

**TOWNSHIP  
OF  
LOWER MERION**  
MONTGOMERY COUNTY

**TOWNSHIP ENGINEER**

75 E. Lancaster Avenue  
Ardmore, PA 19003 2376  
Telephone: (610) 645-6200  
[www.lowermerion.org](http://www.lowermerion.org)

LOWM 254.66

April 29, 2019

Christopher Leswing, Director of Building and Planning  
Township of Lower Merion  
75 East Lancaster Avenue  
Ardmore, PA 19003

**Re: Holy Child School at Rosemont  
Tentative Sketch Plan Review**

Dear Mr. Leswing:

In accordance with your request for the above referenced submission, we have reviewed a set of nine (9) plans dated 10-15-18, latest revision dated 04-12-19, prepared by Site Engineering Concepts, LLC. We have also reviewed a Traffic Impact Study, dated 12-04-18 prepared by Traffic Planning and Design, Inc. We offer the following comments for your consideration:

**A. MAJOR ENGINEERING ISSUES**

- ❖ **Stormwater**—Since principal buildings on this consolidated site will be demolished, stormwater rate and volume controls must be provided considering the predevelopment ground cover condition as meadow for those lots where the structures are removed. The rate control volume ultimately provided must be capable of draining in twenty-four (24) hours. Percolation testing must be performed. The storm sewer at Airdale Road has been requested to be extended to the development in order to facilitate the connection of the overflow from the proposed artificial turf field. This will eliminate any nuisance flow of runoff onto Montgomery Avenue. The complete design and details shall be submitted and reviewed at the Preliminary Plan stage of the submission.
- ❖ **Traffic**—Vehicular maneuverability must be verified to be adequate for the proposed layout. A pavement marking and signage plan has been requested to be submitted with the Preliminary Plan that will show the necessary vehicular controls for safe and efficient movement of traffic through the parking and queueing areas. A revised traffic study has also been requested to be submitted. The study shall include an analysis and evaluation of the intersection of Airdale Road and Wendover Avenue. It also must include documentation of any accident history at that intersection. Finally, the revised study must conduct and document the traffic counts when it is confirmed that Rosemont College is in regular operating session.

With the resolution of the above major engineering issues and the remaining comments in this letter incorporated, we recommend that the Tentative Sketch Plan be approved.

**B. ORDINANCE REQUIREMENTS**

1. Section 101-6A(1)—All woody vegetation to be retained within twenty-five (25') feet of a building site or disturbed area shall be protected from equipment damage by fencing placed at the driplines. The location of the fence shall be provided. A detail shall be included on the plans that complies with township standards. The Township Arborist must approve the location of the tree protection fence if it is not indicated at the driplines. This shall be fully evaluated with the Preliminary Plan Submission.
2. Section 101-6A(6)—Grade changes around the driplines of trees to be retained shall be minimized. Impacted trees to remain shall be clearly identified. Treatment of any impacted trees prior to construction to protect the root system shall be performed if/as directed by the Township Arborist. The Township Arborist must also approve the procedure. This shall be evaluated with the Preliminary Plan.
3. Section 121-5B(4A)—Since more than seventy-five (75%) percent of the principal building areas of certain structures on this consolidated site are being demolished, the Cn number for the predevelopment conditions on those properties shall be considered as meadow for all rate and volume control analysis. This shall be fully evaluated with the Preliminary Plans.
4. Section 121-4A(1b)2—The property is located within the Lower Merion Act 167 sub-district 3-31 which is classified as a Provisional Infiltration area. As a result, the post development rates must be controlled to predevelopment rates. Meadow ground cover condition shall be used for properties where the primary structure is being demolished as the predevelopment condition for this analysis. This shall be fully evaluated with the Preliminary Plan submission.
5. Section 121-2C(2), 121-15—In order to improve water quality and reduce runoff within the sub-drainage basin area, the applicant shall provide recharge for the volume of runoff generated by all new roof areas on the development for the two (2) year storm.
6. Section 121-4A(4)—The responsibility for the continued maintenance and operation of the detention basin and other facilities shall be the obligation of the property owner. This note shall be clearly indicated on the Preliminary Plans.
7. Section 121-4A(8), Section 121-15—Areas of existing diffused drainage onto adjacent properties must be managed such that the peak rate of runoff does not increase in the general direction of discharge.
8. Section 121-4E(2c)—The rate control volume of seepage beds shall be designed to empty the total design storm volume in twenty-four (24) hours or less. Calculations verifying this shall be submitted with the Preliminary Plans.
9. Section 121-4E(2f)—The requested/required seepage beds must contain a sediment trap accessible for maintenance. Details shall be submitted with the Preliminary Plans.
10. Section 121-4E(2i)—Soil permeability tests shall be performed to a depth adequate to demonstrate the functioning of the proposed systems. The location of the percolation tests shall be indicated on the plan the complete test reports must be submitted for review. This shall be fully evaluated with the Preliminary Plans.

11. Section 121-5A(1) – The maximum bare areas shall not exceed twenty five (25%) percent of the total lot area at any one time. Phasing of the construction activities is required. A waiver to the requirement may be necessary. This shall be fully evaluated at the Preliminary Plans stage.
12. Section 121-6C—The limits of disturbance shall be clearly delineated on the plan. The amount of square feet of earth disturbance shall be listed. This shall be fully evaluated with the Preliminary Plans.
13. Section 121-6J—A sequence of construction activities shall be submitted. Installation of tree protection fence, erosion control, temporary basins, seepage beds, roof collection systems and the requested storm sewer extension shall be listed. Notification of the Township Engineer shall be listed in the sequence following installation of protective barriers and prior to earth disturbance. The demolition of the buildings and existing paving shall be listed. Notification of the Township Engineer for inspection shall be listed prior to installation of any seepage bed and storm piping. This shall be fully evaluated with the Preliminary Plan.
14. Section 121-10—No grading changes shall be shown within three (3') feet of the property line in order to ensure transition to the grading on the adjoining property. This shall be clearly noted on the plan.
15. Section 121-12—For disturbance of over one acre, an NPDES Permit must be obtained from the Montgomery County Soil Conservation District prior to issuance of any permits.
16. Section 121-15—The runoff crossing to the adjacent properties during the construction phase of the project shall be managed so that the water quality/quantity does not adversely impact the adjacent properties. Diversion berms, stoned construction staging areas, and inlets/piping shall be noted to be provided as required and/or as directed by the township so as to ensure acceptable conditions during the construction phase. This shall be fully evaluated during the Preliminary Plan.
17. Section 121-15- In order to reduce or eliminate potential nuisance runoff flow into Montgomery Avenue, the existing storm sewer at Airdale Road and Montgomery Avenue shall be extended to the location of the Artificial Turf field. Overflow piping from the field recharge stone shall be connected into the requested storm sewer extension. Details for the extension including sewer profiles and inlet structure elevations shall be submitted with the Preliminary Plan submission.
18. Section 121-15- Curbing shall be provided for the new parking areas and runoff from the paved areas shall be directed into the stormwater management system. A berm/swale shall be constructed in the landscape area to the east of the proposed artificial turf field in order to direct any surface overflows not carried by the proposed conveyance system toward Montgomery Avenue and not toward the adjacent property.
19. Section 133-15C—Where required, sidewalk must be constructed at the location of abandoned driveways. Sidewalks must be constructed to allow the sidewalk to cross at an even grade across the property. This shall be verified at the Preliminary Plan submission.
20. Section 133-15F—Concrete aprons shall be shown and labeled at all active driveway locations. Aprons shall be indicated to be removed at all abandoned driveways.
21. Section 135-16B(7)- The addresses of the adjoining property owners shall be provided on the plans.

22. Section 135-16B(13), 121-15—The soil hydrologic classification shall use Type B soil in the analysis if it is determined to present a more conservative design. This shall be fully evaluated with the preliminary Plan Submission.
23. Section 135-16B(14), 121-4E(1b)—Where feasible, stormwater management system discharge shall be connected into the requested storm sewer extension. However, if determined by the Township Engineer that this is not feasible, discharge from any stormwater basin or seepage bed must be converted from a concentrated flow to a sheet flow. The overflow shall be piped to a level spreader or bubble-up spreader. The location of the outflow shall match existing areas of drainage. They shall be field located with concurrence of the Township Engineer. Calculations shall be submitted with the Preliminary Plans qualifying the designs. Details must be provided and will be fully evaluated with the Preliminary Plan.
24. Section 135-16B(15)—Areas for all stormwater management facilities have not been fully provided. The location of required “during construction” temporary facilities have not been clearly indicated.
25. Section 135-16B(15)—The location of existing inlets, piping and storm conveyance lines on the site shall be shown. The existing stormwater detention facilities and overflow pipe locations shall be provided. Existing connections to the township storm sewer system shall be clearly indicated. All pipe sizes, material and slopes shall be shown. This shall be fully evaluated with the Preliminary Plans.
26. Section 135-16B(15), 121-4A(2)—All new roof drains have not been clearly shown to be directly connected to a stormwater facility. The location of the proposed collection system shall be shown. Details regarding the size, slope, and material of the conveyance lines shall be evaluated with the Preliminary Plan.
27. Section 135-17B(6)—The error of closure shall be provided for the consolidated lot and shall not be greater than 1:5,000.
28. Section 135-19A- The tract perimeter survey plan must be signed and sealed by a registered Land Surveyor.
29. Section 135-32—Concrete road control monuments shall be shown to be installed at the right-of-way at the intersection of each property line and at all changes in direction where feasible as determined by the Township Engineer.
30. Section 135-40—A Planning Module or Exemption must be approved by the City of Philadelphia and the DEP prior to recording the Final Plan.
31. Section 135-41.1(A)—Adequate water supply must be documented for the development. A letter from Aqua Pennsylvania must be submitted certifying adequate supply for the additional demand. This shall be submitted with the Preliminary Plan.
32. Section 101-5C(2b)—Portions of the proposed plaza and walkways are shown to be constructed/performed in slopes exceeding twenty-five (25%) percent. Waivers to applicable code provisions for disturbance/construction on steep slopes must be obtained.

33. Section 155-167.7(B)- Wooded lot calculations shall be submitted for each existing lot to be consolidated. The planting plans shall account for any required compensatory tree planting for properties classified as wooded lots.

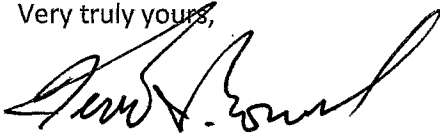
### **C. ENGINEERING COMMENTS**

1. The location of all existing sanitary laterals shall be shown.
2. The location of any proposed utility services shall be provided. This must be indicated on the Preliminary Plans.
3. The existing sanitary sewers shall be shown to within 200' of the development.
4. All existing utility service locations shall be shown. Utilities to be removed/abandoned shall be clearly noted.
5. The actual sight distance triangles shall be shown for the exit driveway. The sight distance must meet the minimum safe stopping distance required by PaDOT Publication Title 67, Chapter 441. Calculations shall be provided as necessary. It shall be noted what improvements are necessary to be performed to achieve the required sight distance. The Traffic Safety Unit of the Lower Merion Police Department must approve the final drive configuration. This shall be fully evaluated with the Preliminary Plan.
6. Erosion control measures shall be provided on the plan. Details that conform to township standards shall be shown. This shall be evaluated during the Preliminary Plan.
7. A soil stockpile location shall be provided. This shall be shown with the Preliminary Plans.
8. A note shall be added to the plan indicating that the Township Engineer shall be notified 48 hours prior to the installation of any seepage bed and prior to the start of earthmoving activities.
9. A Lighting Plan must be submitted and must be approved by the Director of Building and Planning.
10. A Planting Plan must be approved by the Planning Department and the Township Arborist.
11. Full reveal and depressed curb details shall be provided with the Preliminary Plans.
12. Depressed curb and concrete apron shall be indicated at the driveway access locations. The length of depressed curb shall be dimensioned on the Plan. The radii at the aprons shall be dimensioned on the plan and demonstrated to be adequate. This shall be provided with the Preliminary Plans.
13. Curb shall be noted on the plan to be repaired/replaced at the direction of the township.
14. Details of the concrete apron and sidewalk shall be provided. Details must conform to township standards.

15. The mean grade of the structures shall be calculated and shown on the plan. The architectural plans must be coordinated with and must comply with the grading proposed with this application. This shall be fully evaluated with the Preliminary Plans.
16. "One-way" and "Do-Not-Enter" signage along with pavement markings shall be added in order to better control and clarify vehicular movement. Stop bars/Signs and double-yellow centerline pavement markings shall be provided as required in order to provide safe and efficient movement of traffic. All traffic control signage shall be provided on a "Signage and Pavement Marking" plan. This shall be submitted and fully evaluated with the Preliminary Plan.
17. Maneuverability diagrams must be submitted. Adequate turning radii for all vehicle movements shall be documented. Fire truck access and maneuverability must be fully documented to be adequate if/as required by the Fire Marshal.
18. The traffic study must be revised to include an analysis of the intersection of Airdale Road and Wendover Avenue. It must also include any accident history involving this intersection. In addition, existing traffic counts appear to have been taken when Rosemont College was not in regular session. Updated counts must be conducted and the results fully evaluated in a revised study. This shall be submitted with the Preliminary Plans.
19. All existing and proposed impervious surfaces shall be clearly tabulated/itemized on the Plan. This shall be fully evaluated with the Preliminary Plan.
20. A detail of the proposed retaining walls shall be provided. Calculations must be provided for wall clear heights exceeding four (4') feet or for walls with equivalent surcharge loading if/as applicable.
21. A copy of the revised plan shall be submitted with any changes highlighted. A letter shall also be provided with the revised plan indicating how each requested revision has been addressed in the re-submission.

Please advise if we may be of further assistance in this matter.

Very truly yours,



Kevin J. Bowers, P.E.

**PENNONI ASSOCIATES**

Township Engineer

Cc: Robert E. Duncan, Assistant Township Manager  
Site Engineering Concepts, LLC  
Traffic Planning and Design, Inc.  
Holy Child School at Rosemont