

RESOLUTION NO. 2015-54

RADNOR TOWNSHIP

A RESOLUTION OF RADNOR TOWNSHIP, DELAWARE COUNTY, PENNSYLVANIA, APPROVING THE PRELIMINARY PLAN APPLICATION OF VILLANOVA UNIVERSITY FOR A PROPERTY LOCATED ON LANCASTER AVENUE AND ITHAN AVENUE PURSUANT TO PLANS PREPARED BY NAVE NEWELL, INC. ESTABLISHING A COMPREHENSIVE INTEGRATED COLLEGE DEVELOPMENT.

WHEREAS, Villanova University (“Applicant”) submitted a Preliminary Land Development Application (“Application”) for properties located on the southeast and southwest corners of Lancaster Avenue and Ithan Avenue within the Township’s PI - Planned Institutional Zoning District (“Property”) to establish a Comprehensive Integrated College Development (“CICD”) upon the Campus in accordance with Section 280-68.1 of the Township Zoning Ordinance; and

WHEREAS, this Application includes the following engineered plan sets (jointly referred to as the “Plan”):

- Preliminary Land Development Submission for Lancaster Avenue Housing, consisting of 35 sheets prepared for Villanova University, prepared by Nave Newell, Inc., dated December 5, 2014 and revised March 6, 2015.
- Preliminary Land Development Submission for West Lancaster Parking, consisting of 28 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.
- Preliminary Land Development Submission for Church Walk and Bridge, consisting of 20 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 13, 2015.
- Preliminary Land Development Submission for Pike Field Garage, consisting of 34 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.
- Preliminary Land Development Submission for Performing Arts Center, consisting of 18 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.

WHEREAS, the Application proposes the construction of student housing, retail shops, a parking garage, a performing arts center, and surface parking spaces as set forth on the Plan.

WHEREAS, the Application has been reviewed by both the Radnor Township Planning Commission and the Delaware County Planning Commission.

WHEREAS, the Applicant received conditional use approval for the CICD by Decision and Order of the Radnor Township Board of Commissioners dated November 24, 2014 (“CU Decision”); and

NOW, THEREFORE, it is hereby **RESOLVED** that the Board of Commissioners of Radnor Township does hereby approve the Preliminary Plan of land development for Villanova University subject to the following conditions:

1. The Applicant shall comply with the May 4, 2015 correspondence of the Township Engineer, Gannett Fleming, a copy of which is attached hereto and incorporated herein as **“Exhibit “A”**.
2. The Applicant shall comply with the May 5, 2015 correspondence of Gilmore & Associates, Inc., a copy of which is attached hereto and incorporated herein as **“Exhibit “B”**.
3. The Applicant shall comply with the two May 4, 2015 correspondences of RETTEW, copies of which are attached hereto and incorporated herein collectively as **“Exhibit “C”** except for the following revisions:
 - a. Church Walk letter, Subdivision section- paragraph 2 with respect to a separate walkway to St. Thomas of Villanova Church is deleted and not a required condition.
 - b. Lancaster Avenue Housing review letter, Specific Zoning section-paragraph 7 requiring a rezoning of the portion of the site zoned R-3 is deleted and not a required condition.
4. The Applicant shall comply with the terms and conditions of the Conditional Use Order of the Board of Commissioners dated November 24, 2014, a copy of which is attached hereto and incorporated herein as **Exhibit “D”**.
5. The Applicant shall install the enhanced stormwater system shown on the Plan. Additionally, the Applicant shall connect the existing PennDOT stormwater pipe from State Route 30 to Pike Field to the proposed stormwater system for the overall project.
6. The Applicant shall install the proposed right-hand turn lane along Lancaster Pike in front of the performing arts center and into the entrance drive for the Pike Field Garage.

7. The Applicant shall pay \$174,408.00 in park and recreation fees based on a total square footage of 210,957 in lieu of dedication of park land. All fees are due and payable upon execution of development and financial security agreements.
8. The Applicant shall construct all public improvements shown on the Plan including construction of the pedestrian bridge across Lancaster Avenue at Church Walk prior to occupancy of the new dormitories.
9. The Applicant shall submit to the Township Engineer for review and approval all necessary legal descriptions and construction cost estimates of the site improvements.
10. The Applicant shall execute Development and Financial Security Agreements in a form and manner to be approved by the Township Solicitor. Prior to any construction, the Applicant shall provide a detailed staging plan acceptable to the Township addressing off site erosion, street sweeping, the impact of special events, construction worker parking, and any required road closures of Township or State streets during construction.
11. The Applicant shall comply with all other Township, County, State and Federal ordinances, statutes, rules and regulations.
12. The Applicant shall comply with current IBC and NFPA guidelines for all new construction. The Applicant shall provide sufficient vehicle access to all buildings as recommended by the Township. Additionally, the Applicant shall provide to the Township information and/or training guidelines for firefighting issues which may arise upon construction and operation of the proposed parking structure.
13. The Applicant shall provide a supplemental landscape plan for the buffer area along the Barley Cone Lane neighboring residents' property lines which shall be reviewed and approved by the Township.

In addition to the foregoing conditions of preliminary plan approval, the Board's determination with respect to the following waivers is as follows:

1. SLDO 255-29 A(2) to permit 22' entry/exit drives as shown on the Plan.

Approved
 Denied

2. SLDO 255-27 H. to permit a reduced 30 foot curb radius at the southwest corner of the Ithan/Lancaster Avenue intersection

Approved
 Denied

SO RESOLVED, at a duly convened meeting of the Board of Commissioners of Radnor Township conducted on this 11th day of May, 2015.

RADNOR TOWNSHIP

By: William A. Spingler
Name: William A. Spingler
Title: President

ATTEST: _____

A handwritten signature, possibly of a notary or witness, written in dark ink over a horizontal line.



Date: May 4, 2015

To: Radnor Township Board of Commissioners

From: Roger Phillips, PE

cc: Robert Zienkowski – Township Manager
Stephen Norcini, P.E. – Director of Public Works
Kevin W. Kochanski, RLA, CZO – Director of Community Development
John Rice, Esq – Grim, Biehn, and Thatcher
Amy Kaminski, PE – Gilmore and Assoc.
Steve Gabriel - Rettew

RE: Villanova University – Lancaster Avenue Housing
Villanova University – Applicant

Date Accepted: January 6, 2015
90 Day Review: April 6, 2015 extended to May 11, 2015

Gannett Fleming, Inc. has completed a review of the Villanova University Lancaster Avenue Housing Preliminary Plan for compliance with the Radnor Township Code. This Preliminary Plan was reviewed for conformance with Zoning, Subdivision and Land Development, Stormwater Management, and other applicable codes of the Township of Radnor. A preliminary review was also completed for the West Lancaster Parking Lot, Pike Field Garage, the Performing Arts Center, and the Church Walk Bridge. We note that detailed plans have not been submitted for the SAC Parking Garage.

Conditional use approval was granted on November 24, 2014 to permit the development under CICD (decision attached). The applicant is proposing to construct a 1,138 bed student housing facility in six buildings with associated retail space.

The applicant appeared before the Planning Commission on April 6, 2015. The Planning Commission recommended approval of the plans based on the following conditions:

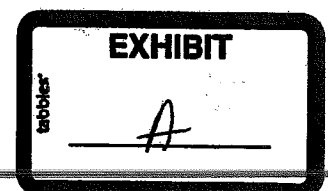
- Denial of the waiver request for Section 255-27.H, to permit a 25' radius curb on the southwest corner of Ithan Avenue and Route 30.
- The applicant meet all outstanding staff comments and review letters, or request waivers from comments.
- The applicant install an enhanced stormwater management plan as detailed to the staff, the public, and the Planning Commission at the March 26th meeting. This enhanced stormwater management system is to include infiltration and improved water quality as outlined at the March 26 meeting

Gannett Fleming, Inc.

P.O. Box 80794 • Valley Forge, PA 19484-0794 | 1010 Adams Avenue • Audubon, PA 19403-2402

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www.gannettfleming.com



- The applicant seek any and all easements necessary for the construction, maintenance and access to the pedestrian bridge.

The applicant has indicated that the following waivers will be requested from the Subdivision and Land Development Code:

- §255-27.H – To permit a 25 ft radius curb on the southwest corner of Ithan Avenue and Lancaster Avenue.
- §255-29.A.(12) – To permit 22' entry/exit drives between the parking areas in the West Lancaster parking lot, the Visitors and SEPTA parking lot, and Lancaster Avenue parking lot.

Lancaster Avenue Housing

Plans Prepared By: Nave Newell

Dated: 12/05/2015 and revised 03/06/2015

I Zoning

1. §280-68.1.D(2)(g)1 – Not more than 30% of CICD shall be occupied by buildings. The total building coverage may be increased to no greater than 45%, subject to the land preservation standards of this section, provided that in no event may the total building coverage of the applicant's entire campus within the PI zoning district exceed 30%. For purposes of calculating the total building coverage in the CICD, parking structures shall be included in the building area. A breakdown of the proposed 35.5% building coverage shown on the plans must be provided, including information from the other phases. The applicant has indicated that the total building area is 4.9 acres. The building area for each individual building must be provided.
2. §280-68.1.D(2)(g)2 – No individual building nor group of buildings not separated from each other by the minimum required separation distance noted below shall occupy more than 10% of the CICD site. Parking structures are not required to be included in the calculations of individual building coverage. The plan indicates building coverages of 7.6% for Residence Hall 2, 8.5% for Residence Hall 1 and the Performing Arts Center is 5.6%. A detailed breakdown of this calculation has been provided. It appears that the proposed % shown on the zoning tables are reversed for the residence halls. This must be revised.
3. §280-68.1.D(2)(h) – Not more than 45% of the CICD site may be covered by impervious surfaces; provided, however, if the CICD is redeveloping existing improved lands, then the maximum allowed impervious surface ratio shall be 45% or 10% less than the existing impervious surface ratio on the proposed CICD site, whichever is greater. In no event may the maximum allowed impervious surfaces on the applicants entire campus

within the PI Zoning District exceed 45%. The plan indicates that the entire campus proposes 36.4%. The existing impervious surface calculation for the CICD indicates it is 92% impervious therefore 82% is the maximum permitted. A detailed breakdown of how the 92% impervious was calculated must be provided. The impervious should be broken down by each separate area.

4. §280-68.1.D(3)(g) – Light fixtures shall be shielded to reduce light spillage beyond the property line of the campus; provided, however, that at no point shall any light trespass onto adjacent residential properties or exceed 0.5 footcandles at the residential property line. All proposed exterior site and building-mounted lighting shall meet the International Dark-Sky Association (IDA) full cutoff requirements. The plan must provide calculations that indicate it is in compliance with IDA requirements.
5. §280-105.E. – All outside lighting including sign lighting shall be directed in such a way as not to create a nuisance in any agricultural, institutional, or residential districts, and in every district all such lighting shall be arranged so as to protect the street or highway and adjoining property from direct glare or hazardous interference of any kind. Any luminary shall be equipped with some type of glare shielding device approved by the Township Engineer. The height of any luminary shall not exceed 25 feet. It appears that the detail for the luminary has been removed from the detail sheet. A clearly legible detail must be provided that indicates the proposed height.
6. §280-112.C. – Areas of steep slopes containing slopes steeper than 14% shall be outlined as following (1) Areas containing slopes steeper than 14% but less than 20% shall be distinguished from the areas containing slopes of 20% or steeper. (2) Areas containing slopes of 20% and steeper shall be separately identified. The applicant has indicated that there will be disturbance in the steep slope area along Ithan Avenue. This disturbance is allowed under §280.112.D.(6) as it is required for construction of a roadway with no alternative routing along Ithan Avenue.

II Subdivision and Land Development

1. §255-20.B.(1)(d) – All applicable zoning districts for this land development must be provided on the plans. This must be shown on the overall plan sheet.
2. §255-27.H(6) – Minimum curb radii at street intersections shall be 25 feet for local streets; 30 feet for collectors; 35 feet for arterials; and 10 feet for driveways. The applicant has requested a waiver to allow a 25 foot radius curb on the southwest corner of Ithan Avenue and Lancaster Avenue.
3. §255-29.A.(12) – The width of entrance and exit drives shall be a minimum of 25 feet for two-way use. The entrance exit drive shown on the plan into the proposed parking area

behind the student housing from Ithan Avenue is 22 feet. The applicant has requested a waiver to allow for a 22' entrance and exit drive.

4. §255-43.1.B(2) – For all nonresidential subdivision and/or land developments, the amount of land to be dedicated for park and recreational area shall be 2,500 square feet per 4,000 square feet of building area. The applicant must conform to this section.
5. §255-43.1.E(2) – Where, upon agreement with the applicant or developer, it is determined that the dedication of all or any portion of the land area required for park and recreation purposes is not feasible, the applicant or developer shall pay a fee in lieu of dedication of any such land to the Township. The fee for non-residential subdivisions or land developments shall be \$3,307 per 4,000 square feet of building area. The applicant must conform to this section.
6. §255-54.B. – The system central water supply system shall be designed with adequate capacity and appropriately spaced fire hydrants for firefighting purposes pursuant to the specifications of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided.

III Stormwater Management

1. The applicant must provide an explanation or reconcile the inconsistency for the impervious area value for RG-10. Page 31 of the Stormwater Report lists the impervious area to be 9,216 SF, page 40 lists the impervious area to be 6,216 SF, page 149 lists the impervious area to be 6,216 SF and the table on the plan, and “Drainage Plan (Volume Management) lists the impervious area to be 9,216 SF.

IV General Comments

1. The applicant shall obtain revisions to both the Radnor Township and Lower Merion Township Act 537 Plans in order to accommodate the increase wastewater disposal generated by the project.
2. A detail of the proposed fence/gate enclosure must be provided on the plans.

West Lancaster Parking

Plans Prepared By: Nave Newell

Dated: 03/06/2015

I Zoning

1. §280-43.D – No building shall be located less than 65 feet from a street right-of-way line, less than 20 feet from a side property line nor less than 25 feet from a rear property line. The applicant is proposing a 57.9 front yard setback and a 11.9 foot side yard setback. Both are non-conformities that the applicant intends to continue.

II Subdivision Land Development

1. §255-29.B.(1) – All parking areas shall have at least one tree 2 ½ inches minimum in caliper for every five parking spaces in single bays and one tree 2 ½ inches minimum in caliper for every parking space in double bay. A minimum of 10% of any parking lot facility over 2,000 square feet in gross area shall be devoted to landscaping, inclusive of required trees. The landscape plans indicate that there are 232 parking spaces for this project. The overall Lancaster Avenue housing plans indicate that there are 240 proposed spaces for this lot. This must be verified and all plans revised to be consistent.
2. §255-29.A.(15) – All dead-end parking areas shall be designed to provide sufficient backup area for all the end stalls of a parking area. The dead-end parking spaces behind Farrell Hall must be revised to include a sufficient back-up area.

III Stormwater Management

1. The applicant must provide an explanation or reconcile the inconsistency for the Area values listed for RG-101. The supporting calculations for the Volume Summary on page 24 list the overall drainage area to be 29,422 SF. Plan measurements of the sheet, "Post Watershed Area Plan" appears to indicate a drainage area significantly larger (approximately 46,500 SF). It would be helpful if the applicant submitted documentation similar to page 36 of the Stormwater Report for the Lancaster Avenue Housing Phase that detailed the structure/facility's total area, impervious area and pervious area.
2. The "Volume – One Inch" calculation sheet on pages 24-25 appears to have some inconsistencies and should be rechecked and resubmitted. Specific examples include the following

- a. RG-101's volumetric storage value of 1,472 CF seems inconsistent with the calculations shown for the cumulative storage and incremental storage volume values.
 - b. RG-102 has a similar calculation inconsistency – The T/G elevation of 438.5 listed, however calculations for the area, depth, ave. area etc. stop at elevation 438.00. Additionally the volumetric storage value of 1,846 CF does not appear consistent with the volume calculations provided for both the incremental and cumulative storage volume values.
 - c. The applicant must provide supporting documentation for the cumulative volume values reported for Infiltration systems 101, 102 and 103 similar to what was provided for the infiltration systems in the Lancaster Avenue Section of the Stormwater report on page 43-46.
3. The applicant must provide a summary table similar to what was provided for the Lancaster Avenue Housing calculations (p. 35-36) which details what drainage areas contribute to each BMP (or unmanaged area), including total drainage area, impervious area, and pervious area.
 4. The applicant must provide a plan similar to the "Post Development Drainage Plan (Volume Management)" provided for the Lancaster Avenue Housing portion of the project which includes a table detailing the impervious surfaces to each BMP.
 5. The "Inlet Area Plan" appears to be missing drainage areas for I-202A, I-202B, and some of the inlets along the Lancaster Avenue turning lane. Please update the plan so these values can be checked against what is being reported in the stormwater calculations.
 6. How and where is the runoff from the pedestrian bridge being addressed? A drainage area for this area is partially drawn on sheet "Post Watershed Area Plan", but it is not included in the drainage area chart on page 124. Please provide an explanation.
 7. A general note shall be added to the plans indicating that a grading plan and erosion sediment and control plans will be **submitted and approved** prior to issuing any building permits. Any revisions to the size or location of the individual structures or other features will be addressed at that time, and a final approval of the stormwater management plan will be required as part of the Grading Permit process.

Pike Field Garage

Plans Prepared By: Nave Newell
Dated: 03/06/2015

I Zoning



1. §280-68.1.D(3)(g) – Light fixtures shall be shielded to reduce light spillage beyond the property line of the campus; provided, however, that at no point shall any light trespass onto adjacent residential properties or exceed 0.5 footcandles at the residential property line. All proposed exterior site and building-mounted lighting shall meet the International Dark-Sky Association (IDA) full cutoff requirements. The plan must provide calculations that indicate it is in compliance with IDA requirements.
2. §280-68.1.D(3)(e)4 – Surface parking spaces shall be no less than nine feet by 19 feet. Parking spaces in any parking structure shall be no less than eight feet six inches by 19 feet. The parking spaces must be dimensioned on the plans. Detailed parking garage plans must be submitted for review.
3. §280-112.C. – Areas of steep slopes containing slopes steeper than 14% shall be outlined as following (1) Areas containing slopes steeper than 14% but less than 20% shall be distinguished from the areas containing slopes of 20% or steeper. (2) Areas containing slopes of 20% and steeper shall be separately identified. There are storm sewers proposed within areas of greater than 20%.

II Subdivision Land Development

1. §255-54.B. – The system central water supply system shall be designed with adequate capacity and appropriately spaced fire hydrants for firefighting purposes pursuant to the specifications of the National Fire Protection Association. Review and approval by the Township Engineer and the Township Fire Marshall shall be required in order to ensure that adequate fire protection is provided. The proposed fire access land is proposed to be grass pavers. This must be reviewed by the Township Fire Marshall.

III Stormwater Management

1. The applicant must provide a summary table similar to what was provided for the Lancaster Avenue Housing calculations (p. 35-36) which details what drainage areas contribute to each BMP (or unmanaged area), including total drainage area, impervious area, and pervious area.
2. The applicant must provide a plan similar to the “Post Development Drainage Plan (Volume Management)” provided for the Lancaster Avenue Housing portion of the project which includes a table detailing the impervious surfaces to each BMP.
3. There appears to be missing/inconsistent information between the drainage area table on page 189 of the Stormwater Report and the “Inlet Area Plan”. The RG-1 referred to on

the table does not appear on the plan for this section of the development. There also appears to be missing drainage areas/information for YD 3-1, YD 3-2 and the Trunc Flow I-314. Please explain.

4. A drainage area for Pike Garage is shown to drain to a stormwater management system in POI 2B. The area breakdown does not appear to be included on the drainage area table on page 189 of the Stormwater Report. This is inconsistent with the other drainage areas reported for POI 2B. Please update the table accordingly.
5. The Volume Calculations for the Proposed Garage Basin – POI – 2B appears to have inconsistent information with regards to the detail shown on the Pike Field Garage Plans, Sheet 27 of 34. The bottom of the engineered soils appears to be at elevation 412.50 while the calculations report a total volume to el. 411.50 to be 1,613 CF. Further detail explaining how that volume was calculated must be provided.
6. The applicant must provide supporting documentation for the “Elevate Low Flow Orifice 6” to 411.00 volume value reported (6,073 CF) similar to what was provided for the infiltration systems in the Lancaster Avenue Section of the Stormwater report on page 43-46.
7. Please provide a detail of the Existing Underground Basin in Pike Field
8. The applicant must provide supporting documentation for the “Total Volume to El. 411.65” volume value reported (1,992 CF) similar to what was provided for the infiltration systems in the Lancaster Avenue Section of the Stormwater report on page 43-46.
9. A general note shall be added to the plans indicating that a grading plan and erosion sediment and control plans will be **submitted and approved** prior to issuing any building permits. Any revisions to the size or location of the individual structures or other features will be addressed at that time, and a final approval of the stormwater management plan will be required as part of the Grading Permit process.

IV General

1. The proposed fire access lane is proposed to be grass pavers. This must be reviewed by the Township Fire Marshall.
2. Detailed parking garage plans must be provided for the Pike Field Garage.



Performing Arts Center

Plans Prepared By: Nave Newell

Dated: 03/06/2015

I Zoning

1. §280-68.1.D(2)(j)2(b) - The minimum building space between buildings and a parking structure is 30 feet. The parking garage must be shown on the plans to ensure adequate distance between the performance art center and the parking garage.
2. §280-68.1.D(3)(f)2 – Mechanical/electrical equipment and trash shall be screened from view. In addition, sound attenuation shall be installed on all equipment to minimize noise pollution at any adjacent residential property line. A detail of the dumpster/recycling area must be provided. Also details of the proposed screen wall and access gates must be provided.
3. §280-68.1.D(3)(g) – Light fixtures shall be shielded to reduce light spillage beyond the property line of the campus; provided, however, that at no point shall any light trespass onto adjacent residential properties or exceed 0.5 footcandles at the residential property line. All proposed exterior site and building-mounted lighting shall meet the International Dark-Sky Association (IDA) full cutoff requirements. The plan must provide calculations that indicate it is in compliance with IDA requirements.

II Stormwater Management

1. The applicant must provide a summary table similar to what was provided for the Lancaster Avenue Housing calculations (p. 35-36) which details what drainage areas contribute to each BMP (or unmanaged area), including total drainage area, impervious area, and pervious area.
2. The applicant must provide a plan similar to the “Post Development Drainage Plan (Volume Management)” provided for the Lancaster Avenue Housing portion of the project which includes a table detailing the impervious surfaces to each BMP.
3. The drainage area table on page 189 of the Stormwater Report does not appear to be accounting for the drainage areas of the PAC Detention System to POI 2B (I-225, I-226, Roof area).
4. A general note shall be added to the plans indicating that a grading plan and erosion sediment and control plans will be **submitted and approved** prior to issuing any



building permits. Any revisions to the size or location of the individual structures or other features will be addressed at that time, and a final approval of the stormwater management plan will be required as part of the Grading Permit process.

Church Walk and Bridge

Plans Prepared By: Nave Newell

Dated: 03/15/2015

I Zoning

1. §280-68.1.D(2)(b) – Setbacks from the ultimate right-of way for major collector streets shall be 60 feet for surface parking lots. The visitors parking lot is less than 60 feet from the proposed right of way line. This is a non-conformity that the applicant intends to continue.
2. §280-69.E(3) – Surface parking areas are classified as a category of use 1. Category 1 uses and structures shall be set back from rear and side property lines by 75 feet. The existing parking area is set back 20 feet. This is a non-conformity that the applicant intends to continue.
3. §280-112.C. – Areas of steep slopes containing slopes steeper than 14% shall be outlined as following (1) Areas containing slopes steeper than 14% but less than 20% shall be distinguished from the areas containing slopes of 20% or steeper. (2) Areas containing slopes of 20% and steeper shall be separately identified.

II Subdivision and Land Development

1. §255-29.A.(19) – All artificial lighting used to illuminate any parking space or spaces shall be arranged so that no direct rays from such lighting shall fall upon any neighboring property or streets, nor shall any high-brightness surface of the luminaries be visible from neighboring residential properties or from a public street.
2. §255-37.C – Sidewalks and public paths shall be located within a public right-of-way, a public easement or a common open space area. The sidewalk is not located in the public right-of-way. The applicant has indicated that they will provide an easement for the sidewalk.

III Stormwater Management

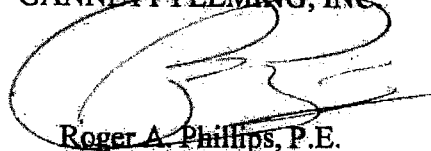
1. The March 6, 2015 Stormwater Report does not include a specific discussion of the Stormwater concept for the Church Walk and Bridge. Please update the narrative accordingly.
2. The applicant must provide a summary table similar to what was provided for the Lancaster Avenue Housing calculations (p. 35-36) which details what drainage areas contribute to each BMP (or unmanaged area), including total drainage area, impervious area, and pervious area.
3. The applicant must provide a plan similar to the "Post Development Drainage Plan (Volume Management)" provided for the Lancaster Avenue Housing portion of the project which includes a table detailing the impervious surfaces to each BMP.

We recommend that the plans be revised to address the comments stated above along with comments provided in the review memo from Gilmore and Associates prior to consideration for approval, or conditional approval shall include the applicant addressing the comments to the satisfaction of the Township Engineer.

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

Very truly yours,

GANNETT FLEMING, INC



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





GILMORE & ASSOCIATES, INC.
ENGINEERING & CONSULTING SERVICES

MEMORANDUM

Date: May 5, 2015

To: Steve Norcini, P.E.
Radnor Township Public Works Director

From: Amy Kaminski, P.E., PTOE
Transportation Services Manager

cc: Kevin Kochanski, ASLA, R.L.A., Director of Community Development
Roger Phillips, P.E., Senior Project Manager, Gannett Fleming, Inc.
Steve Gabriel, PP, RETTEW
Damon Drummond, P.E., PTOE, Gilmore & Associates, Inc.

Reference: Villanova University – Lancaster Avenue Redevelopment
Preliminary Land Development Review #2 *FINAL*
Radnor Township, Delaware County, PA

G&A 12-04054

Gilmore & Associates, Inc. (G&A) has completed a transportation review for the referenced project and offers the following transportation comments for Radnor Township consideration:

I. BACKGROUND

The applicant, Villanova University, intends to develop/redevelop several parcels located along Lancaster Avenue, southeast and southwest of the Ithan Avenue intersection, in Radnor Township, Delaware County. The project includes construction of student housing (1,135 bed apartment-style residence halls), retail shops (University Bookstore, bistro and small convenience store, size to be determined) along with 147 surface parking spaces to be located on the southwest corner of Lancaster Avenue and Ithan Avenue. In addition, the project includes construction of a Performing Arts Center (with 500 – 650 total seats in two theaters) and a multilevel parking structure (1,293 spaces) to be located on the southeast corner of Lancaster Avenue and Ithan Avenue. Villanova University intends to eliminate many of the existing driveway accesses located on the south side of Lancaster Avenue, west of Ithan Avenue and construct a shared surface parking lot to the rear of the existing university buildings along the south side of Lancaster Avenue. The Church Walk access and associated signalization will be relocated west of the present location and a new right in driveway will be constructed west of Church Walk. The applicant also intends to construct a pedestrian walkway over Lancaster Avenue at the present Church Walk access location.

BUILDING ON A FOUNDATION OF EXCELLENCE

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

www.gilmore-assoc.com

EXHIBIT

tabler

B

II. DOCUMENTS REVIEWED

1. Preliminary Land Development Submission for Lancaster Avenue Housing, consisting of 35 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated December 5, 2014 and revised March 6, 2015.
2. Preliminary Land Development Submission for West Lancaster Parking, consisting of 28 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.
3. Preliminary Land Development Submission for Church Walk and Bridge, consisting of 20 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 13, 2015.
4. Preliminary Land Development Submission for Pike Field Garage, consisting of 34 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.
5. Preliminary Land Development Submission for Performing Arts Center, consisting of 18 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.
6. Pedestrian Parking & Traffic Plan, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.
7. Event Traffic Circulation Plan, consisting of 7 sheets, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.
8. Lancaster Avenue residential Housing Evacuation Plan, consisting of 2 sheets, prepared for Villanova University, prepared by Voith & Mactavish Architects LLP, dated March 2, 2015.
9. Response Letter, prepared for Villanova University, prepared by Nave Newell, Inc., dated March 6, 2015.
10. Transportation Impact Study dated March 12, 2015 prepared by F. Tavani Associates, Inc.
11. Response Letter dated March 12, 2015 prepared by F. Tavani Associates, Inc.

III. CONSTRUCTION PHASING

The applicant has identified the following construction phasing Sheet 8 of 35(C2.3) *Project Phasing Plan*.

1. Phase 1 Improvements
 - i. St. Augustines Center Garage Expansion
 - ii. Improvements to the West Lancaster Parking facilities
 - iii. Ingress from Lancaster Avenue at existing driveways
 - iv. Egress to Lancaster Avenue at signal at the existing Church Walk driveway
 - v. Closure of Pike Lot surface parking field

Comment: Phase 1 improvements may require signal timing modifications at the Church Walk intersection due to redistribution of traffic from Ithan Avenue to Church Walk signal. In addition, the elimination/modification to the existing accesses along Lancaster Avenue should be discussed with PennDOT.

2. Phase 2 Improvements (includes Highway Occupancy Permitting)
 - i. Construction of the Pike Field Parking Garage

- ii. Temporary improvements to Pike Lot surface lot at the site of the future Performing Arts Center – PAC
 - iii. Construction of the Pedestrian Bridge over Lancaster Avenue
 - iv. Improvements to visitor lot, west of existing Church Walk
 - v. Relocation of Church Walk
 - vi. Lancaster Avenue and Ithan Avenue improvements
3. Phase 3 Improvements
 - i. Construction of Student Housing Complexes 1 and 2
 - ii. Continued use of Pike Lot surface lot at the site of the future Performing Arts Center – PAC
 4. Phase 4 Improvements (Upon availability of funding)
 - i. Elimination of Pike Lot surface lot
 - ii. Construction of Performing Arts Center

IV. REQUESTED WAIVERS

1. §255-27.H – The applicant has requested a waiver to permit a 25ft. curb radii for the curb on the southwest corner of Ithan Avenue and Lancaster Avenue; a 35 foot radii is required for arterials.

Comment: The stop bar/line for the northbound left turn lane on Ithan Avenue is proposed 50 feet from the Lancaster Avenue intersection to accommodate trucks turning right from eastbound Lancaster Avenue and continue south on Ithan Avenue. The industry standard, *Manual of Uniform Traffic Control Devices* (MUTCD) and PennDOT Publication 111M, TC-8600 *Pavement Markings* both indicate that stop lines at controlled intersections should be placed 4' to 30' from the edge of the travel lane. The proposed 50' stop line setback is proposed at a location 20 feet beyond the maximum 30 feet distance from the intersection.

V. GENERAL COMMENTS

1. The public sidewalk on the south side of Lancaster Avenue has been relocated outside the public legal right-of-way. In addition, the sidewalk is located behind a decorative fence open to public access. A sidewalk easement granting public access will be required from the applicant. The easement must be shown the plans.
2. We recommend discussing potential traffic calming elements with nearby affected neighborhoods, particularly Aldwyn Lane residents.
3. Final Land Development requirements:
 - i. Provide a Pavement Marking and Signage Plan

- ii. Provide traffic signal construction and permit plans for both signalized intersections and the two pedestrian-activated rectangular rapid flashing beacons (RRFB) crossings on Ithan Avenue.
4. Revise all stop bars locations to a minimum of 4 feet from any crosswalk.

VI. LANCASTER AVENUE HOUSING PLAN COMMENTS

1. On Sheet 7 of 35 (C2.2)
 - i. The plan indicates pedestrian activated rectangular rapid flashing beacons (RRFB) for the midblock crossings on Ithan Avenue near the South Campus dormitories and Aldwyn Triangle, and the Lancaster Avenue Housing surface lot and the Pike Street Garage accesses to Ithan Avenue. Flashing Warning signal permit and construction plans are required for both locations.
 - ii. The applicant has proposed a right-turn lane along Lancaster Avenue at the PAC driveway; however, the Board should consider whether or not to require the construction of the warranted right turn lane on the eastbound approach of Lancaster Avenue at Ithan Avenue.
 - iii. Eliminate the stop bar on southbound Ithan Avenue at the proposed LAH/PAC driveways.
 - i. Verify the sight distance is adequate for the proposed crosswalks on Ithan Avenue at the parking driveways;
 - ii. Identify and dimension all existing and proposed public sidewalks along Ithan Avenue and Lancaster Avenue.
2. During final land development, each phase will require the design details regarding the onsite pedestrian curb ramps and crosswalks (refer to PennDOT Publication 72M *Roadway Construction Details, RC-67M* for information).
3. Provide WB-40 (modified) Truck Turning Templates for the following turn movements:
 - i. The southbound right turn from Ithan Avenue to the Lancaster Avenue Housing driveway access
4. Provide SU-30 Truck Turning Templates for the following turn movements:
 - i. The eastbound left-turn from the Lancaster Avenue Housing driveway access to northbound Ithan Avenue.
 - ii. The eastbound right-turn from the Lancaster Avenue Housing driveway access to southbound Ithan Avenue.
 - iii. The eastbound right-turn movement from Lancaster Avenue into Church Walk
 - iv. The westbound left-turn from Lancaster Avenue into Church Walk
5. Include a note on the plan restricting the noted WB-40 (modified) and larger turning movements at the following intersections:

- i. Existing movements from Lancaster Avenue Housing Driveway to Ithan Avenue
 - ii. Entering movements at Lancaster Avenue and both Church Walk/West Lancaster Parking driveway accesses.
6. Sheet 9 (C2.4), Exhibit 2: If necessary, adjust the location of the eastbound stop bars to allow for the left turn movement from the dual left turn lanes or include signage prohibiting truck movements (WB-40 modified) in the left most, left turn lane exiting Church Walks.
 7. The University may want to consider designating short term parking for spaces located near the proposed retail space in the LAH parking area to encourage parking turnover.

VII. WEST LANCASTER PARKING PLAN COMMENTS

1. Sheet 5 of 28 (C2.1): Clarify the use of the remaining western most access to Lancaster Avenue. The access is located within the limits of the right turn lane taper and based on the provided legend, appears to include a fence. If this is an emergency access, provide a note on the plans identifying the use and replace the "fence" line with a gate.
2. Sheet 6 of 28 (C2.2) Consider altering the location of the handicapped parking space closer to the sidewalk near Moriarty Hall.
3. The location of the proposed fencing is inconsistent and not clearly defined. The Composite Site Plan indicates fencing is proposed along the north side of Lancaster Avenue from Ithan Avenue and extending west with a campus entrance break just west of the proposed right in /right out access; however, no fencing is shown on Sheet 5 (C2.1) and Sheet 6 (C2.2) of the plan set. The plans should be revised to be consistent for all provided sheets.
4. Provide truck turning templates for the largest anticipated truck (SU-30) utilizing the two adjacent left turn lanes exiting the proposed Church Walk access to continue westbound Lancaster Avenue. Additional widening along Lancaster Avenue may be necessary for the receiving lanes associated with the dual left turn lane operation.

VIII. CHURCH WALK PLAN

1. Include internal stop bars and signage on internal parking aisles. Adjust the location of the pedestrian crosswalks and stop bars as needed.

IX. PIKE FIELD GARAGE PLAN COMMENTS

1. Sheet 9 of 34 (C2.4): Modify the design of the driveway access to Lancaster Avenue. Exhibit 1 indicates SU-30 trucks will encroach on the concrete island.

2. Sheet 9 of 34 (C2.4): Include the exiting SU-30 right-out turn movement to eastbound Lancaster Avenue.
3. The crosswalk locations at the intersection of Ithan Avenue and Lancaster Avenue may require signal equipment relocation or additional pedestrian related traffic signal equipment (i.e. Pedestrian pedestal poles).

X. PERFORMING ARTS CENTER PLAN No transportation comments.

XI. LANCASTER AVENUE HOUSING PEDESTRIAN PARKING & TRAFFIC PLAN

1. Provide a north arrow and label all roadways
2. Phase 2: Provide phase 2A and 2B separately. Identify what work will be completed during each phase and identify the pedestrian path available, particularly near Church Walk.

XII. EVENT CIRCULATION PLAN

1. The event traffic Circulation Plan should be reviewed by the Radnor Police Department.
2. Refer to the Manual of Uniform Traffic Control Devices (MUTCD) 2009 (Chapter 2L *Changeable Message Signs*) and PennDOT Publication 646 *Intelligent Transportation Systems Design Guide* and verify DMS sign placement/location based on the reading and decision zone, number of lines, character length and height is adequate for roadway conditions.
3. We recommend the applicant consider the following suggestions:
 - i. Consider revising all turn designations to provide the direction message after the movement message. Specifically, TURN RIGHT instead of RIGHT TURN.
 - ii. To reduce the message length and improve patron memory retainage, revise the parking structure designations to colors as opposed to structure name. Revise the Permanent Signs for Parking Facilities to include the color as a background or text legend.
 - iii. Revise messages from "MAKE" to "TURN" for clear conveyance of movement.
 - iv. Revise messages from "AFTER LIGHT" to read "AFTER" followed by the name of the street.

XIII. TRAFFIC IMPACT STUDY

1. The applicant is required to provide a turn-lane length analysis for all auxiliary lanes including the eastbound right turn lane at the intersection of Ithan Avenue and

Lancaster Avenue in accordance with the methodology included in PennDOT Publication 46 Traffic Engineering Manual.

2. Subsequent submissions must utilize Synchro HCM2010 methodology for the analysis of the Church Walk and Lancaster Avenue intersection. G&A verified the provided Synchro files can utilize HCM 2010 methodology.
3. Table II Queue Comparison Table Signalized Intersections
 - i. Revise based on the HCM 2010 methodology in lieu of the provided percentile method.
 - ii. **Lancaster Avenue & Ithan Avenue:**
The queue for the AM and PM peak hour Build Scenario exceeds the southbound left-turn available storage length of 75 feet. Mitigation must be provided for this movement to accommodate the anticipated queues.



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May 4, 2015

Mr. Stephen F. Norcini, PE
Public Works Director
Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297

RE: Villanova University
Church Walk and Bridge
Preliminary Land Development Plans
Review No. 2
RETTEW Project No. 101442003

Dear Steve:

We have completed our review of the above referenced plan as prepared by Nave Newell, Inc. including 19 plan sheets dated March 13, 2015 as well as the responses presented by Villanova verbally and in writing at the April 25, 2015 Board of Commissioners meeting. The Church Walk and Pedestrian Bridge are necessary elements of the University's overall Lancaster Avenue Housing and related CICD development. Preliminary plans for those developments have been reviewed and comments were submitted most recently May 4, 2015. Certain comments contained in that letter relate specifically to Church Walk and the Pedestrian Bridge. Those comments are not repeated here.

We have performed a compliance review of the Church Walk and Bridge preliminary plan for conformance with certain elements of the Radnor Township Zoning and Subdivision Ordinances and coordinated our comments with those submitted by Gannett Fleming, the Township Engineer. We have the following comments on this submittal:

ZONING

1. Landscaping making up the required buffer planting strip along the rear of the property (Sheet L 1.0) needs to be shown on the plan along the south side of the proposed ADA ramp to the pedestrian bridge or a note needs to be added to the plan referring to the information on the landscaping plan that is part of the Lancaster Avenue Housing preliminary land development plan (§ 280-71.D).
2. On Sheet L 1.1 regarding the planting on the Aldwyn Triangle, the references to the amounts of dedicated and unprotected areas and the preservation easement need to be updated to reflect the current Lancaster Avenue Housing plan that shows virtually all of the Triangle being preserved.

EXHIBIT

tabbles

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SUBDIVISION

1. An ADA accessible parking spot with direct sidewalk access to the ADA ramp up to the Pedestrian Bridge needs to be designated within the Visitors Parking Lot.
2. On the north side of Lancaster Avenue, a gate is proposed across the driveway just east of the Pedestrian Bridge that leads up to St. Thomas of Villanova Church and other campus facilities. The gate is to be closed except for church events. If vehicles will be allowed to travel along the driveway during church events, a separate walkway up to the church should also be provided for pedestrian safety.

Should you have any questions or require any additional information, please do not hesitate to contact us at any time.

Sincerely,



Stephen R. Gabriel, PP
Township Planning Consultant

copy: Suzan Jones
Kevin Kochanski, RLA, CZO
Roger Phillips, PE
Amy Kaminski, PE
Peter Nelson, Esq.

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May 4, 2015

Mr. Stephen F. Norcini, PE
Public Works Director
Radnor Township
301 Iven Avenue
Wayne, PA 19087-5297

RE: Villanova University
Lancaster Avenue Housing, Related Parking Improvements, and
Performing Arts Center
Preliminary Land Development Plans
Review No. 3
RETTEW Project No. 101442003

Dear Steve:

We have completed our review of the above referenced plan as prepared by Nave Newell, Inc. Our review was of the following information received on March 9, 2015, lighting and mechanicals information supplements received on April 1, 2015, landscaping elevation views received on April 3, 2015, as well as the responses presented by the applicant verbally and in writing at the April 25, 2015 Board of Commissioners meeting:

1. Thirty-six (36) plan sheets for Lancaster Avenue Housing dated December 5, 2014 and revised March 6, 2015;
2. Twenty-eight (28) plan sheets for West Lancaster Parking dated March 6, 2015;
3. Thirty-four (34) plan sheets for Pike Field Garage dated March 6, 2015;
4. Eighteen (18) plan sheets for the Performing Arts Center dated March 6, 2015;
5. Four (4) sheets for the Pedestrian Circulation Plan dated March 6, 2015;
6. Event Circulation Plan Summary and four (4) plan sheets for Events Circulation Plan dated March 6, 2015;
7. Lancaster Avenue Housing Evacuation Plan with diagram dated March 2, 2015;
8. PECO response letter concerning additional landscape material stamped received December 19, 2014 by the Facilities Management Office;
9. Storm Water Management Report and Site Drainage Calculations revised March 6, 2015; and,
10. A plan reviews comments response letter dated March 6, 2015.

Project Overview:

<u>Applicant:</u>	Villanova University
<u>Requested Action/Use:</u>	Preliminary Land Development Plan Review: Lancaster Avenue Housing



West Lancaster Parking
Pike Field Garage
Performing Arts Center

Zoning District: PI-Planned Institutional; CO-Commercial Office; R-3-Residence

Location and Size: Lancaster Avenue Student Housing and most related parking improvements properties are located between Lancaster Avenue and the SEPTA R-100 tracks, and between Pike Field and Farrell Hall on the Villanova campus. Improvements to the SAC Garage are located on land at the north end of the Main Campus along the AMTRAK/SEPTA rail lines. Apart from the SAC Garage site, the subject lands are roughly coincidental with the CICD development proposal which the applicant indicated contained gross site area of approximately 13.81 acres.

Existing Use: Surface parking lots and small University office buildings.

Proposed Use: Student dormitories, student-centered retail, Performing Arts Center, and related Pike Parking Garage, West Lancaster Avenue parking lot, and SAC Garage expansion.

We have performed a compliance review of the four land development plans with certain elements of the Radnor Township Zoning Ordinance, with the applicant's phasing plan, and with the Radnor Township Comprehensive Plan. A report on the status of the applicant's compliance to date with the conditions of the Board of Commissioners' CICD conditional use approval is provided to the Board of Commissioners in a separate memorandum. We have the following comments on this submittal:

SPECIFIC ZONING

1. New landscaping information has been provided by the applicant including section and elevation drawings along the south property line of the Housing portion of the site showing new and existing vegetation looking in a west to east direction as well as in a south to north direction. These views demonstrate that the proposed Buffer Planting Strip along the R-100 line provides a screen of sufficient density not to be seen through and of sufficient height to constitute an effective screen and give maximum protection and immediate visual screening to an abutting property or district (§ 280-4B, § 280-68.1.D(3), and § 280-71.D). The same views of the landscaping proposed for the West Lancaster Parking Plan have been provided and demonstrate the same buffering sufficiency.
2. Sub-section 71.A of the zoning ordinance requires buffer planting strips to be not less than 20 feet in width. There are places at the rear of the West Lancaster Parking and Lancaster Housing where the width of the buffer planting strip is less than 20 feet wide. However, Sub-section 71.D allows for alternative buffer planting strips stating, "As an alternative to the possibly linear appearance of the minimum requirements above, applicants are encouraged to provide innovative, free-form buffers which need not be located entirely within the minimum required width. Such alternative buffers shall be subject to approval by the Township." Such alternative buffer planting strips

would be required to meet the same "screen of sufficient density not to be seen through...and immediate visual screening..." standard as noted above and our review concludes that the standard is met.

3. New landscaping information has been provided by the applicant including a plan view of the landscaping proposed to surround the Pike Field Parking Garage and the Performing Arts Center. Further, the applicant indicated during its presentation at the March 10 Planning Commission meeting that it will provide additional landscaping along the eastern boundary of Pike Field as desired by residents of Barley Cone Lane to buffer their view of the Pike Field Parking Garage and Performing Arts Center. The development plan needs to reflect this additional landscaping desired by the Barley Cone Lane residents. The ultimate standard required of such landscaping is the same as above "a screen of sufficient density not to be seen through and of sufficient height to constitute an effective screen and give maximum protection and immediate visual screening to an abutting property or district," as called for by § 280-68.1D(3)(b) and § 280-71.D.
4. The submitted lighting plan information for all four development plans includes isometrics that demonstrate light at the nearby residential property lines is well below the maximum 0.5 foot-candles allowed. The information also demonstrates that the site and area lighting proposed within the CICD complies with International Dark Sky Association (IDA) full cut-off standards (§ 280-68.1D(3)[g]).
5. The Housing plan needs to include information describing the sound attenuation devices that are a part of or are to be installed on all mechanical, electrical, and trash equipment to minimize noise pollution at any adjacent residential property line (§ 280-68.1D(3)[f]). While a fence and gate enclosure are proposed to surround the trash compactor shown at the railroad end of the eastern portion of Building 1-C in the Housing Plan, how will the fence provide noise buffering? Noise buffering of the mechanical pit adjacent to South Ithan Avenue will be needed as well.
6. A small section of the access control fence along the south side of Lancaster Avenue near its intersection with South Ithan Avenue is proposed to be located inside the required right-of-way.
7. As noted in the February 19, 2015 plan review letter from the Delaware County Planning Commission to the Township, a portion of the subject site is zoned R-3 Residence and should be rezoned to PI Planned Institutional.

PHASING AND PEDESTRIAN PARKING AND TRAFFIC PLAN

1. Phase 1 - the buffer planting strip that is proposed between the proposed West Lancaster Parking Lot and the R-100 line needs to be ordinance compliant and in place prior to the start of construction of any part of Phase 2.
2. Phase 1 - landscaping to be installed along the Barley Cone Lane properties at the request of the property owners needs to be installed during Phase 1 construction activities and before the start of construction of the Pike Field Garage in Phase 2A.

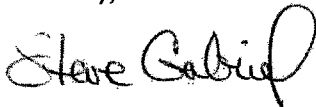
3. Phase 3 – the buffer planting strip that is proposed between the proposed parking to the rear of the proposed new dormitories and the R-100 line needs to be ordinance compliant and in place prior to the start of construction of any part of Phase 4.

COMPREHENSIVE PLAN CONSISTENCY

1. Our previous review indicated that Villanova's proposed development plan was generally consistent with various components of the Township's Comprehensive Plan including Institutional uses, Environment and Natural Resources, Transportation and Circulation, and Stormwater policies.

Should you have any questions or require any additional information, please do not hesitate to contact us at any time.

Sincerely,



Stephen R. Gabriel, PP
Township Planning Consultant

copy: Steve Norcini, Public Works Director (email: snorcini@radnor.org)
Suzan Jones (email: sjones@radnor.org)

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CONDITIONAL USE APPLICATION OF VILLANOVA UNIVERSITY

ORDER

AND NOW, this 24th day of November, 2014, after due deliberation and discussion at public hearings, the Radnor Township Board of Commissioners does hereby grant the Conditional Use Application of Villanova University, subject to the following conditions:

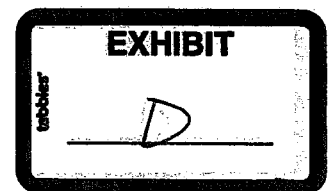
1. The applicant shall comply with all other applicable Township Ordinances and shall submit a land development plan pursuant to the Township's Subdivision and Land Development Ordinance prior to the construction of any facilities.

2. That the transportation, roadway and signalization and improvements necessary for the construction have full access to Ithan Avenue from both the Pike Lot Parking Garage and Lancaster Avenue housing parking area with provisions for stop control for both parking accesses to Ithan Avenue and a pedestrian activated signal including the new pedestrian crosswalk be required if approved by PennDOT, unless waived by the Board of Commissioners during the land development process.

3. That during the land development process an event circulation plan be developed to address event parking and traffic circulation with the input of the Radnor Township Police Department and Township traffic engineer outlining procedures, traffic patterns, parking configurations and way finding techniques for the various sporting and other events held at the University. Upon development of the event circulation plan, Villanova shall be responsible for constructing and/or installing such signs, structures, or other directional aids necessary to implement the event circulation plan.

4. That Villanova University contributes the sum of One Hundred Seventy-Five Thousand Dollars (\$175,000.00) towards the design, approval and installation of a traffic adaptive signal system that would incorporate the following signalized intersections along Lancaster Avenue:

- a. Sproul Road/Spring Mill Road; Aldwyn Lane/ Kenilworth Street
- b. Church Walk
- c. Ithan Avenue
- d. Lowrys Lane
- e. Airdale Road
- f. County Line Road



5. That during the land development process an emergency evacuation plan for the new student housing be developed.

6. That appropriate fencing be provided on both the north and south sides of Lancaster Avenue in the area of the church walk pedestrian bridge in an effort to restrict pedestrian traffic from accessing the campus. A gate shall be provided for vehicular and pedestrian access during church events if approved by the Board of Commissioners during the land development approval process.

7. That the University preserve the entire area known as the Aldwyn Triangle and restrict it as open space except for that portion of the area necessary to provide pedestrian activity and handicap accessibility improvements for the adjacent SEPTA rail line.

8. That a landscape and buffer plan be developed to comply with Section 280-68.1.D. (3)(b) of the Zoning Ordinance.

9. That Villanova seek permission from PECO to plant screening on the south side of the PECO R-100 line to visually screen the SEPTA bridge from the adjacent residential neighbors. Provided that the applicant receives permission, Villanova shall provide an installation and maintenance plan of the vegetation necessary for this screening during land development.

10. Villanova shall provide Radnor Township a list of contractors, subcontractors and vendors and their addresses within twenty (20) days of the execution of any contracts by Villanova in connection with the development and/or construction of the proposed project. The purpose of this list is to permit the Township to audit for required business privilege/mercantile taxes.

11. During the land development process, the Applicant shall use its best efforts to develop and construct stormwater management facilities, including green infrastructure practices and components that meet or exceed infiltration or retention requirements as currently required by the Radnor Township Stormwater Management Ordinance. The Applicant shall conduct soil testing as necessary to determine whether the site can accommodate volume management in excess of 1-inch of run-off from all impervious surfaces resulting from the project. If soil testing indicates that it is possible to provide volume management in excess of 1-inch of run-off, the Applicant shall construct such necessary stormwater facilities on the site to accommodate this increased volume.

12. The Applicant shall obtain revisions to both the Radnor Township and Lower Merion Township Act 537 Plans in order to accommodate the increased waste water disposal generated by the project.

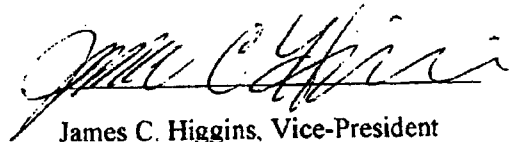
13. The Applicant shall develop a traffic plan during the land development process delineating the paths by which the existing population of commuting and part-time students will be directed to and from parking for each phase of the construction

14. The Applicant shall permit parishioners to park, on a space available basis, on the north side of Lancaster Avenue on existing Villanova property adjacent to the church for church related events.

15. The Applicant shall maintain a pedestrian crosswalk from the proposed project site to the existing church at the present church walk location if approved by Penn Dot.

16. The Applicant shall insure that no amplified music or other excessive noise shall emanate from any of the south facing dormitories. During the land development process, the Township and applicant shall establish a permissible sound level at the property boundary of the the Aldwyn Lane residential uses.

17. The Applicant's land development plans shall be in substantial conformity with the Conditional use plans dated May 2, 2014 as amended during the hearings.



James C. Higgins, Vice-President

Radnor Township Board of Commissioners

Date of mailing 12/5/14