ft. LIDAR contours to determine whether similar hydraulic capacity can be provided with an alternative sewer alignment. Two sewer cross-sections will be analyzed in AutoCAD Storm and Sanitary Analysis for comparison of the flow characteristics in each potential pipe alignment. A narrative describing the benefits and drawbacks of each alternative with respect to cost, permitting, constructability, and ability to maintain pipe capacity.

#### *Tangible Work Products:*

- Review existing sewer information
- Conduct a desktop analysis of existing pipe capacity and potential for sewer alternative alignments
- Gather survey data to inform the base design
- Prepare 2 design alternatives for Township review
  - Existing Conditions evaluated in Storm and Sanitary Analysis
  - Two alternative sewer alignments in Storm and Sanitary Analysis
- One day of environmental assessment to rule out impacts along the existing sewer alignment. This task will be conducted prior to survey in order to capture any flagging used during the assessment.

### Task 2 – Sewer Repair Documentation (Base Scope)

In this task, Meliora Design will document the preferred sewer option to include plan, profile, details, and specifications for the construction of the permanent sewer repair. The extent of the base repair is assumed to existing between the two manholes upgradient and three manholes downgradient of the existing stream crossing of Little Darby Creek. This base scope of pipe repair would include the sewer repair or replacement in kind with documentation including the demolition of the existing pipe and manholes, removal of existing encasement obstructing stream, design of the new pipe and manholes in roughly the same location as existing, and a profile to coincide with adjustments to allow for an improved stream crossing. It is likely that the existing sewer will remain active during construction of the new sewer to limit the need to run bypass pumps. Abandonment of the existing sewer will be documented to follow installation of the new sewer conveyance and depend on the chosen sewer replacement approach.

#### *Tangible Work Products:*

- New Sewer Plan, Profile, and Details
- Demolition Plan for Existing Sewer
- Erosion and Sediment Control Plan and Details
- Specifications

### Task 3 – Stream Restoration Documentation (Base Scope)

In this task, Meliora Design will document the restoration of the existing stream reach impacted by the exposed encased sewer. The goal of this work would be to restore the hydraulic capacity of the reach that has been diminished by the exposed encasement and restore and protect the stream banks and bed bottom from future erosion. The extent of the repair is assumed to be within 100 ft. upstream and downstream of the existing sewer pipe crossing. It is assumed that this base scope will be necessary to repair existing damage regardless of the location of the repaired sewer. If the sewer repair is located within the region identified in this task, the restoration will be coordinated with the permanent sewer repair. By limiting the extent of the repairs to 200 linear feet, this



project will qualify for a Small Projects Joint Permit through the Chapter 105 program if the environmental assessment indicates no wetlands are present in the work area. It is assumed a new sewer alignment outside of the existing alignment will be within 100 ft. of the existing crossing eliminating the need for additional permitting and design work.

*Tangible Work Products:*

- Construction Documents
  - Existing Conditions Plan
  - Stream restoration Plan and Details
  - Erosion and Sediment Control Plan and Details
- Specifications

#### Task 4 – Permitting (Base Scope)

In this task, Meliora Design will permit the sewer replacement and the stream restoration through PaDEP. A submission to the Delaware County Conservation District for review of the Erosion and Sediment Control plan associated with the proposed construction activities will also be required. By keeping the project scope to a limited area, the project will qualify for a Small Projects Joint Permit through the Chapter 105 program. Both the utility work and stream restoration can be permitted under the Joint Permit without the need for additional applications. It is assumed that the alternative sewer repair will not increase the permit scope beyond what is identified in the base scope of this task.

*Tangible Work Products:*

- Small Projects Joint Permit Application
  - Erosion and Sediment Control Submission to DCCD.
  - H&H Analysis
  - Alternatives Analysis Narrative

#### Task 5 – Additional Investigation for Sewer Repair Documentation (Optional Scope)

In this task, Meliora Design will coordinate the additional investigation needed to develop the preferred sewer option outside of the existing sewer alignment. The extent of the repair is assumed to exist outside the two manholes upgradient and three manholes downgradient of the existing stream crossing of Little Darby Creek. This will create the need for additional survey along the proposed alignment and will impact a different section of stream with the sewer crossing. This sewer repair will likely be installed while the existing sewer is active and only require bypass pumping during cut over from existing to proposed if at all. The design within this task is included in work previously identified within Task 2. The exception to this is the additional survey and environmental assessment needed to evaluate the alternate sewer route and the coordination of the additional data collection.

*Tangible Work Products:*

- Additional Survey
- Additional Environmental Assessment
- Coordination of Subconsultants and review of work products

**Emergency Sewer Repair Design and Permitting Services**  
**Meliora Fee Estimate**  
**Prepared for Radnor Township**  
**October 3, 2017**


**Meliora Design - Fee Estimate - Summary**


<b>1. Sewer Survey and Sewer Alternatives Analysis</b>						
<b>Sewer Survey and Sewer Alternatives Analysis Total</b>	<b>42</b>	<b>\$</b>	<b>5,190</b>	<b>\$</b>	<b>210</b>	<b>\$ 5,400</b>
<b>2. Sewer Repair Documentation</b>						
<b>Sewer Repair Documentation Total</b>	<b>30</b>	<b>\$</b>	<b>3,330</b>	<b>\$</b>	<b>140</b>	<b>\$ 3,470</b>
<b>3. Stream Restoration Documentation</b>						
<b>Stream Restoration Documentation Total</b>	<b>46</b>	<b>\$</b>	<b>5,490</b>	<b>\$</b>	<b>220</b>	<b>\$ 5,710</b>
<b>4. Permitting</b>						
<b>Permitting Total</b>	<b>107</b>	<b>\$</b>	<b>12,085</b>	<b>\$</b>	<b>490</b>	<b>\$ 12,575</b>
<b>5. Additional Investigation for Sewer Repair Documentation (Optional Scope)</b>						
<b>Additional Investigation for Sewer Repair Documentation (Optional Scope) Total</b>	<b>8</b>	<b>\$</b>	<b>1,080</b>	<b>\$</b>	<b>50</b>	<b>\$ 1,130</b>
<b>6. Subconsultants</b>						
Survey			\$ 18,000	\$		\$ 18,000
Additional Survey (Task 5)			\$ 10,000	\$		\$ 10,000
Environmental Assessment (base) - 4 days			\$ 5,600	\$		\$ 5,600
Environmental Assessment (Task 5) - 1 days			\$ 1,400	\$		\$ 1,400
<b>Subconsultants Subtotal</b>			<b>\$ 35,000</b>	<b>\$</b>		<b>\$ 35,000</b>

**Totals** 233 \$ 27,175 \$ 36,110 \$ 63,285

We understand that this work effort has an aggressive timeline, with a goal of completion of this work as soon as possible. We look forward to the opportunity to support Radnor Township and appreciate you reaching out to our firm to complete this project. If you have any questions or concerns, we can be reached at 610-933-0123, or MicheleA@Melioradesign.com and MarchH@Melioradesign.com.

Sincerely yours,

  
Michele C. Adams, PE, LEED AP  
Principal

  
Marc B. Henderson, PE  
Project Manager



**Gannett Fleming**

*Excellence Delivered As Promised*

**Date:** September 29, 2017

**To:** Stephen Norcini, P.E. – Township Engineer

**From:** Roger Phillips, PE

**RE:** 301 South Wayne Avenue – Stormwater Waiver Request  
Grading Permit Application – GP 17-155

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The applicant is requesting a waiver of §245-22 of the Township's Stormwater Management Ordinance which requires the maximizing of the ground water recharge capacity of the area being developed.

The applicant has performed infiltration testing at one (1) location on the site. The required infiltration is not feasible due to the infiltration testing results of zero inches per hour. As a result, the applicant has made provisions for the installation of an underground system that includes ten (10) 50-gallon ADS "Flo-wells" to address the volume management requirements due to the lack of infiltration at the site.

The applicant has requested to appear before the Board of Commissioners to discuss the implementation of the above mentioned stormwater system.

In addition to the above mentioned issues, the applicant must address the following items prior to the issuance of the Grading Permit:

1. The applicant appeared before the Shade Tree Commission on September 21, 2017. Any comments developed as a result of this meeting must be addressed prior to the issuance of the grading permit.
2. The applicant must appear and receive approval from the Historical Architecture Review Board and the Board of Commissioners prior to the issuance of the Grading Permit.
3. The applicant must address the remaining grading permit review comments per the Gannett Fleming email dated September 6, 2017.





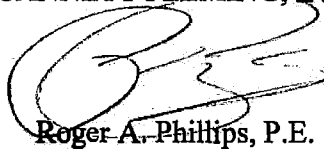
***Gannett Fleming***

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If you have any questions or require any additional information, please contact me.

Very truly yours,

GANNETT FLEMING, INC.

A handwritten signature in black ink, appearing to read 'R. Phillips', is written over the company name.

Roger A. Phillips, P.E.  
Senior Project Manager



# MESKO Engineering Associates



Steve Norcini  
Radnor Township  
301 Iven Avenue North Penn Road  
Wayne, PA 19087

RE: GP 17-155  
301 South Wayne Avenue  
Radnor, PA

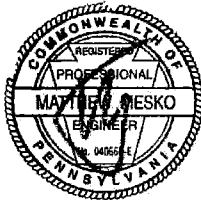
Dear Mr Norcini:

We attempted to conduct a percolation test at the above referenced location. At a depth of 3' no measurable percolation was evident. Therefore, the site is unsuitable for water quality requirements.

Due to the infiltration limitation, Section 245-22(A).(2).(c). (2) the minimum infiltration requirement of .5" cannot be achieved. Therefore the applicant is requesting relief from Section 245-22 - "Groundwater Recharge". Due to the limitations of the underlying geology.

If you should have any questions or comments please do not hesitate to contact me.

Sincerely,



Matthew Mesko, PE  
MESKO Engineering Associates, Inc  
PA - 40660E  
NJ - 37833

Main Office  
672 Exton Commons  
Exton, PA 19341  
MESKOengineering.com



Phone:(610) 280-9541  
Fax:(610) 280-9542







# ZONING HEARING BOARD APPLICATION

## TOWNSHIP OF RADNOR

301 IVEN AVENUE

WAYNE, PA 19087

610-688-5600

FAX: 610-971-0450

www.radnor.com

www.radnor.com

TOWNSHIP USE ONLY	
APPEAL #	3001
FEE:	900
DATE RECEIVED:	8/29/17

**GENERAL INFORMATION:** Applicants are strongly encouraged to review the "Requirements and Information for Appeals to the Zoning Hearing Board" that are attached to the application. Ten (10) copies of this application and required attachments along with an electronic submittal in pdf format (CD or thumb drive) must be filed with the Community Development Department not less than thirty (30) calendar days prior to the hearing. Incomplete applications will not be accepted for processing.

**REQUIRED FEE DUE AT FILING:** Please refer to the Consolidated Fee Schedule, as amended on our website at [www.radnor.com](http://www.radnor.com) for a copy of our current fees.

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### TYPE OR PRINT

Property Address: 284 Iven Avenue, Wayne, PA 19087

Name and address of Applicant: G & I II Radnor Crossing LP

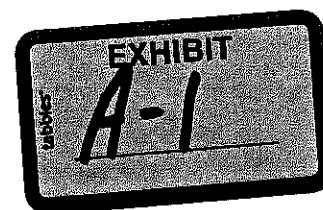
801 Old York Road, Jenkintown, PA 19046

Telephone Number: 215-887-8400 Email: kmclaughlin@scullycompany.com

Property Owner (if different than above): \_\_\_\_\_

Owner address: \_\_\_\_\_

Telephone number: \_\_\_\_\_ Email: \_\_\_\_\_



Attorney's name: Nicholas J. Caniglia, Esquire

Address: 125 Strafford Ave., Suite 110, Wayne, PA 19087

Telephone number: 610-688-2626 Email: Nick@piercecanigliataylor.com

**Relief requested and/or basis for appearing before the Zoning Hearing Board including *specific citation to any and all sections of the Zoning Code relevant to the appeal. (attach additional pages if necessary)***

Property is split zoned PA-Planned Apartment surrounded by a ring of R-1 Residential. Applicant maintained a legally non-conforming tennis court in the R-1 District. Applicant seeks to change the non-conforming use of the tennis court to parking for its apartment buildings. The number of required off-street parking spaces is legally non-conforming and Applicant seeks to reduce that non-conformity. Additionally the Applicant proposes to reduce the non-conformity as to impervious coverage. Applicant seeks a special exception pursuant to Section 280-101(A)(1) of the Zoning Code to change one non-conforming use to another non-conforming use. In the alternative Applicant seeks a variance from section 280-14 or such other relief as required under the Zoning Code consistent with the Application and the exhibits attached hereto.

**Description of previous decisions by the Zoning Hearing Board pertinent to the property, or attach copies of decisions: *(attach additional pages if necessary)***

None to Applicant's knowledge.



**Brief narrative of improvements: (attach additional pages if necessary)**

The Premises is split zoned PA-Planned Apartment with a 100 foot wide ring of R-1 zoning. The apartments and the tennis court were constructed in the mid-1960s. In the mid-1980s the zoning was changed so that the R-1 Residential ring was added to the property which made the tennis courts a legal non-conformity. The site is also legally non-conforming as to the number of parking spaces and the impervious coverage requirement. In approximately 2016 the Township required the removal of existing parking spaces due to fire-lane safety concerns. In July of 2016, the Applicant and the Township entered into a Memorandum of Understanding ("MOU") (Exhibit A-4) permitting the temporary use of the tennis courts for parking. The MOU required that Applicant apply for zoning relief in order to make the situation permanent. Applicant seeks relief to convert the tennis court area to 20 parking spaces. The Applicant will remove existing impervious coverage as well as provide stormwater management in accordance with the Township standards for the existing impervious area being converted to parking.

**List of Witness:**

Representative of Applicant – Will testify as to the need.

Civil Engineer – Will discuss plans and the stormwater system.

Applicant reserves the right to call other witnesses at the time of the hearing.

**ATTACHMENTS: Ten (10) copies of each and one (1) electronic copy in pdf format (CD or thumb drive) of the following must be provided:**

1. **Engineered plan or survey of the property drawn to scale, prepared by a registered architect, engineer or surveyor licensed in Pennsylvania, containing the following information:**
  - a) **lot lines and lot dimensions described in metes and bounds (in feet);**
  - b) **total lot area;**
  - c) **location of easements and rights of way, including ultimate rights of way;**
  - d) **location of all setback lines for existing and proposed structures;**
  - e) **location of steep slopes, floodplains, riparian buffers, wetlands, and other pertinent features;**
  - f) **location of existing and proposed improvements;**
  - g) **table of zoning data including zoning district, required setbacks, existing and proposed building coverage, impervious coverage, height, and other pertinent zoning restrictions, and any degree of compliance or noncompliance; and**
  - h) **all other features or matters pertinent to the application.**

**PLANS SHALL NOT EXCEED 24" X 36", AND MUST BE NEATLY FOLDED TO NO GREATER DIMENSION THAN 8 1/2" X 11" AT FILING**

2. **List of witnesses and summary of their testimony attached.**
3. **Photographs of the property at issue and all adjoining properties.**
4. **Copies of any written professional reports, including traffic studies, land planning studies,**

appraisals, floodplain analyses, economic forecasts or other written reports, which the applicant wishes to present at the hearing (*note: the author of the study or a qualified representative of the entity who prepared the study must appear at the meeting and be available for cross-examination*).

5. Copy of deed, lease, agreement of sale, or other authorization to file the appeal. (*note: leases or agreements of sale either must expressly permit the tenant or buyer to file an appeal, or must be accompanied by a letter from the owner clearly authorizing tenant or buyer to file the appeal*).

#### ADDITIONAL REQUIREMENTS

1. Will this application involve the subdivision of land? Applications that involve the subdivision of land are referred to the Planning Commission for review and recommendation. *Applicants will be notified of the date and time of the Planning Commission meeting*
2. Will briefs or memoranda of law be filed in accordance with requirements of the Zoning Hearing Board? (*note – 10 copies of any brief or memorandum of law to be submitted by the applicant must be received by the Community Development Department no later than 14 days before the hearing*).
3. Will the applicant (or duly authorized officer of the applicant, if applicant is not a natural person) be present at the hearing. If not, then power of attorney, notarized and in recordable form, authorizing the person who will testify on behalf of the applicant, and to bind the applicant in any proceedings of the Board must be presented at or before commencement of the hearing. Attorneys, agents, or other representatives of the applicant may not appear and testify on behalf of the applicant without power of attorney. Forms of power of attorney are available in the Community Development Department. (*note: failure to provide power of attorney will result either in the appeal being continued, or being dismissed, at the discretion of the Board*)

  
SIGNATURE OF APPLICANT

AN ADDITIONAL FEE OF \$200 SHALL BE CHARGED FOR ANY CONTINUANCE REQUESTED BY THE APPLICANT. THIS FEE SHALL BE PAID PRIOR TO THE RESCHEDULING OF THE HEARING.

## MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING ("MOU") is made as of this 18 day of July, 2016, by and between G & I II Radnor Crossing, LP ("Radnor Crossing LP"), a Pennsylvania corporation with offices at 801 Old York Road, Jenkintown, Pennsylvania, and the Township of Radnor, Delaware County, PA ("Township"), a Home Rule municipality with offices located at 301 Iven Avenue, Wayne, Pennsylvania. Radnor Crossing LP and the Township shall collectively be referred to herein as the "Parties."

### BACKGROUND

- A. Radnor Crossing LP is the owner of real property located at 284 Iven Avenue, St. Davids, Pennsylvania (the "Property"). The Property has two zoning districts. The majority of the site is in the PA Planned Residential District, but there is a 100-foot wide R-1 Residential District along Iven Avenue and the residential properties North and West of the site.
- B. The Property is improved with an apartment complex commonly known as "Radnor Crossing." Radnor Crossing LP seeks to construct certain improvements (the "Improvements") at Radnor Crossing pursuant to a grading permit application and associated plans (collectively, the "Application") to be submitted by Joseph P. Hanna, P.E. of Chambers Associates, Inc. on behalf of Radnor Crossing LP. The purpose of the Improvements is to allow for temporary parking, among other places, on Radnor Crossing's tennis court.
- C. On May 4, 2016, Radnor Crossing LP met with the near neighbors regarding the Improvements and the Application.

### AGREEMENT

NOW THEREFORE, in consideration of the foregoing recitals, the promises and covenants of each set forth below, and other good and valuable consideration, the sufficiency of which the Parties acknowledge, and intending to be legally bound hereby, the Parties agree as follows:

- 1. Concurrent with the execution of this MOU, Mr. Hanna shall submit the Application to the Township for review and approval, which the Township shall approve in its customary practice and procedures.
- 2. The Application is a mutually acceptable design to allow temporary parking at Radnor Crossing under the terms set forth herein. Slight changes in the design may occur in coordination and upon agreement between the Parties.
- 3. Radnor Crossing LP agrees to pay all reasonable bills and invoices for engineering, inspection, legal, and other professional consulting services that Township incurs for such services for the time that the Engineer, Inspector, or other professional for the Township is actually engaged as a result of the following: (1) review and approval of the Application; (2)





development of the Improvements in accordance with the terms of the approved Application; (3) review of this MOU and any other supplemental agreements, documents, etc., incidental to the approved Application and Improvements; (4) monitoring, testing and inspecting of the work required of Radnor Crossing LP under the approved Application; and (5) attendance at meetings pertaining to this agreement.

4. Because the parking proposed pursuant to the Application is temporary in nature, the Improvements do not require zoning relief and the current permitted uses at Radnor Crossing are hereby preserved and no abandonment thereof shall have occurred by way of the Application or this MOU. Should Radnor Crossing LP seek to make the proposed temporary parking and/or the Improvements permanent, Radnor Crossing LP must apply for and receive all necessary approvals in accordance with the Township Code.

5. The temporary parking at Radnor Crossing in accordance with the Application shall be valid for twelve (12) months from the date of completion of the Improvements. Radnor Crossing LP may receive up to two additional months of temporary parking pursuant to the terms of this MOU upon written request to the Township for just cause shown as reasonably determined by the Township.

6. Radnor Crossing, LP will meet with adjacent neighbors to the property and address neighborhood concerns regarding stormwater management and stormwater runoff from the new parking area subject to approval of the Township Engineer.

7. The provisions of this MOU shall be severable. If any provision of the MOU, or the application thereof, for any reason or circumstance, is to any extent held to be invalid or unenforceable, the remaining provisions of the MOU (as well as the application of all provision(s) that were held to be invalid or unenforceable to persons to entities other than those as to which they were held invalid or unenforceable) shall not be affected or impaired thereby; and each provision of the MOU shall be valid and enforceable to the fullest extent permitted by law.

8. This MOU and all disputes arising under the MOU shall be governed, construed and decided in accordance with the laws of the Commonwealth of Pennsylvania. The parties agree that any lawsuit, action, claim, or legal proceeding involving, directly or indirectly, any matter arising out of or related to the MOU, or the relationship(s) created or evidenced thereby, shall be brought exclusively in the Court of Common Pleas of Delaware County.

9. This MOU may be executed in counterparts, each of which shall be deemed an original, and all of which shall constitute one instrument; provided, that the MOU shall be effective and binding on the parties upon, but only upon, the execution of each party of one copy thereof.

10. Radnor Crossing LP and the Township each represents and warrants that it has caused this MOU to be duly authorized, executed and delivered by and through persons authorized to execute the MOU on its behalf. The parties hereto bind themselves, their heirs, executors, administrators, successors and assigns for the faithful performance of this MOU. This MOU contains the entire agreement between the parties with respect to the subject matter hereof; supersedes all prior negotiations, agreements, and undertakings between the parties with respect

to such subject matter, and cannot be changed, modified or amended except by agreement in writing signed by both parties.

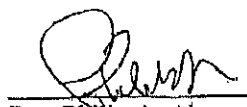
11. All provisions of this instrument shall be governed by the laws of the Commonwealth of Pennsylvania.

IN WITNESS WHEREOF, the parties hereto, intending to be legally bound, have executed this MOU as of the date first written above.

G & I II RADNOR CROSSING, LP

By: 

TOWNSHIP OF RADNOR

By:   
Philip A. Ahr  
President, Board of Commissioners

# CERTIFICATE OF APPROPRIATENESS

Radnor Township Historical and Architectural Review Board  
Radnor Township, Pennsylvania



**NAME OF OWNER:** KING TAYLOR & HEATHER E  
**OWNER ADDRESS:** 304 EDGEHILL ROAD, WAYNE, PA 19087  
**ADDRESS OF PROPERTY:** 224 S ABERDEEN AV , WAYNE PA 19087  
**APPLICATION NUMBER:** HARB-2017-16

Subject to the conditions below the above owner, having complied with the Radnor Township Historical and Architectural Review Board (HARB) process, is hereby granted this permit for the

**Re-submitting for two (2) changes - dormer details and front entry pent roof**

at the address specified and may proceed with the building permit process. If not completed within one year of the date hereof, this permit is void and new application must be made. This Approval is subject to the Applicant applying for and receiving all necessary permits and approvals; and complying with all applicable Municipal regulations. Owner specifically gives the building inspector or designated official the right to inspect the work during progress and at completion.

**NOTES AND/OR CONDITIONS OF APPROVAL:**

Approved as submitted.

**ISSUED:** Monday, October 09, 2017

**TOWNSHIP OFFICIAL**

**ACCEPTED BY APPLICANT**

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# CERTIFICATE OF APPROPRIATENESS

Radnor Township Historical and Architectural Review Board  
Radnor Township, Pennsylvania



**NAME OF OWNER:** 400 OAK LANE LLC  
**OWNER ADDRESS:** 72 FARRIER LA, NEWTOWN SQUARE, PA 1907  
**ADDRESS OF PROPERTY:** 400 OAK LA , WAYNE PA 19087  
**APPLICATION NUMBER:** HARB-2017-17

Subject to the conditions below the above owner, having complied with the Radnor Township Historical and Architectural Review Board (HARB) process, is hereby granted this permit for the

**2nd story addition above sun room; extend pent roof; change bay window roof to copper;  
remove hip roof and replace with gable roof; remove double staircase; remove shed dormer;  
add new two car garage; extend 2nd floor over porch.**

at the address specified and may proceed with the building permit process. If not completed within one year of the date hereof, this permit is void and new application must be made. This Approval is subject to the Applicant applying for and receiving all necessary permits and approvals; and complying with all applicable Municipal regulations. Owner specifically gives the building inspector or designated official the right to inspect the work during progress and at completion.

## NOTES AND/OR CONDITIONS OF APPROVAL:

Approved as submitted with the condition that they maintain the flat facia above the door.

**ISSUED:** Monday, October 09, 2017

**TOWNSHIP OFFICIAL**

**ACCEPTED BY APPLICANT**

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\_\_\_\_\_

# CERTIFICATE OF APPROPRIATENESS

Radnor Township Historical and Architectural Review Board  
Radnor Township, Pennsylvania



**NAME OF OWNER:** CAHILL KEVIN & ELIZABETH  
**OWNER ADDRESS:** 416 ST DAVIDS RD, ST DAVIDS, PA 19087  
**ADDRESS OF PROPERTY:** 416 ST DAVIDS RD , ST DAVIDS PA 19087  
**APPLICATION NUMBER:** HARB-2017-18

Subject to the conditions below the above owner, having complied with the Radnor Township Historical and Architectural Review Board (HARB) process, is hereby granted this permit for the

**Build new detached garage, expand driveway in back of house for new garage; remove existing circular driveway in front of house.**

at the address specified and may proceed with the building permit process. If not completed within one year of the date hereof, this permit is void and new application must be made. This Approval is subject to the Applicant applying for and receiving all necessary permits and approvals; and complying with all applicable Municipal regulations. Owner specifically gives the building inspector or designated official the right to inspect the work during progress and at completion.

## NOTES AND/OR CONDITIONS OF APPROVAL:

Approved as submitted.

**ISSUED:** Monday, October 09, 2017

**TOWNSHIP OFFICIAL**

**ACCEPTED BY APPLICANT**

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# CERTIFICATE OF APPROPRIATENESS

Radnor Township Historical and Architectural Review Board  
Radnor Township, Pennsylvania



**NAME OF OWNER:** KELTON COLIN M & PAIGE P  
**OWNER ADDRESS:** 430 MEADOWBROOK AVE, ST DAVIDS, PA 190  
**ADDRESS OF PROPERTY:** 430 MEADOWBROOK AV , ST DAVIDS PA 1908  
**APPLICATION NUMBER:** HARB-2017-20

Subject to the conditions below the above owner, having complied with the Radnor Township Historical and Architectural Review Board (HARB) process, is hereby granted this permit for the

**Addition to west façade of house; replace existing bow window on north elevation and replace with casement windows; new covered entrance on south elevation.**

at the address specified and may proceed with the building permit process. If not completed within one year of the date hereof, this permit is void and new application must be made. This Approval is subject to the Applicant applying for and receiving all necessary permits and approvals; and complying with all applicable Municipal regulations. Owner specifically gives the building inspector or designated official the right to inspect the work during progress and at completion.

## NOTES AND/OR CONDITIONS OF APPROVAL:

Approved as submitted.

**ISSUED:** Monday, October 09, 2017

**TOWNSHIP OFFICIAL**

**ACCEPTED BY APPLICANT**

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Remove Pine Tree Rd.  
Traffic Islands (by  
Township Staff, with rental  
equipment as necessary),  
not to exceed \$15,000  
*(Requested by  
Commissioner Booker)*

# Public Participation

# Appointments to Various Boards and Commissions



Announcement of Boards  
and Commissions  
Vacancies

# Discussion and Possible Motion of the Willows Funding

Motion to Replace the  
President of the Board and  
Elect a New Candidate  
*(Requested by  
Commissioner Booker)*



Motion to Eliminate the  
Consent Agenda  
*(Requested by  
Commissioner Nagle)*

Motion that the agenda is locked as of noon on the Wednesday prior to the meeting. Any items requested after that time shall be placed on the next regular meeting agenda

***(Requested by  
Commissioner Nagle)***

# 2018 Township Manager's Recommended Budget Presentation





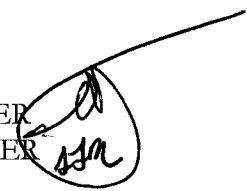
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## MEMORANDUM

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**DATE:** OCTOBER 3, 2017

**TO:** BOARD OF COMMISSIONERS

**FROM:** ROBERT A. ZIENKOWSKI, TOWNSHIP MANAGER  
STEPHEN F. NORCINI, PE, TOWNSHIP ENGINEER 

**CC:** WILLIAM M. WHITE, ASST. TOWNSHIP MANAGER/FINANCE DIR.  
STEPHEN J. MCNELIS, INTERIM DIRECTOR OF PUBLIC WORKS  
JOHN RICE, SOLICITOR  
SHADE TREE COMMISSION

**RE:** VIOLATION OF ORDINANCE NO. 2012-05 OF RADNOR  
TOWNSHIP, THE SHADE TREE ORDINANCE, SECTIONS 263-9C  
AND 263-11-A-3, BY MILLER BROTHERS, IN CONNECTION WITH  
~~GAS UTILITY CONSTRUCTION ON EAST BEECHTREE LANE:~~  
COMPENSATORY PLANTINGS AND FINE

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The Township was contacted by residents regarding damage to the trees along the shoulder of East Beechtree Lane, on the south side, as it approaches Eagle Road. Township staff including the Manager, Police, and Public Works visited the site and evaluated the damage. A slide show of this damage will be presented during the Board of Commissioners meeting.

Staff witnessed the excavation over tree roots, equipment tracks indicating that equipment traversed the tree roots, damaged trees, dirt piled against trees, and damaged street signs. The Township Arborist was contacted to evaluate the damage to the trees (please see the attached arborists report). This damage was inflicted by Miller Brothers, Incorporated, in the course of constructing a new gas line and services on the street.

Section 263-9C of the Ordinance # 2012-5-2,3,7 the Shade Tree Ordinance states:

*C. Acts injurious to street trees. Except in the case of necessity for protection of life or property, it shall be a violation of this chapter for a person to do any of the following acts:*

- (2) To interfere or come into contact with the roots of any tree*
- (3) To cut into, drive nails or spikes into, break, climb with spurs, or injure in any manner a street tree*
- (7) to place any stone, cement, or other material on a street tree or around its base so as to impede the natural passage of water and air into its roots*

Section 263-11-A-3 of the Ordinance states:

*263-11 Fines and Penalties; Enforcement*

*This chapter shall be enforced by the Township Manager and his duly authorized representatives, and the Township Manager shall carry out and enforce the recommendations of the Shade Tree Commission*

*A. Fines shall be levied under the following circumstances:*

*3) Injury or injuries (as described in 263-9C) or removal of any street or shade tree in violation of this chapter.*

It is clear that Miller Brothers is in direct violation of the provisions of the Ordinance as noted above. Due to the egregious nature of the damage to the trees by Miller Brothers, the following fines will be levied and compensatory plantings required:

- 1) Based on discussions with the Township Arborist and staff, a fine of \$20,000 will levied upon Miller Brothers, Incorporated. The proceeds will be placed in the Shade Tree Fund.
- 2) Based on the Township Arborist's report (attached), the following compensatory plantings are required, and all work to be performed and material in accordance with the report:
  - a. (5) Serbian Spruce
  - b. (7) Zalkova
  - c. (5) Rutgers Dogwood
  - d. (1) Willow Oak
  - e. (57) Miscellaneous Shrubs

In accordance with the Shade Tree Ordinance, Miller Brothers will provide a two year warranty on the planting and tree stock.



www.RockwellConsultants.com

**To:** Robert Zienkowski  
Township Manager/Secretary  
Radnor Township  
301 Iven Avenue  
Wayne, PA 19087  
**From:** John Hosbach  
**Date:** September 27, 2017  
**Subject:** Miller Brothers– Construction Damage – West Beech Tree Lane – Wayne

Dear Robert,

I have inspected the above location to opine on the condition of the subject damage and unauthorized disturbance of the Radnor Greenspace. I am quite surprised that Miller Brothers has implemented such poor best management practices in and among these subject trees and ground plane. Usually, Miller Brothers is very proactive and respectful when it comes to private property, from my observations.

Numerous trees been observed with the following impacts;

- ☐ Root disturbance – Severing, crushing, removal.
- ☐ Soil compaction
- ☐ Over-grading and unorganized stock piling of soil/debris on top of the critical root zones and the against the trunk systems.
- ☐ Trunk damage with equipment
- ☐ Due to the unknown and underlying impacts of the root intrusion, I am at this point deeming all the trees within this vicinity a “risk”.

A major effort to mitigate this greenspace prior to the late fall cutoff period is imperative. I would like to see a total removal completed, stumps pulled (not ground), grading (new soil/Compost) and installation of the following;

Species	Size	Quantity
Serbian Spruce	8-10'	5
Zelkova	2.5"	7
Rutgers Dogwood	8-10'	5
Willow Oak	2.5"	1
Misc Native Shrubs (TBD)	36"	57
Final Grade, seed with a cool season grass, mulch plants, water.	N/A	N/A

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T: 610.731.7969 | F: 610.521.0108 | E: jhtrees@verizon.net

Po Box 542 - Ridley Park - PA - 19078

CONSULTANTS • URBAN FORESTERS • PLANNERS • FORENSIC ARBORIST





[www.RockwellConsultants.com](http://www.RockwellConsultants.com)

Total Value of the disturbance to bring the area back to parity - \$55,000 - \$68,000 – Grading, removals, stumps, soil, planting, mitigation, final detail.

I will be happy to discuss this further.



John Rockwell Hosbach Jr., Urban Forester

Registered Consulting Arborist #483

ISA Certified Arborist PD-0372

ISA Tree Risk Assessment Qualified

Consultants | Urban Foresters | Planners | Forensic Arborist

Phone| 610-731-7969 Facsimile| 610-521-0810 Email| [jhtrees@verizon.net](mailto:jhtrees@verizon.net)

PO Box 542 – Ridley Park – Pennsylvania - 19078

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**T:** 610.731.7969 | **F:** 610.521.0108 | **E:** [jhtrees@verizon.net](mailto:jhtrees@verizon.net)

Po Box 542 - Ridley Park - PA - 19078

**CONSULTANTS • URBAN FORESTERS • PLANNERS • FORENSIC ARBORIST**

**ORDINANCE NO. 2017-16**

**AN ORDINANCE OF THE TOWNSHIP OF RADNOR, COUNTY OF DELAWARE, PENNSYLVANIA VACATING A PORTION OF BELROSE LANE EXTENDING BETWEEN HUSTON ROAD AND GLENMARY LANE WITH THE EXCEPTION OF RADNOR'S EASEMENT RIGHTS IN THE SEWER FACILITIES LOCATED WITHIN THE EXISTING RIGHT OF WAY.**

**WHEREAS**, a road deed of dedication for Belrose Lane was executed and dedicated to Radnor Township ("Township") on December 15, 1967 and was recorded in the Office of the Recorder of Deeds of Delaware County on May 9, 1968 a copy of which is attached hereto and incorporated herein as **Exhibit "A"**; and

**WHEREAS**, Belrose Lane was never improved or physically opened by the Township to vehicular traffic; and

**WHEREAS**, property owners adjacent to Belrose Lane filed a quiet title action against the Township at Delaware County Docket #2000-09518 asserting that title to a dedicated but unopened and unimproved road should revert back to the adjacent property owners; and

**WHEREAS**, the Delaware County Court of Common Pleas entered an Order on December 21, 2005 ("2005 Order"), attached hereto and incorporated herein as **Exhibit "B"**, ordering Radnor Township to vacate its public road interest or title in that portion of Belrose Lane between Huston Road and Glenmary Lane except for the Township's obligation to own, maintain, and/or improve the sewer line located therein; and

**WHEREAS**, the 2005 Order to vacate Belrose Lane between Huston Road and Glenmary Lane, upon enactment of this Ordinance, will vest title in all abutting landowners free and clear of the public right of way; and

**WHEREAS**, the properties and abutting landowners ("Abutting Landowners") to Belrose Lane extending between Huston Road and Glenmary Lane as shown on **Exhibit "C"** include:

- a) Barry Howard and Elayne B. Howard, 475 Glenmary Lane, TMP #36-14-021-000, folio#36-02-00803-00.
- b) Joshua S. Gross and Mackenzie L. Gross, 600 Huston Road, TMP #36-14-019-000, folio# 36-02-00803-01.
- c) The 500 Huston Road Trust c/o John R. Twombly, 500 Huston Road, TMP #36-14-020-000, folio #36-02-00803-02.
- d) William J. Donnell, Jr. and Courtney E. Donnell, 471 Glenmary Lane, TMP #36-14-073-000, folio# 36-02-01002-03.

- e) Michael J. Selverian and Susan M. Selverian, 470 Huston Road, TMP #36-14-074-000.
- f) Joseph M. Mahady and Barbara A. Mahady, 458 Huston Road, TMP #36-14-075-000, folio# 36-02-01144-00.

**WHEREAS**, the Township desires to and hereby vacates the portion of Belrose Lane extending between Huston Road and Glenmary Lane in accordance with the 2005 Order; and

**WHEREAS**, upon enactment of this road vacation ordinance and filing with the Recorder of Deeds of Delaware County, the Belrose Lane area as described on **Exhibit "C"** shall be free and clear of any public road rights.

**NOW, THEREFORE**, pursuant to the 2005 Order, the Board of Commissioners of Radnor Township does hereby ordain as follows:

**SECTION 1.** Road Vacation. The Township hereby vacates Belrose Lane extending between Huston Road and Glenmary Lane as depicted on the plan attached hereto and incorporated herein as **Exhibit "C"** thereby terminating any public rights in this portion of Belrose Lane except for the Township's access easement rights in maintaining, repairing, and replacing the sewer facilities currently existing within the right of way being vacated.

**SECTION 2.** Upon recording of this Ordinance with the Recorder of Deeds of Delaware County, each Abutting Landowner shall be vested, free of any public road rights, with that portion of the vacated Belrose Lane as set forth on the individual vacation plans prepared by Gannett Fleming for their respective properties as follows:

- a) 475 Glenmary Lane attached hereto as Exhibit "D".
- b) 600 Huston Road attached hereto as Exhibit "E".
- c) 500 Huston Road attached hereto as Exhibit "F".
- d) 471 Glenmary Lane attached hereto as Exhibit "G".
- e) 470 Huston Road attached hereto as Exhibit "H".
- f) 458 Huston Road attached hereto as Exhibit "I".

**SECTION 3.** Repealer. All ordinances or parts of ordinances which are inconsistent herewith are hereby repealed.

**SECTION 4.** Severability. If any section, paragraph, sub-section, clause, or provision of this Ordinance shall be declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of this Ordinance as a whole or any part thereof other than that portion specifically declared invalid.

**SECTION 5.** Effective Date. This Ordinance shall become effective in accordance with the Radnor Township Home Rule Charter.



**VACATION OF BELROSE LANE  
ORDINANCE NO. 2017-16**

***ENACTED AND ORDAINED*** this            day of            , A.D., 2017.

**RADNOR TOWNSHIP**

By: \_\_\_\_\_  
Name:  
Title:

ATTEST: \_\_\_\_\_  
Robert A. Zienkowski, Secretary

J. LAWRENCE GRIM, JR.  
MARY C. EBERLE  
JOHN B. RICE  
DIANNE C. MAGEE \*  
DALE EDWARD CAYA  
DAVID P. CARO ♦  
DANIEL J. PACI ♦ †  
JONATHAN J. REISS ◊  
GREGORY E. GRIM †  
PETER NELSON \*  
PATRICK M. ARMSTRONG  
SEAN M. GRESH  
KELLY L. EBERLE \*  
COLBY S. GRIM  
JOEL STEINMAN  
MATTHEW E. HOOVER  
STEPHEN J. KRAMER  
REBECCA A. O'NEILL\*†  
MICHAEL K. MARTIN  
GEORGE K. PATSALOSAVVIS

\* ALSO ADMITTED IN NEW JERSEY  
◊ ALSO ADMITTED IN NEW YORK  
† MASTERS IN TAXATION  
♦ ALSO A CERTIFIED PUBLIC ACCOUNTANT

LAW OFFICES  
**GRIM, BIEHN & THATCHER**

A PROFESSIONAL CORPORATION

SUCCESSOR TO  
GRIM & GRIM AND BIEHN & THATCHER  
ESTABLISHED 1895 AND 1956,  
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122ND ANNIVERSARY 1895-2017

[www.grimlaw.com](http://www.grimlaw.com)

Peter Nelson  
e-mail: [pnelson@grimlaw.com](mailto:pnelson@grimlaw.com)

JOHN FREDERIC GRIM, OF COUNSEL

104 S. SIXTH STREET  
P.O. BOX 215  
PERKASIE, PA. 18944-0215  
(215) 257-6811  
FAX (215) 257-5374  
  
(215) 536-1200  
FAX (215) 538-9588  
  
(215) 348-2199  
FAX (215) 348-2520

September 27, 2017

Delaware County Law Library  
Delaware County Courthouse  
201 West Front Street  
Media, PA 19063

**Re: Radnor Township- Belrose Lane Ordinance**

Dear Sir/Madam:

Enclosed for filing with the Delaware County Law Library, please find a true and correct copy of a proposed Ordinance which the Radnor Township Board of Commissioners will consider for possible adoption after a public hearing on October 9, 2017. Please keep the enclosed Ordinance available for public inspection and/or photocopying through the hearing date.

Sincerely,

**GRIM, BIEHN & THATCHER**

By: 

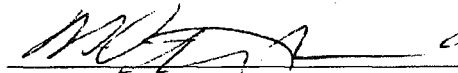
Peter Nelson

HPN/hlp  
Enclosure

cc: Robert A. Zienkowski (w/encl.) – via email  
Jennifer DeStefano (w/encl.) – via email  
John B. Rice, Esquire (w/o encl.) – via email

ATTEST:

I do hereby certify that this is a true and correct copy of the proposed Ordinance of Radnor Township, being advertised for possible adoption by the Radnor Township Board of Commissioners on October 9, 2017.

 9/28/17  
H. Peter Nelson, Esquire  
Grim, Biehn & Thatcher  
Township Solicitor



# Radnor Township

## PROPOSED LEGISLATION

DATE: October 3, 2017

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer *SFN*

CC: Robert A. Zienkowski, Township Manager  
William M. White, Assistant Township Manager/Finance Director  
John Rice, Township Solicitor

LEGISLATION: **Ordinance #2017-15** -Establishing Rules and Regulations for The Management Of Its Rights-Of-Way; Requiring A Permit Application Fee And Plan For Any Street, Driveway, Or Utility Installation Upon Any Portion Of A Township Road Or Other Public Road Or Right-Of-Way

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LEGISLATIVE HISTORY: This proposed ordinance is being introduced to the Board of Commissioners for the first time.

PURPOSE AND EXPLANATION: The proposed legislation encompasses many benefits to the Township. The benefit most forefront is the fact that due to the utility inspections required by this ordinance, Radnor Township residents and the motoring public will be able to travel roads under utility construction with far less angst. The Township is not staffed to perform more than spot inspections on Township streets, and there is a higher level of expectation by the Township, for work being completed on State streets, than is currently being provided. The Township will be able to have an inspector or inspectors on site at streets with utility work being performed, thereby ensuring a better quality of product for our residents. The inspection service costs will be reimbursed to the Township by the utility.

The ordinance formalizes many practices that have been instituted in the last six years, as well as instituting new requirements. A few of the benefits, practices, and requirements are as follows:

- Utilities performing work within the R.O.W of State or Township streets will be required to compensate the Township for inspections services, as part of the permit requirements
- All applicable State requirements (many of which are currently used by the Township) will be required for all work on Township streets, including, but not limited to:
  - Drainage control plan analysis
  - Following Penn DOT Publications 408, 72, PA Code Title 67, Chapters 203, 441, 459
- Proposed telecommunication facilities within State or Township R.O.W. shall meet the requirement of the Zoning Code, Chapter 28
- Compensation to the Township for instituting repairs, should a utility fail to rectify a defect within forty-eight hours
- Required mapping; on paper and GIS
- Utilities will be required to obtain corporate bond with a surety company in the amount of 15% of the estimated project cost
- Violations and enforcement

The ordinance will allow the Township to be compensated for inspection and oversight of the utility work, as well as require more stringent adherence to the specifications, for all utility work within Township and State Rights of Way. The utility work is estimated to continue for the next five to seven years.

**ORDINANCE NO. 2017-15**

**AN ORDINANCE OF THE TOWNSHIP OF RADNOR, COUNTY OF DELAWARE, COMMONWEALTH OF PENNSYLVANIA, ESTABLISHING RULES AND REGULATIONS FOR THE MANAGEMENT OF ITS RIGHTS-OF-WAY; REQUIRING A PERMIT APPLICATION FEE AND PLAN FOR ANY STREET, DRIVEWAY, OR UTILITY INSTALLATION UPON ANY PORTION OF A TOWNSHIP ROAD OR OTHER PUBLIC ROAD OR RIGHT-OF-WAY**

*WHEREAS*, Radnor Township is authorized to regulate its streets, rights-of-way and public areas with respect to construction activities, and to grant rights therein for the installation of public and private utilities; and

*WHEREAS*, the Township has determined that the establishment of new utility or telecommunication facilities in Township or State rights-of-way create traffic hazards; and

*WHEREAS*, the Township deems it necessary to determine and regulate all encroachments within the Township's right-of-way to insure traffic safety, appropriate stormwater management, and other health, safety and welfare concerns with respect to right-of-way construction.

*NOW, THEREFORE*, be it hereby *ORDAINED* that the Board of Commissioners of Radnor Township does hereby *ENACT* an amendment to the Radnor Township Code of Ordinances, repealing Article VI, Street Excavations, Sections 250-17 through 250-34, and replacing it with a new Article VI, **Right of Way Management**, as follows:

**SECTION I.**

**§ 250-17. Right-of-way construction and facilities.**

- A. No person, firm, corporation or other entity within the Township shall construct a driveway or install a utility or telecommunication facility within a street right-of-way, except as permitted by this section.
- B. Permit procedures.
  - (1) A permit must be acquired from Radnor Township for any work within a Township right-of-way and from the Pennsylvania Department of Transportation (PennDOT) for any work within a State right-of-way where such work involves construction or alteration of a driveway or the installation of a utility, telecommunication facility or other structure.
  - (2) An application for a driveway permit shall be submitted in the name of the owner or equitable owner of the property.

- (3) An application for a road opening permit or right-of-way construction for a utility or telecommunication facility must be submitted in the name of the owner or operator of the facility.
- (4) Forms, plans and fees shall be submitted in accordance with regulations and procedures adopted by either Radnor Township or PennDOT for work in Township or State rights-of-way, respectively. The application fees for work within Township rights-of-way shall be specified in the schedule of fees by resolution by the Board of Commissioners.

C. Regulations and standards.

- (1) This section represents minimum requirements of certain types of activities within Township or State rights-of-way. Activities associated with approved subdivision or land developments shall be subject to any additional requirements of the final plans as approved by Radnor Township and/or PennDOT. Any activity not regulated by the Subdivision and Land Development Ordinance of Radnor Township shall be regulated by the requirements of this Ordinance.
- (2) A drainage control plan and analysis shall be submitted whenever an increase in flow of water into a street or into existing drainage facilities will result from the proposed activity. The design of all drainage facilities shall be based on the Rational Method as determined by the PennDOT Design Manual, Part 2, as amended, and the U.S. Department of Commerce, Hydraulic Design Series No. 5, Hydraulic Design of Highway Culverts, as amended.
- (3) All construction work, structures, paving and facilities shall conform to the design standards of PennDOT Publications 408 and 72 (Road Construction Standards), as amended. Work shall be done at such time and in such a manner as shall be consistent with the safety of the public. Any work within Township or State rights-of-way shall conform to all requirements and standards of PennDOT, except as otherwise supplemented or modified by this Ordinance. In the event regulations conflict, the most stringent regulations shall apply. If at any time it is found the work is not being done or has not been properly performed, the permittee, upon being notified in writing by either the Township or PennDOT, must immediately take the necessary steps, at its own expense, to replace the work in a condition to conform to such requirements or standards. In case any dispute arises between the permittee and the representative of the owner of the right-of-way, the owner's representative shall have the authority to suspend work until the question at issue can be decided by the Township and/or State.
- (4) The following PennDOT provisions shall regulate the occupancy of all Township and State rights-of-way, unless otherwise required by an approved subdivision or land development plan, this Ordinance, or the Township Engineer:

- (a) Pennsylvania Code, Title 67 Transportation, Chapter 441 Access and Occupancy of Highways by Driveways and Local Roads, as amended.
  - (b) Pennsylvania Code, Title 67 Transportation, Chapter 459 Occupancy of Highways by Utilities, as amended.
- (5) A traffic control plan must be submitted to either close any portion of a travel lane during construction, during the hours of darkness when no active work is in progress or to detour traffic in order to perform the permitted work. All plans shall conform with § 6123 of the Motor Vehicle Code, as amended, and the applicable provisions of the Pennsylvania Code, Title 67 Transportation, Chapter 203, as amended.

D. Driveway construction requirements.

- (1) Driveways shall be located at least 40 feet from street intersections, measured from the centerline of the driveway to the point of intersection of the street ultimate right-of-way lines (extended). When streets of different classifications are involved, driveways shall provide access to the street of lesser classification.
- (2) Driveways shall be provided with a stopping area of 20 feet, at a maximum grade of 3%, measured from the edge of cartway. In order to provide access for emergency vehicles, the maximum centerline grade for any portion of the driveway shall not exceed 8% and the maximum change in grade shall not exceed 6%.
- (3) Driveways shall be paved for a minimum of 50 feet from the edge of the street or to the ultimate right-of-way, whichever is greater. The pavement construction shall be in accordance with Township-approved construction details.<sup>1</sup> In the event additional width or a supplemental thickness is required by other rules and regulations of the Township or PennDOT, or as may be necessitated by site conditions, these minimum requirements shall be increased appropriately.
- (4) Driveways shall have a minimum radius of curvature at the street intersection of 10 feet.
- (5) A minimum distance of five feet shall be maintained between the driveway and the side lot lines.
- (6) Driveways shall have a minimum turnaround area of 10 feet by 20 feet.
- (7) A 50-foot clear sight triangle must be provided for all driveways, measured from the point of intersection of the street right-of-way line and edge of the driveway. The site plan shall contain a notation that states that the applicant is required to maintain the area of the clear sight triangle and the Township has the right to enter and perform required maintenance in the area if deemed critical to public welfare.

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<sup>1</sup> Construction detail is on file and may be seen at the Township office.



- (8) Sight distances for all driveways shall comply with Pennsylvania Code, Title 67 Transportation, Chapter 441 Access and Occupancy of Highways by Driveways and Local Roads, as amended.
  - (9) When a sidewalk is proposed across a driveway, a concrete apron shall be installed in accordance with Township-approved construction details.<sup>2</sup> When a curb is proposed along a driveway, depressed curb shall be installed in accordance with the attached construction detail.
  - (10) A 15-inch RCP culvert, or equivalent size, shall be provided for all driveways. The minimum culvert length shall be 24 feet with flared end sections and end walls. Where an existing roadside drainage swale is too shallow to permit installation of a driveway culvert, a concrete trench box with grate may be utilized upon approval of the Township.
  - (11) Any associated grading, curb or sidewalk installation located within the street right-of-way shall be in accordance with the design standards of the Township's Subdivision and Land Development Ordinance (Chapter 180), as amended.
- E. Telecommunication facilities. All proposed telecommunication facilities within Township or State rights-of-way, shall meet the requirements of the Zoning Code, Chapter 28, of the Township. All new telecommunication facilities shall utilize existing poles, streetlights or other structures within the right-of-way or acquire additional areas adjacent to and outside of the right-of-way, or shall be placed underground.
- F. Maintenance period. Upon completion of the work authorized by the permit, the Township shall inspect the work and, when necessary, enforce compliance with the conditions, restrictions and regulations prescribed by the Township. In addition to such inspection, the Township may re-inspect the work not more than two years after its completion and if any settlement of any road surface trench or other defects shall appear in the work contrary to the conditions, restrictions and regulations of the Township, it may enforce compliance therewith. If the applicant shall fail to rectify a defect which presents an immediate or imminent safety or health problem in 48 hours, or any other defect within 30 days after written notice from the Township Engineer to do so, the Township, or its agents, may do the work and impose upon the applicant the costs thereof, together with an additional 20% of the costs, which may be recovered by a civil action in the Court of Common Pleas of Delaware County.

**§ 250-18. Standards of service for right-of-way construction.**

- A. Conditions of street occupancy. Facilities and equipment installed or erected by the permittee pursuant to the terms hereof shall be located so as to cause a minimum of interference with the proper use of public rights-of-way and with the rights and reasonable convenience of property owners who own property that adjoins any of said public rights-of-

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<sup>2</sup> Construction detail is on file and may be seen at the Township office.

way.

- B. Restoration of public rights-of-way. If during the course of permittee's construction, operation, and/or maintenance of its facilities and equipment there occurs a disturbance of any public rights-of-way by permittee, permittee shall, at its expense, replace and restore such public rights-of-way to a condition which existed immediately prior to such disturbance. If permittee excavates the surface of any public rights-of-way, permittee shall be responsible for restoration of the public rights-of-way and its surface within the area affected by the excavation. The Township reserves the right, after providing notice to permittee, to remove and/or repair any work done by permittee which is inadequate. The reasonable cost thereof, including the cost of inspection and supervision, shall be paid by the permittee. All excavations made by permittee in the public rights-of-way shall be properly safeguarded for the prevention of accidents.
- C. Trees and shrubbery. The permittee shall notify Township and all affected property owners regarding permittee's need to trim trees or other natural growth upon and overhanging public rights-of-way so as to prevent the branches of such trees from coming in contact with its facilities or equipment. Trimming shall be limited to the area required to clear its facilities or equipment.
- D. Safety requirements. All such work in the public rights-of-way shall be performed in accordance with applicable safety codes and technical requirements.
- E. Maps. Prior to beginning any construction of facilities, permittee shall provide the Township with a construction schedule for work in the public rights-of-way which schedule shall be updated as changed. Upon completion of initial construction and upon completion of construction of any modification to its facilities, permittee shall provide the Township with a map showing the location of its installed facilities in the public rights-of-way. Such maps shall be provided in both paper form, as well as in an electronic format for placement on the Township's GIS system. Annually thereafter, permittee shall provide a map to the Township showing the location of permittee's facilities in the public rights-of-way on a scale of 150 feet per inch or whatever standard scale the Township adopts for general use.
- F. Excavations. Permittee may make excavations in public rights-of-way for any facility subject to obtaining excavation permits from the Township. Prior to doing such work, permittee must apply for, and obtain, appropriate permits from the Township, and give appropriate notices to any other licensees and/or permittees of the Township, and/or other units of government owning or maintaining facilities which may be affected by the proposed excavation.
- G. Reservation of the Township public rights-of-way. Nothing in this section shall be construed to prevent the Township or other agency of government or municipal authority from constructing sewers, grading, paving, repairing and/or altering any street and/or laying down, repairing and/or removing water mains and/or constructing and/or establishing any other public work or improvement. If any of the permittee's facilities or equipment interferes with the construction or repair of any street or public improvement,

including construction, repair or removal of a sewer or water main, the permittee's facilities or equipment shall be removed or replaced in the manner the respective Township or other agency of government or municipal authority shall direct. Any and all such removal or replacement shall be at the expense of the permittee. Should permittee fail to remove, adjust or relocate its facilities by the date established by the Township or other agency of government or municipal authority, the Township or other agency of government or municipal authority may cause and/or effect such removal, adjustment or relocation, and the expense thereof shall be paid by permittee, including all reasonable costs and expenses incurred by the Township or other agency of government or municipal authority due to permittee's delay.

**§ 250-19. Insurance, indemnification and bonds or other surety for right-of-way construction.**

- A. Permittee shall save the Township, its agents, employees and elected and appointed officials, harmless from and against all claims, damages, losses and expenses, including reasonable attorney's fees, sustained on account of any suit, judgment, execution, claim or demand whatsoever arising out of the construction, leasing, operation or maintenance of the permittee's equipment, facilities, and services specified by this section, whether or not any act or omission complained of is authorized, allowed and/or prohibited by this section and the rights granted hereunder.
- B. Permittee shall obtain and maintain in full force and effect insurance with an insurance company licensed to do business and doing business in the Commonwealth of Pennsylvania and acceptable to the Township. All companies will be required to be rated A-VH or better by A.M. Best or A better by Standard and Poors. permittee shall provide Township with proof of such insurance so required.
- C. Permittee shall obtain and maintain in full force and effect, at permittee's sole expense, insurance coverage in the following types and minimum amounts:

<u>Type</u>	<u>Amount</u>
Workers' Compensation and Statutory Employers Liability	\$ 100,000/\$500,000/\$100,000

Commercial General (public) Liability to include coverage for the following where exposure exists:

Premises operations	Combined single limit for bodily
Independent contractors	injury and property damages
Products/completed operations	\$2,000,000 per occurrence or its
Personal Injury	equivalent
Contractual liability	
Explosion, collapse and underground	
property damage	

Comprehensive Vehicle insurance coverage for loading and unloading hazards, for:

Owned/leased vehicles	Combined single limit of bodily
Non-owned vehicles	injury and property damage
Hired vehicles	\$1,000,000 per occurrence or its
	equivalent

- D. The Township shall receive without expense copies of certificates of insurance evidencing coverage stated above.
- E. Permittee agrees that with respect to the above-required insurance, all insurance certificates will contain the following required provisions:
- (1) Name the Township and its officers as additional insureds.
  - (2) Provide for 60 days written notice to the Township for cancellation, non- renewal, or material change.
  - (3) Provide that all provisions of this section concerning liability, duty, and standard of care, including the indemnity provisions, shall be underwritten by contractual coverage sufficient to include such obligations within applicable policies, subject to policy terms and conditions.
- F. Companies issuing the insurance policies shall have no recourse against the Township for payment of any premiums or assessments which all are set at the sole risk of the permittee. Insurance policies obtained by permittee shall provide that the issuing company waives all right of recovery by way of subrogation against the Township in connection with any damage covered by these policies.
- G. Permittee shall obtain and maintain, at its sole cost and expense, and file with the Township, a corporate surety bond with a surety company authorized to do business in the Commonwealth of Pennsylvania in the amount of 15% of permittee's estimated costs to secure permittee's performance of its obligations and faithful adherence to all requirements of this section.



(1) No action, proceeding or exercise of a right with respect to such bond shall affect the Township's rights to demand full and faithful performance under this section or limit permittee's liability for damages.

(2) The bond shall contain the following endorsement:

It is hereby understood and agreed that this bond may not be cancelled by the surety nor any intention not to renew be exercised by the surety until 60 days after receipt by the Township of Radnor, by registered mail, of written notice of such intent.

H. All expenses of the above-noted insurance and bond shall be paid by the permittee.

I. The insurance policies mentioned herein shall contain an endorsement stating the following:

Should any policies of insurance be cancelled or coverages be reduced, before the expiration date of said policies of insurance, the issuer shall deliver 60 days advance written notice to the Township.

J. Neither the provisions of this section nor any insurance accepted by the Township pursuant hereto, nor any damages recovered by the Township thereunder, shall be construed to excuse faithful performance by the permittee and/or limit the liability of the permittee under this section issued hereunder and/or for damages, either to the full amount of the bond or otherwise.

K. Any person violating any provision of this Article shall upon conviction, be fined not less than fine hundred dollars nor more than one thousand dollars, for each day of violation plus court costs and reasonable attorney's fees incurred by the Township.

## **SECTION II.**

Sections 250-17 through 250-34. of Chapter 250, Article VI, of the Radnor Township Code of Ordinances are hereby repealed. Section 250-16. Definitions is saved from repeal.

## **SECTION III.**

Severability. If any section, paragraph, subsection, clause or provision of this Ordinance shall be declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of this Ordinance as a whole or any part thereof other than that portion specifically declared invalid.

## **SECTION IV.**

Effective Date. This Ordinance shall become effective five (5) days after final enactment.

***ENACTED*** and ***ORDAINED*** this                      day of                      , 20127

RADNOR TOWNSHIP  
BOARD OF COMMISSIONERS

Attest: \_\_\_\_\_

Name: Robert Zienkowski  
Title: Township Secretary

By: \_\_\_\_\_

Name: Phillip M. Ahr  
Title: President

**RESOLUTION NO. 2017-116**

**A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE  
COUNTY, PENNSYLVANIA, AUTHORIZING PAYMENT  
OF CHANGE ORDERS TO THE PRIME CONTRACTORS  
FOR THE MEMORIAL LIBRARY OF RADNOR  
RENOVATION AND EXPANSION PROJECT**

**WHEREAS**, during construction, it was determined that change orders are required for work that was unforeseen, replacement of areas affected by mold, and work requested by the owner

**WHEREAS**, Change Order cost proposals have been submitted by Dolan Construction, the General Prime, and Electri-Tech, the Electrical Prime

**WHEREAS**, the Change Order cost proposals have been reviewed by the architect of record and the owner's representative

**NOW, THEREFORE**, be it **RESOLVED** by the Board of Commissioners of Radnor Township does hereby authorize and approve the following change orders, as outlined on the attached AIA documents, as follows:

1. Dolan Construction, General Prime, Change Orders 002,003,004, for a net cost of \$66,386.25
2. Electri-Tech, Electrical Prime, Change Orders 002,003,004, for a cost of \$65,000

**SO RESOLVED** this 9th day of October, A.D., 2017

**RADNOR TOWNSHIP**

By: \_\_\_\_\_

Name: Philip Ahr

Title: President

ATTEST: \_\_\_\_\_

Robert A. Zienkowski  
Manager/Secretary



# AIA<sup>®</sup> Document G701<sup>™</sup> – 2001

## Change Order

PROJECT (Name and address):

Radnor Library Expansion and  
Renovation as per Exhibit A  
114 West Wayne Avenue  
Wayne, PA 19087

CHANGE ORDER NUMBER: 002

DATE: 09/26/2017

OWNER: ☒

ARCHITECT: ☒

CONTRACTOR: ☒

FIELD: ☐

OTHER: ☐

TO CONTRACTOR (Name and address):

Dolan Construction Inc.  
401 South 13<sup>th</sup> Street  
Reading, PA 19602

ARCHITECT'S PROJECT NUMBER:

CONTRACT DATE:

CONTRACT FOR: General Construction

### THE CONTRACT IS CHANGED AS FOLLOWS:

(Include, where applicable, any undisputed amount attributable to previously executed Construction Change Directives)

Refer to attached:

- 1) COR: G-002 ( 8,635.49) Louver infill @ rear wall
- 2) COR: G-003 ( 874.65) Restroom wall @ main level
- 3) COR: G-004 ( 7,916.10) Rebuild Wall @ lower level stair
- 4) COR: G-005 ( 3,110.63) Tree removal and replacement
- 5) COR: G-006 (-5,460.00) Credit for AWI / ACI standrads
- 6) COR: G-007 (12,632.00) FB#10 - Add administrative office walls @ Main Level
- 7) COR: G-008 (-30,000.00) Credit for Removal of Rain Water Garden

The original Contract Sum was	\$ 3,612,400.00
The net change by previously authorized Change Orders	\$ 0.00
The Contract Sum prior to this Change Order was	\$ 3,612,400.00
The Contract Sum will be decreased by this Change Order in the amount of	\$ 2,291.13
The new Contract Sum including this Change Order will be	\$ 3,610,108.87

The Contract Time will be unchanged by Zero (0) days.

The date of Substantial Completion as of the date of this Change Order therefore is December 20, 2017

**NOTE:** This Change Order does not include changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

### NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

Kimmel Bogrette Architecture + Site, Inc.

ARCHITECT (Firm name)

151 E. 10<sup>th</sup> Avenue, Suite 300  
Conshohocken, pa 19454

ADDRESS

Dolan Construction Inc.

CONTRACTOR (Firm name)

401 South 13th Street  
Reading, PA 19602

ADDRESS

Radnor Township

OWNER (Firm name)

301 Iven Avenue  
Wayne, PA 19087-5297

ADDRESS

BY (Signature)

Sherri Kimmel

(Typed name)

BY (Signature)

Michael Vottero

(Typed name)

BY (Signature)

Steve Norcini

(Typed name)

DATE

DATE

DATE





April 19, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

**Project: 16449 / Radnor Library Reno&Expan**  
**Change Request 002**  
**99000002 Louver infill at rear wall and terrace associated with RFI #5**

Louver infill at rear wall and rear terrace associated with RFI #5:

Gypsum wall infills and soffit removal.	\$1,570.00
EIFS.	\$4,791.00
Demolition of siding.	\$1,000.00
Subtotal:	\$7,361.00
5% OH and Profit:	\$ 368.05
Subcontractors subtotal:	\$7,729.05
Miscellaneous trim work material.	\$ 125.00
Labor to install:	\$ 699.04
Subtotal:	\$ 824.04
10% OH and Profit:	\$ 82.40
Self Perform Subtotal:	\$ 906.44
Total of COR #002	\$8,635.49

Change Request Total      \$8,635.49

The impact of this change includes only those items which can be identified at this time. However, should it be determined at a later date that we are experiencing identifiable cost impacts or time delays beyond our control due to this scope change or because of multiple scope changes, delays, or other causes, we reserve the right to submit those costs and time extensions at that time.

If you have any other questions, please do not hesitate to contact this office.

Sincerely,

Accepted By:

Dolan Construction Inc

Michael J Vottero, Project Manager

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date



April 19, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

**Project: 16449 / Radnor Library Reno&Expan**  
**Change Request 003**  
**99000003 Modification to restroom walls on main level**

Modifications to Restroom walls on Main Level per FB 4.1:

Gypsum wall board assemblies:	\$833.00
5% OH and Profit:	<u>\$ 41.65</u>
Total of COR #003	\$874.65

Change Request Total      \$874.65

The impact of this change includes only those items which can be identified at this time. However, should it be determined at a later date that we are experiencing identifiable cost impacts or time delays beyond our control due to this scope change or because of multiple scope changes, delays, or other causes, we reserve the right to submit those costs and time extensions at that time.

If you have any other questions, please do not hesitate to contact this office.

Sincerely,

Accepted By:

Dolan Construction Inc

Michael J Vottero, Project Manager

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date



Date: August 8, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

Re: Project: 16449 / Radnor Library Renovation & Expansion

Change Request 004 Rev 1:

Rebuild Lower Level wall between Friends Area and Stairway per RFI#8.

Demolition.	\$875.00
Steel.	\$2,638.00
Gypsum Board wall assemblies:	\$2,376.00
Painting Prime Coat:	<u>\$144.00</u>
	\$6,033.00
5% OH and Profit:	<u>\$301.65</u>
	\$6,334.65
Excavation Labor:	\$526.64
Concrete Material:	\$212.00
Concrete Labor:	<u>\$699.04</u>
	\$1,437.68
10% OH and Profit:	<u>\$143.77</u>
	\$1,581.45
Total COR# 004 Rev 1	\$7,916.10

If you should have any questions, please contact our office.

Respectfully,

A handwritten signature in black ink, appearing to read "Michael A. Vottero".

Michael A. Vottero  
Project Manager

MJV/kk



April 19, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

**Project: 16449 / Radnor Library Reno&Expan**  
**Change Request 005**  
**99000005 Tree removal and replacement**

Tree removal and replacement:

Excavation - tree removal.	\$2,500.00	
Landscaping - two replacement trees.	<del>\$ 925.00</del>	462.50
Subtotal:	<del>\$3,425.00</del>	2,962.50
5% OH and Profit:	<del>\$ 171.25</del>	148.13
Total for COR #005	<del>\$3,596.25</del>	3,110.63

Removed 1 replacement tree

Change Request Total ~~\$3,596.25~~ \$3,110.63

The impact of this change includes only those items which can be identified at this time. However, should it be determined at a later date that we are experiencing identifiable cost impacts or time delays beyond our control due to this scope change or because of multiple scope changes, delays, or other causes, we reserve the right to submit those costs and time extensions at that time.

If you have any other questions, please do not hesitate to contact this office.

Sincerely,

Dolan Construction Inc

Michael J Vottero, Project Manager

Accepted By:

Authorized Signature

Date





April 19, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

**Project: 16449 / Radnor Library Reno&Expan**  
**Change Request 006**  
**99000006 Credit for relief from certifications**

Credit for relief from AWI's quality certifications program labels and participant requirements for the material and installers, and relief from the concrete installers qualifications of employing ACI certified flat-work technician, finisher, and supervisor who is an ACI certified concrete flat-work technician.  
AWI and ACI standards would still be followed:

Credit for certifications.	(\$5,200.00)
5% OH and Profit.	<u>(\$ 260.00)</u>
Total for COR #006	(\$5,460.00)

Change Request Total    \$-5,460.00

The impact of this change includes only those items which can be identified at this time. However, should it be determined at a later date that we are experiencing identifiable cost impacts or time delays beyond our control due to this scope change or because of multiple scope changes, delays, or other causes, we reserve the right to submit those costs and time extensions at that time.

If you have any other questions, please do not hesitate to contact this office.

Sincerely,

Dolan Construction Inc

Michael J Vottero, Project Manager

Accepted By:

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date



Date: August 8, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

Re: Project: 16449 / Radnor Library Renovation & Expansion

Change Request 007:

Added walls for office space

Total COR#007 request \$12,632.00

If you should have any questions, please contact our office.

Respectfully,

A handwritten signature in black ink, appearing to read "Michael J. Vottero".

Michael J. Vottero  
Project Manager

MJV/kk



Date: August 8, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

Re: Project: 16449 / Radnor Library Renovation & Expansion

Change Request 008:

Delete Rain Garden

Total COR#008 request (\$30,000.00)

If you should have any questions, please contact our office.

Respectfully,

A handwritten signature in black ink, appearing to read "Michael A. Vottero".

Michael A. Vottero  
Project Manager

MJV/kk

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## Change Order

PROJECT (Name and address):

Radnor Library Expansion and  
Renovation as per Exhibit A  
114 West Wayne Avenue  
Wayne, PA 19087

CHANGE ORDER NUMBER: 003

DATE: 09/26/2017

OWNER: ☒

ARCHITECT: ☒

CONTRACTOR: ☒

FIELD: ☐

OTHER: ☐

TO CONTRACTOR (Name and address):

Dolan Construction Inc.  
401 South 13<sup>th</sup> Street  
Reading, PA 19602

ARCHITECT'S PROJECT NUMBER:

CONTRACT DATE:

CONTRACT FOR: General Construction

### THE CONTRACT IS CHANGED AS FOLLOWS:

(Include, where applicable, any undisputed amount attributable to previously executed Construction Change Directives)  
Refer to attached:

1) COR: G-001 (43,677.38) Replacment of mold related materials and Kitchen.

The original Contract Sum was	\$	3,612,400.00
The net change by previously authorized Change Orders	\$	-2,291.13
The Contract Sum prior to this Change Order was	\$	3,610,108.87
The Contract Sum will be increased by this Change Order in the amount of	\$	43,677.38
The new Contract Sum including this Change Order will be	\$	3,653,786.25

The Contract Time will be unchanged by Zero (0) days.

The date of Substantial Completion as of the date of this Change Order therefore is December 20, 2017

**NOTE:** This Change Order does not include changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

**NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.**

Kimmel Bogrette Architecture + Site, INC.

ARCHITECT (Firm name)

151 E. 10<sup>th</sup> Avenue, Suite 300  
Conshohocken, pa 19454

ADDRESS

BY (Signature)

Sherri Kimmel  
(Typed name)

DATE

Dolan Construction Inc.

CONTRACTOR (Firm name)

401 South 13th Street  
Reading, PA 19602

ADDRESS

BY (Signature)

Michael Vottero  
(Typed name)

DATE

Radnor Township

OWNER (Firm name)

301 Iven Avenue  
Wayne, PA 19087-5297

ADDRESS

BY (Signature)

Steve Norcini  
(Typed name)

DATE



April 19, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

**Project: 16449 / Radnor Library Reno&Expan**  
**Change Request 001**  
**99000001 Replacement of mold related walls.**

Replacement of mold related walls, drywall, and finishes.	
3 5/8" metal studs and insulation.	\$ 4,140.00
Gypsum drywall.	\$13,833.00
Painting - prime coat.	\$ 1,500.00
Painting in mechanical room.	\$ 1,895.00
Painting in storage room.	\$ 1,695.00
Flooring in kitchen.	\$ 942.00
Ceiling in kitchen.	\$ 410.00
Subtotal:	\$24,415.00
5% OH and Profit:	\$ 1,220.75
Subcontractors subtotal:	\$25,635.75
Cabinets and solid surface counter-tops material.	\$ 7,758.22
Labor to install.	\$ 3,495.20
Wainscot material for meeting & conference rooms.	\$ 1,344.00
Labor to install.	\$ 3,095.82
Rough carpentry - wood blocking material.	\$ 95.40
Labor to install.	\$ 349.52
Labor to remove damaged kitchen flooring.	\$ 263.32
Subtotal:	\$16,401.48
10% OH and Profit:	\$ 1,640.15
Self Perform Subtotal:	\$18,041.63
Total for COR #001	\$43,677.38

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## Change Order

<b>PROJECT</b> <i>(Name and address):</i> Radnor Library Expansion and Renovation as per Exhibit A 114 West Wayne Avenue Wayne, PA 19087	<b>CHANGE ORDER NUMBER:</b> 004 <b>DATE:</b> 09/26/2017	<b>OWNER:</b> <input checked="" type="checkbox"/> <b>ARCHITECT:</b> <input checked="" type="checkbox"/> <b>CONTRACTOR:</b> <input checked="" type="checkbox"/> <b>FIELD:</b> <input type="checkbox"/> <b>OTHER:</b> <input type="checkbox"/>
<b>TO CONTRACTOR</b> <i>(Name and address):</i> Dolan Construction Inc. 401 South 13 <sup>th</sup> Street Reading, PA 19602	<b>ARCHITECT'S PROJECT NUMBER:</b> <b>CONTRACT DATE:</b> <b>CONTRACT FOR:</b> General Construction	

### THE CONTRACT IS CHANGED AS FOLLOWS:

*(Include, where applicable, any undisputed amount attributable to previously executed Construction Change Directives)*

Refer to attached:

1) COR: G-009 (25,000) FB# 11 -Add bid alternate #12A Tile wainscot for toilet rooms

The original Contract Sum was	\$	3,612,400.00
The net change by previously authorized Change Orders	\$	41,386.25
The Contract Sum prior to this Change Order was	\$	3,653,786.25
The Contract Sum will be increased by this Change Order in the amount of	\$	25,000.00
The new Contract Sum including this Change Order will be	\$	3,678,786.25

The Contract Time will be unchanged by Zero (0) days.

The date of Substantial Completion as of the date of this Change Order therefore is December 20, 2017

**NOTE:** This Change Order does not include changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

### NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

<u>Kimmel Bogrette Architecture + Site, Inc.</u> <b>ARCHITECT</b> <i>(Firm name)</i>  151 E. 10 <sup>th</sup> Avenue, Suite 300 Conshohocken, pa 19454 <b>ADDRESS</b>	<u>Dolan Construction Inc.</u> <b>CONTRACTOR</b> <i>(Firm name)</i>  401 South 13th Street Reading, PA 19602 <b>ADDRESS</b>	<u>Radnor Township</u> <b>OWNER</b> <i>(Firm name)</i>  301 Iven Avenue Wayne, PA 19087-5297 <b>ADDRESS</b>
<b>BY</b> <i>(Signature)</i>  Sherri Kimmel <i>(Typed name)</i>	<b>BY</b> <i>(Signature)</i>  Michael Vottero <i>(Typed name)</i>	<b>BY</b> <i>(Signature)</i>  Steve Norcini <i>(Typed name)</i>
<b>DATE</b>	<b>DATE</b>	<b>DATE</b>



Date: August 8, 2017

Radnor Township  
301 Iven Avenue  
Wayne, PA 19087

Re: Project: 16449 / Radnor Library Renovation & Expansion

Change Request 009:

Add Ceramic per FB11

Total COR#009 request \$25,000.00

If you should have any questions, please contact our office.

Respectfully,

A handwritten signature in black ink, appearing to read "Michael J. Vottero".

Michael J. Vottero  
Project Manager

MJV/kk



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## Change Order

PROJECT (Name and address):

Radnor Library Expansion and  
Renovation as per Exhibit A  
114 West Wayne Avenue  
Wayne, PA 19087

CHANGE ORDER NUMBER: 002

DATE: 09/26/2017

OWNER: ☒

ARCHITECT: ☒

CONTRACTOR: ☒

FIELD: ☐

OTHER: ☐

TO CONTRACTOR (Name and address):

Electri-Tech, Inc.  
82 Tuckahoe Road  
Dorothy, NJ 08317

ARCHITECT'S PROJECT NUMBER:

CONTRACT DATE:

CONTRACT FOR: Electrical Construction

### THE CONTRACT IS CHANGED AS FOLLOWS:

(Include, where applicable, any undisputed amount attributable to previously executed Construction Change Directives)  
Refer to attached

- 1) COR: E-002 (3,006.74) Branch Circuit Modification
- 2) COR: E-003 ( 452.83) Increase Circuit Breaker for Elevator
- 3) COR: E-005 (4,497.90) FB#7

The original Contract Sum was

\$ 400,000.00

The net change by previously authorized Change Orders

\$ 0.00

The Contract Sum prior to this Change Order was

\$ 400,000.00

The Contract Sum will be increased by this Change Order in the amount of

\$ 7,957.47

The new Contract Sum including this Change Order will be

\$ 407,957.47

The Contract Time will be unchanged by Zero (0) days.

The date of Substantial Completion as of the date of this Change Order therefore is December 20, 2017

**NOTE:** This Change Order does not include changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

### NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

Kimmel Bogrette Architecture + Site, Inc.  
ARCHITECT (Firm name)

151 E. 10<sup>th</sup> Avenue, Suite 300  
Conshohocken, pa 19454

ADDRESS

Electri-Tech, Inc.

CONTRACTOR (Firm name)

82 Tuckahoe Road  
Dorothy, NJ 08317

ADDRESS

Radnor Township

OWNER (Firm name)

301 Iven Avenue  
Wayne, PA 19087-5297

ADDRESS

BY (Signature)

Sherri Kimmel  
(Typed name)

BY (Signature)

Bob Kennedy  
(Typed name)

BY (Signature)

Steve Norcini  
(Typed name)

DATE

DATE

DATE





82 Tuckahoe Road  
Dorothy, NJ 08317  
(Tel) 609-476-0822  
(Fax) 609-476-0663  
License # 34EBO1289300

## CONTRACTORS COST BREAKDOWN

CHANGE ORDER NO.		DATE:		05/17/17	
RADNOR Memorial Library		COR #		2	
Electri-Tech, Inc.		Project No. 2016-20			
Description of Changes					
Modify Existing Branch Circuit to Accomodate New Waste Piping					
ADD					
		MATERIAL DESCRIPTION	Amount	UNIT	TOTAL
		Standard Material Per Attached Backup	\$291.42	1	\$ 291.42
				1	\$ -
		Sub Total Materials			\$ 291.42
		Overhead	10%		\$ 29.14
		Sub Total Materials			\$ 320.56
		Profit	5%		\$ 16.03
		MATERIAL TOTAL			\$ 336.59
	HOURS	LABOR CLASSIFICATION	HR. RATE		TOTAL
					\$ -
	22	Project Superintendent	\$69.28		\$ 1,524.16
	0	Electrical Journeymen	\$69.28		\$ -
		Apprentice/Laborer			\$ -
		Sub Total Labor			\$ 1,524.16
		Social Security	7.65%		\$ 116.60
		Unemployment Taxes	19.21%		\$ 292.79
		Workman's Compensation Insurance	9.90%		\$ 150.89
		Public Liability Insurance	3.46%		\$ 52.74
		Overhead	10.00%		\$ 152.42
		Sub Total Labor			\$ 2,289.59
		Profit	5%		\$ 343.44
		TOTAL LABOR			\$ 2,633.03
HOURS		EQUIPMENT DESCRIPTION	RENTAL RATE		TOTAL
		SEE ATTACHED LIST			0.00
		Sub Total Equipment			0.00
		Sales Tax	6%		0.00
		Sub Total Equipment & Sales Tax			0.00
		Overhead & Profit	15%		0.00
		TOTAL EQUIPMENT			0.00
		SUBCONTRACTORS			0.00
					0.00
		Sub Total Subcontracts			0.00
		Overhead & Profit	5%		0.00
		TOTAL SUBCONTRACTS			0.00
SUMMARY					
		Total Material			336.59
		Total Labor			2,633.03
		Total Equipment			0.00
		Total Subcontracts			0.00
				SUB TOTAL	2,969.62
		LESS DEDUCTS			0.00
				SUB TOTAL	2,969.62
		Bond	1.25%		37.12
		TOTAL PROPOSAL			3,006.74



82 Tuckahoe Road  
Dorothy, NJ 08317  
(Tel) 609-476-0822  
(Fax) 609-476-0663  
License # 34EBO1289300

## CONTRACTORS COST BREAKDOWN

CHANGE ORDER NO.		DATE:	05/18/17
RADNOR Memorial Library		COR #	3
Electri-Tech, Inc.	Project No. 2016-20		
Description of Changes			
Increase Circuit Breaker and Conductors for the Elevator			
<b>ADD</b>			
	MATERIAL DESCRIPTION	Amount	UNIT TOTAL
	Standard Material Per Attached Backup	\$179.98	1 \$ 179.98
			1 \$ -
	Sub Total Materials		\$ 179.98
	Overhead	10%	\$ 18.00
	Sub Total Materials		\$ 197.98
	Profit	5%	\$ 9.90
	<b>MATERIAL TOTAL</b>		<b>\$ 207.88</b>
	HOURS	LABOR CLASSIFICATION	HR. RATE TOTAL
			\$ -
	0	Project Superintendent	\$69.28 \$ -
	2	Electrical Journeymen	\$69.28 \$ 138.56
		Apprentice/Laborer	\$ -
		Sub Total Labor	\$ 138.56
		Social Security	7.65% \$ 10.60
		Unemployment Taxes	19.21% \$ 26.62
		Workman's Compensation Insurance	9.90% \$ 13.72
		Public Liability Insurance	3.46% \$ 4.79
		Overhead	10.00% \$ 13.86
		Sub Total Labor	\$ 208.14
		Profit	5% \$ 31.22
		<b>TOTAL LABOR</b>	<b>\$ 239.37</b>
HOURS	EQUIPMENT DESCRIPTION	RENTAL RATE	TOTAL
	SEE ATTACHED LIST		0.00
	Sub Total Equipment		0.00
	Sales Tax	6%	0.00
	Sub Total Equipment & Sales Tax		0.00
	Overhead & Profit	15%	0.00
	<b>TOTAL EQUIPMENT</b>		<b>0.00</b>
	<b>SUBCONTRACTORS</b>		
			0.00
			0.00
	Sub Total Subcontracts		0.00
	Overhead & Profit	5%	0.00
	<b>TOTAL SUBCONTRACTS</b>		<b>0.00</b>
<b>SUMMARY</b>			
	Total Material		207.88
	Total Labor		239.37
	Total Equipment		0.00
	Total Subcontracts		0.00
		SUB TOTAL	447.24
	LESS DEDUCTS		0.00
		SUB TOTAL	447.24
	Bond	1.25%	5.59
	<b>TOTAL PROPOSAL</b>		<b>452.83</b>



**ELECTRICAL CONTRACTING**

82 Tuckahoe Road  
Dorothy, NJ 08317  
(Tel) 609-476-0822  
(Fax) 609-476-0663  
License # 34EBO1289300

### CONTRACTORS COST BREAKDOWN

CHANGE ORDER NO.

DATE:

06/07/17

RADNOR Memorial Library

COR #

5

Electri-Tech, Inc.

Project No. 2016-20

#### Description of Changes

Field Bulletin #007

#### ADD

	MATERIAL DESCRIPTION	Amount	UNIT	TOTAL
	Standard Material Per Attached Backup	\$2,084.64	1	\$ 2,084.64
			1	\$ -
	Sub Total Materials			\$ 2,084.64
	Overhead	10%		\$ 208.46
	Sub Total Materials			\$ 2,293.10
	Profit	5%		\$ 114.66
	<b>MATERIAL TOTAL</b>			<b>\$ 2,407.76</b>

HOURS	LABOR CLASSIFICATION	HR. RATE	TOTAL
			\$ -
0	Project Superintendent	\$69.28	\$ -
17	Electrical Journeymen	\$69.28	\$ 1,177.76
	Apprentice/Laborer		\$ -
	Sub Total Labor		\$ 1,177.76
	Social Security	7.65%	\$ 90.10
	Unemployment Taxes	19.21%	\$ 226.25
	Workman's Compensation Insurance	9.90%	\$ 116.60
	Public Liability Insurance	3.46%	\$ 40.75
	Overhead	10.00%	\$ 117.78
	Sub Total Labor		\$ 1,769.23
	Profit	5%	\$ 265.38
	<b>TOTAL LABOR</b>		<b>\$ 2,034.62</b>

HOURS	EQUIPMENT DESCRIPTION	RENTAL RATE	TOTAL
	SEE ATTACHED LIST		0.00
	Sub Total Equipment		0.00
	Sales Tax	6%	0.00
	Sub Total Equipment & Sales Tax		0.00
	Overhead & Profit	15%	0.00
	<b>TOTAL EQUIPMENT</b>		<b>0.00</b>

SUBCONTRACTORS			
			0.00
			0.00
	Sub Total Subcontracts		0.00
	Overhead & Profit	5%	0.00
	<b>TOTAL SUBCONTRACTS</b>		<b>0.00</b>

#### SUMMARY

	Total Material		2,407.76
	Total Labor		2,034.62
	Total Equipment		0.00
	Total Subcontracts		0.00
		SUB TOTAL	4,442.37
	LESS DEDUCTS		0.00
		SUB TOTAL	4,442.37
	Bond	1.25%	55.53
	<b>TOTAL PROPOSAL</b>		<b>4,497.90</b>







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## Change Order

PROJECT (Name and address):

Radnor Library Expansion and  
Renovation as per Exhibit A  
114 West Wayne Avenue  
Wayne, PA 19087

CHANGE ORDER NUMBER: 003

DATE: 09/26/2017

OWNER: ☒

ARCHITECT: ☒

CONTRACTOR: ☒

FIELD: ☐

OTHER: ☐

TO CONTRACTOR (Name and address):

Electri-Tech, Inc.  
82 Tuckahoe Road  
Dorothy, NJ 08317

ARCHITECT'S PROJECT NUMBER:

CONTRACT DATE:

CONTRACT FOR: Electrical Construction

### THE CONTRACT IS CHANGED AS FOLLOWS:

(Include, where applicable, any undisputed amount attributable to previously executed Construction Change Directives)

Refer to attached

1) COR: E-001 (40,159.99) Light Pole Bases and New Lights

The original Contract Sum was

\$ 400,000.00

The net change by previously authorized Change Orders

\$ 7957.47

The Contract Sum prior to this Change Order was

\$ 407,957.47

The Contract Sum will be increased by this Change Order in the amount of

\$ 40,159.99

The new Contract Sum including this Change Order will be

\$ 448,117.46

The Contract Time will be unchanged by Zero (0) days.

The date of Substantial Completion as of the date of this Change Order therefore is December 20, 2017

**NOTE:** This Change Order does not include changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

### NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

Kimmel Bogrette Architecture + Site, INC.

ARCHITECT (Firm name)

151 E. 10<sup>th</sup> Avenue, Suite 300  
Conshohocken, pa 19454

ADDRESS

Electri-Tech, Inc.

CONTRACTOR (Firm name)

82 Tuckahoe Road  
Dorothy, NJ 08317

ADDRESS

Radnor Township

OWNER (Firm name)

301 Iven Avenue  
Wayne, PA 19087-5297

ADDRESS

BY (Signature)

Sherri Kimmel  
(Typed name)

DATE

BY (Signature)

Bob Kennedy  
(Typed name)

DATE

BY (Signature)

Steve Norcini  
(Typed name)

DATE



82 Tuckahoe Road  
Dorothy, NJ 08317  
(Tel) 609-476-0822  
(Fax) 609-476-0663  
License # 34EBO1289300

## CONTRACTORS COST BREAKDOWN

CHANGE ORDER NO.		DATE:		07/28/17	
RADNOR Memorial Library		COR #		1	
Electri-Tech, Inc.		Project No. 2016-20			
Description of Changes					
Remove Existing Parking Lot Pole Lights, Bases, Conduit and Wire and Replace with New					
ADD					
		MATERIAL DESCRIPTION	Amount	UNIT	TOTAL
		Standard Material Per Attached Backup	\$9,431.04	1	\$ 9,431.04
				1	\$ -
		Sub Total Materials			\$ 9,431.04
		Overhead	10%		\$ 943.10
		Sub Total Materials			\$ 10,374.14
		Profit	5%		\$ 518.71
		MATERIAL TOTAL			\$ 10,892.85
	HOURS	LABOR CLASSIFICATION	HR. RATE		TOTAL
					\$ -
	24	Project Superintendent	\$69.28		\$ 1,662.72
	100	Electrical Journeymen	\$69.28		\$ 6,928.00
		Apprentice/Laborer			\$ -
		Sub Total Labor			\$ 8,590.72
		Social Security	7.65%		\$ 657.19
		Unemployment Taxes	19.21%		\$ 1,650.28
		Workman's Compensation Insurance	9.90%		\$ 850.48
		Public Liability Insurance	3.46%		\$ 297.24
		Overhead	10.00%		\$ 859.07
		Sub Total Labor			\$ 12,904.98
		Profit	5%		\$ 1,935.75
		TOTAL LABOR			\$ 14,840.73
HOURS		EQUIPMENT DESCRIPTION	RENTAL RATE		TOTAL
		SEE ATTACHED LIST			850.00
		Sub Total Equipment			850.00
		Sales Tax	6%		51.00
		Sub Total Equipment & Sales Tax			901.00
		Overhead & Profit	15%		90.10
		TOTAL EQUIPMENT			991.10
		SUBCONTRACTORS			
					0.00
					0.00
		Sub Total Subcontracts			12,400.00
		Overhead & Profit	5%		620.00
		TOTAL SUBCONTRACTS			13,020.00
SUMMARY					
		Total Material			10,892.85
		Total Labor			14,840.73
		Total Equipment			991.10
		Total Subcontracts			13,020.00
				SUB TOTAL	39,744.68
		LESS DEDUCTS			0.00
				SUB TOTAL	39,744.68
		Bond	1.25%		496.81
		TOTAL PROPOSAL			40,241.49

agreed discount

-81.50  
40,159.99



# AIA<sup>®</sup> Document G701<sup>™</sup> – 2001

## Change Order

**PROJECT** *(Name and address):*

Radnor Library Expansion and  
Renovation as per Exhibit A  
114 West Wayne Avenue  
Wayne, PA 19087

**CHANGE ORDER NUMBER:** 004

**DATE:** 09/26/2017

**OWNER:** ☒

**ARCHITECT:** ☒

**CONTRACTOR:** ☒

**FIELD:** ☐

**OTHER:** ☐

**TO CONTRACTOR** *(Name and address):*

Electri-Tech, Inc.  
82 Tuckahoe Road  
Dorothy, NJ 08317

**ARCHITECT'S PROJECT NUMBER:**

**CONTRACT DATE:**

**CONTRACT FOR:** Electrical Construction

### THE CONTRACT IS CHANGED AS FOLLOWS:

*(Include, where applicable, any undisputed amount attributable to previously executed Construction Change Directives)*  
Refer to attached

1) COR: E-006 (16,882.54) Bid Alternate #4 with updated light fixtures in Friends Area.

The original Contract Sum was	\$	400,000.00
The net change by previously authorized Change Orders	\$	48,117.46
The Contract Sum prior to this Change Order was	\$	448,117.46
The Contract Sum will be increased by this Change Order in the amount of	\$	16,882.54
The new Contract Sum including this Change Order will be	\$	465,000.00

The Contract Time will be unchanged by Zero (0) days.

The date of Substantial Completion as of the date of this Change Order therefore is December 20, 2017

**NOTE:** This Change Order does not include changes in the Contract Sum, Contract Time or Guaranteed Maximum Price which have been authorized by Construction Change Directive until the cost and time have been agreed upon by both the Owner and Contractor, in which case a Change Order is executed to supersede the Construction Change Directive.

### NOT VALID UNTIL SIGNED BY THE ARCHITECT, CONTRACTOR AND OWNER.

Kimmel Bogrette Architecture + Site, Inc.

**ARCHITECT** *(Firm name)*

151 E. 10<sup>th</sup> Avenue, Suite 300  
Conshohocken, pa 19454

**ADDRESS**

Electri-Tech, Inc.

**CONTRACTOR** *(Firm name)*

82 Tuckahoe Road  
Dorothy, NJ 08317

**ADDRESS**

Radnor Township

**OWNER** *(Firm name)*

301 Iven Avenue  
Wayne, PA 19087-5297

**ADDRESS**

**BY** *(Signature)*

Sherri Kimmel

*(Typed name)*

**BY** *(Signature)*

Bob Kennedy

*(Typed name)*

**BY** *(Signature)*

Steve Norcini

*(Typed name)*

**DATE**

**DATE**

**DATE**



**ELECTRI-TECH**

Radnor Memorial Library  
ETI Proposal EC-004

Summary  
*REVISED*

August 8, 2017

Reinstatement of Bid Alternate #4 -----	Add Cost -	\$12,000.00
Bulletin #12 – Change in Scope/friends Area –	Add Cost -	<u>\$4,882.54</u>
Total Add Cost		\$16,882.54

**Every Electrical Need**  
→ Since 1989 →



**PROJECT****Radnor**

Size	Item Desc	Qty	UOM	Mat Unit	Mat Ext	Lbr Unit	Lbr Ext
	Credit 2 x 4 lay in Fixture	-24	EACH	\$108.50	(\$2,604.00)	0.4	-9.6
	Credit Recessed Down Light	-4	EACH	\$231.00	(\$924.00)	1.25	-5
			EACH	\$0.00	\$0.00	0	0
	Add Type A4 Light Fixture	24	EACH	\$188.00	\$4,512.00	1.5	36
	Add Feed End Outlet Box	24	EACH	\$4.50	\$108.00	0.3	7.2
		0	EACH	\$0.00	\$0.00	0	0
	Deduct 4 Way Switch	-1	EACH	\$25.54	(\$25.54)	1	-1
		0	EACH	\$0.00	\$0.00	0	0
		0	EACH	\$0.00	\$0.00	0	0
		0	LF	\$0.00	\$0.00	0	0
		0	EACH	\$0.00	\$0.00	0	0
	Site Survey	1	EACH	\$0.00	\$0.00	2	2
	<b>GRAND TOTAL</b>				<b>\$1,066.46</b>		<b>30</b>


**Equipment List:**

# Radnor Township

## PROPOSED LEGISLATION

DATE: October 3, 2017

TO: Radnor Township Board of Commissioners

FROM: Stephen F. Norcini, P.E., Township Engineer 

CC: Robert A. Zienkowski, Township Manager  
William M. White, Assistant Township Manager/Finance Director  
Helen McGrane, President, Board of Directors, Memorial Library of Radnor  
Anny Laepple, Director, Memorial Library of Radnor  
Rick Capone, QCI

LEGISLATION: **Resolution #2017-116:** Authorizing Payment of Change Orders to the Prime Contractors for the Memorial Library of Radnor Renovation and Expansion Project

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**LEGISLATIVE HISTORY:** The authorization and payment of Change Orders for the Library Renovation and Expansion Project have not been before the Board of Commissioners previously.

**PURPOSE AND EXPLANATION:** During the course of construction, change orders are required for work that was not included in the original contract. In the case of the Library Renovation and Expansion project, change orders are required for work that was unforeseen, replacement of areas affected by mold, and work requested by the owner. Please note that some of the cost for the mold related work may be reimbursed by our insurance carrier.

Attached is a spread sheet from Helen McGrane, with input from QCI, outlining change orders and their costs for Dolan Construction, the General Prime, and Electri-Tech, the Mechanical Prime. The net total of change orders for Dolan Construction is \$66,386.25, and for Electri-Tech the total is \$65,000. The purpose of the legislation is to have the Board of Commissioners authorize the work under the change orders to be completed, at the costs noted. There are other possible change orders pending, which may be brought before the Board at a future meeting.

Rick Capone, of QCI, the Owner's Representative for the project, will be before the Commissioners to review the proposed change orders, and answer any questions you may have.

**IMPLEMENTATION SCHEDULE:** Pending Board of Commissioners approval, additions to the original contract amounts will be made, noting the change order numbers, and the Resolution number that noting the Board of Commissioners authorization to proceed with the work under the change orders. The contractors will be notified, and work will begin as soon as possible.

**FISCAL IMPACT:** The cost of the change orders will be paid from the contingency fund of the Library construction project. The accompanying resolution will allow us to authorize the change orders, as well as payment upon completion of the work.

**Recommendation:** *Staff respectfully recommends that the Board of Commissioners authorizes and approves Change Orders for Dolan Construction as noted on the attached AIA Documents, Change Orders 002,003,004 in the amount of \$66,386.25, and for Electri-Tech as noted on Change Orders 002,003,004 in the amount of \$65,000.*

Table 1

<b>RML LIBRARY PROJECT: CHANGE ORDERS</b>				
<b>Change order #</b>	<b>COR #</b>	<b>Description</b>	<b>Amount</b>	<b>Notes</b>
<b>Change orders, 10/9/17 BOC</b>				
<b>All Contractors</b>				
001	—	Allowable delay time extension for all four contracts.	\$0.00	KB and QCI evaluated Dolan's request for 68 day extension and determined that 46 days was acceptable due to mold and other unforeseen issues.
<b>ELECTRI-TECH</b>				
002	E-002	Modify branch circuit @waste pipe	\$3,006.74	Unforeseen electrical issue at waste pipe.
002	E-003	Increase circuit breaker for Elevator	\$452.83	Unforeseen: contractor selected different elevator than specified (as allowed), and new elevator required an increased circuit breaker.
002	E-005	Field Bulletin #7, misc additional exterior lighting and interior wiring & outlets, including Windsor Room.	\$4,497.90	Bundled changes, some due to unforeseen issues and some customer requested.
003	E-001	Exterior light poles	\$40,159.99	Unforeseen issue: original installation of light poles in 1980 flawed and does not pass code. Easiest remedy is to replace bases. Total amount also includes replacement of poles (customer requested).
004	E-006	Friends area & kitchen lighting	\$16,882.54	Replace lighting in kitchen (unforeseen—insufficient wiring uncovered while plumbing work was being done) and replacement of lighting in Friends' Area (customer requested).
		<b>Subtotal</b>	<b>\$65,000.00</b>	
<b>DOLAN Construction</b>				
002	G-002	Louver Infill @ Rear Wall/Teen center (RFI #5)	\$8,635.49	Design conflict because of reduction in scope, teen center addition was removed and louvers were missed in redesign.
002	G-003	Restroom Wall @ Main Level (FB4.1)	\$874.65	
002	G-004	Rebuild Wall @ Stair (RFI#8)	\$7,916.10	Unforeseen: defect in blue print re: load bearing beam. Work largely completed.

RML LIBRARY PROJECT				
Change order #	COR #	Description	Amount	Notes
002	G-005	Tree Removal/new trees	\$3,110.63	Arborist said it had to come down, price includes 2 replacement trees although only room for one. Original est: \$3,596.25 Tree has been removed but new trees not planted yet.
002	G-006	<u>Credit</u> for AWI/ACI standards certification, cement flooring	-\$5,460.00	Difficult to obtain req services. Does not impact end result as it is being inspected by several entities.
002	G-007	Walls in Executive Director/ Fundraising offices	\$12,632.00	Customer requested—value engineering had removed walls from ED and Fundraising supervisor offices, which was determined unacceptable by RML Board for patron privacy and security reasons.
002	G-008	<u>Credit</u> for Raingarden	-\$30,000.00	Township requested, RML agrees. Rain garden would prove difficult to maintain and would take up space that could be used for children's programming.
003	G-001	Replacement of Mold related materials	\$43,677.38	Insurance should cover some but amount not determined, includes replacement of all damaged drywall, wainscoting, insulation, etc, in downstairs area (including kitchen).
004	G-009	Tile, all bathrooms	\$25,000.00	Customer requested—determined that public bathroom walls needed tile for sanitary and maintenance issues, and durability. This price includes tile wainscoting for 5 bathrooms (three main level, two by Windsor Room).
		<b>Subtotal</b>	<b>\$66,386.25</b>	
		<b><u>TOTAL:</u></b>	<b><u>\$131,386.25</u></b>	As indicated, amount includes \$35,460 credit.



**ORDINANCE NO. 2016-13**

**AN ORDINANCE OF RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, AMENDING CHAPTER 280 ZONING, ARTICLE XV, PLO PLANNED LABORATORY-OFFICE DISTRICT, SECTIONS 280-62, 280-63 AND 280-64, BY PROVIDING FOR ADDITIONAL USES IN THE PLO PLANNED LABORATORY-OFFICE DISTRICT INCLUDING MIXED USE DEVELOPMENTS; PROVIDING FOR REVISED DIMENSIONAL REQUIREMENTS FOR MIXED USE DEVELOPMENTS INCLUDING FINANCIAL SUBDIVISIONS AND PROVIDING FOR ADDITIONAL ACCESSORY USES**

**SECTION 1.** Chapter 280, Article XV, Sections 280-62, 280-63 and 280-64 are hereby revised to read as follows:

**Section 280-62 Purpose; application of regulations**

- A. PLO Planned Laboratory-Office Districts are designed primarily to provide for selected modern laboratory, office establishments and other compatible uses which:
  - (1) Provide for attractive large-site, low-lot-coverage development in areas where traditional business development would be inappropriate.
  - (2) Strengthen and diversify the Township's tax base.
  - (3) Are compatible with the character of the surrounding areas.
  - (4) Increase the effectiveness of the zoning district by providing the capability for a mixture of complementary uses.
  - (5) Decrease the negative external effects of parking and traffic on surrounding areas by providing the capability for a mixture of complementary uses.
- B. PLO Districts may be established and developed only in accordance with the special provisions of § 280-132 and subject to the regulations of this article and any other pertinent provisions of this chapter.
- C. In PLO Planned Laboratory-Office Districts, the regulations contained in this chapter shall apply.

### **Section 280-63 Use regulations**

A building or unified group of buildings may be erected or used and a lot may be used or occupied for any of the following purposes:

- A. Forty percent (40%) to one-hundred percent (100%) of the gross floor area may be used or occupied for the following:
  - (1) Scientific or industrial research, testing or experimental laboratory or similar establishment for research or product development, provided that there is no commercial production or storage of any commodity or substance except for storage necessary for scientific research.
  - (2) Office Building, including medical, dental, professional and sales.
- B. Subject to the requirements of § 280-64.G., up to sixty percent (60%) of the gross floor area may be used or occupied for the following:
  - (1) Hotel, including extended stay, which may contain restaurant and banquet space. Hotel pools and indoor health/fitness/recreation centers shall be for the use of hotel guests only.
  - (2) Skilled nursing and/or Senior Assisted Living facility.
  - (3) Senior Independent living facility.
  - (4) Ambulatory care facility - a health care facility or a distinct part of a health care facility which provides preventative, diagnostic, and treatment services to persons who come to the facility to receive services and depart from the facility on the same day, excluding medical and dental office uses. All land development plans proposing an Ambulatory care facility shall be limited to no smaller than 969 square feet per patient position yielding 103 patient positions per 100,000 square feet of gross floor area.
- C. Notwithstanding the minimum lot size of Section 280-64.A., properties with a total site area of less than 10 acres may be used or occupied as follows and may not be combined with any other principal use.
  - (1) Skilled nursing, Senior Independent Living, and/or Senior Assisted Living facility, excluding Drug and Alcohol Rehabilitation facilities.
  - (2) Hotel, including extended stay, which may contain restaurant and banquet space. Hotel pools and indoor health/fitness/recreation centers shall be for the use of hotel guests only.
- D. Accessory uses, which may include:

- (1) Storage within a completely enclosed building in conjunction with a permitted use.
- (2) A cafeteria or other service facility located within the building and operated for the exclusive use of the occupants of the building. An accessory cafeteria may include outdoor dining as permitted by § 280-115.3B. [Amended 4-8-2013 by Ord. No. 2012-09]
- (3) A recreational area for occupants.
- (4) Living quarters for watchmen, caretakers or similar employees.
- (5) A parking structure, when constructed as an accessory structure for the purpose of eliminating allowable surface parking. Parking structures may be located wholly or partly within the principal building, attached to and made a part of the principal building, or constructed as a detached accessory structure. Parking spaces within structures may be reduced to not less than nine feet in width by 19 feet in depth, exclusive of aisles, for each motor vehicle.
- (6) Restaurant accessory to a permitted principal use not including existing non-conforming uses. Outdoor dining is permitted in accordance with § 280-115.3 B.

#### **Section 280-64 Area and height regulations**

- A. Lot area and width. Every lot on which a building or combination of buildings is hereafter erected or used shall have a lot area of not less than 10 acres, and such lot shall not be less than 300 feet at the building line.
- B. Building area. Not more than 30% of the area of any lot may be occupied by buildings and structures, and not less than 45% of the total lot area, exclusive of those areas within the public right-of-way, shall be devoted to landscaping and planted in accordance with Chapter 255, Subdivision of Land. Landscaped areas shall include nonimpervious areas devoted to stormwater management, required buffer areas, and landscaping for parking facilities.
- C. Building placement. No building or accessory structure shall be located less than one hundred and fifty (150) feet from a street right-of-way line nor less than two hundred (200) feet from a side or rear property line and no surface parking area, driveway, service or interior roadway, with the exception of approved areas for vehicular access, shall be located less than 75 feet from a street right-of-way or other property line.
- D. Building size and spacing.
  - (1) Except for a Mixed Use development permitted under § 280-64.G., the greatest dimension in length or depth of a building shall not exceed 160 feet, and no more than

three buildings may be attached to each other, provided further that the facade of any building attached to another building be visibly offset from the adjoining building at an angle of approximately 90°.

- (2) The distance at the closest point between any two buildings or group of attached buildings, including accessory structures, shall not be less than 45 feet.
- (3) In no case shall the width of buildings or accessory structures or the aggregate widths of buildings or accessory structures fronting on a street on the same lot exceed 80% of the width of a lot.

E. Height regulations. Except for a Mixed Use development permitted under § 280-64.G., no building or accessory structure shall exceed three stories or 38 feet in height.

F. Riparian buffer setback: 35 feet

G. Mixed Use - A building or unified group of buildings may include the uses specified in § 280-63.A. and B. and no other, subject to the following conditions:

- (1) The minimum gross floor area of the B. uses shall be 30% of the Total Site Area. The maximum medical or dental office use shall be 30% of the gross floor area of the Total Site Area. Ambulatory Care facility uses shall be combined with a minimum 15% of gross floor area of the Total Site Area of one or more of the uses described in § 280-63.B.1, 2 or 3.
- (2) No building shall exceed 85 feet in height. Buildings in excess of three stories or 38 feet in height are subject to the following requirements:

Building Height (Tallest building on site)	Maximum Building Area (%)	Maximum Lot Coverage (%)	Set Back to Street ROW Line (ft)	Set Back to Side and Rear Property Line Adjacent to Residential Zoning District (ft)	Set Back to Side and Rear Property Line Adjacent to Non-Residential Zoning District (ft)	Set Back to Side and Rear Property Line Abutting Railway and Limited Access Highway (ft)
less than or equal to 55'	29	50	100	200	50	25
greater than 55' but less than or equal to 85'	28	45	100	200	50	25

- (3) The gross floor area for all buildings on lots/properties existing as of the date of this ordinance shall not exceed 25,500 square feet per acre of Total Site Area.
- (4) A parking garage or parking structure may have a height of up to 55 feet so long as such parking garage or parking structure does not exceed the height of any building on the site.



- (5) All other accessory structures shall not exceed 45 feet in height as long as the accessory structure does not exceed the height of any other building on the site.
- (6) Financial Subdivision - In connection with development of a Mixed Use within the PLO District, individual lots may be created for purposes of financing and/or conveyancing. Such individual lots shall not be required to comply on an individual basis with the dimensional requirements of this Article, provided that the site and uses comply with such requirements on an overall basis, and further provided that the deeds conveying such separate lots contain covenants requiring the purchasers to, at all times, operate and maintain such lots in good order and repair and in a clean and sanitary condition; that cross-easements for parking areas and all appurtenant ways, pedestrian access, and utilities shall be maintained between such lots; and that such covenants shall be subject to the approval of the Township. The purchaser of any such lot shall execute and file with the Township a written covenant agreeing to the forgoing conditions prior to purchasing.
- (7) In the event that development requires an expansion of the right of way; setbacks shall be measured from the proposed right of way line.
- (8) The greatest dimension in length or depth of a building (as specified in § 280.64.D) may be up to 350 feet provided that: (a) the façade is constructed of brick, stone, architectural concrete, architectural metal work, or articulated glass; (b) is constructed with vertical and horizontal articulation and; (c) is approved by the Township.
- (9) The Total Site Area for a Mixed Use development must be greater than or equal to 10 acres. Total Site Area is the gross area of a lot or lots as described in the deeds or from an actual survey but excluding the area of any public or private street or rights of way as of the date of this ordinance.
- (10) All Mixed Use developments shall submit a Transportation Impact and Mitigation Report to the Township as part of the land development application. The Transportation Impact and Mitigation Report shall address the following components for the proposed development:
  - (a) A description of all improvements proposed along the frontage of the property including curbs, sidewalks, drainage, and utility additions or extensions proposed as a result of the project.
  - (b) A description of all improvements to adjacent intersections or intersections within a 1/2 mile of the proposed project designed to mitigate the impact of the proposed development transportation at full build-out of the site.
  - (c) A description of all off-site transportation improvements proposed by the developer or a description of proposed improvements to existing public

transportation facilities including existing rail lines adjacent to or within ½ mile to the site.

- (d) A description of transportation improvements proposed to be constructed by the applicant as recommended in the Township's Comprehensive Plan.

(11) No land development application shall be accepted or processed by the Township without the submission of the foregoing Transportation Impact and Mitigation Report.

**SECTION 2.** Repealer. All ordinances or parts of ordinances which are inconsistent herewith are hereby repealed.

**SECTION 3.** Severability. If any section, paragraph, subsection, clause or provision of this Ordinance shall be declared invalid or unconstitutional by a court of competent jurisdiction, such decision shall not affect the validity of this Ordinance as a whole or any part thereof other than that portion specifically declared invalid.

**SECTION 4.** Effective Date. This Ordinance shall become effective in accordance with the Home Rule Charter of Radnor Township.

***ENACTED*** and ***ORDAINED*** this                      day of                      , 2017.

**RADNOR TOWNSHIP**

By: \_\_\_\_\_  
Name:  
Title:

ATTEST: \_\_\_\_\_  
Robert A. Zienkowski, Secretary

Authorization to file an  
Enforcement Action Re: 5  
Marlyn Circle and 713  
Miller Street