



**TOWNSHIP
OF
LOWER MERION**
MONTGOMERY COUNTY

TOWNSHIP ENGINEER

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LOWM 260.05

May 20, 2020

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

**Re: 27 W. City Avenue—Application NO. 3853TS
Tentative Sketch Plan Review**

Dear Mr. Leswing:

In accordance with your request for the referenced submission, we have reviewed a plan dated 03-13-20, latest revision dated 05-11-20, prepared by Nave Newell, Inc. We offer the following comments for your consideration:

A. MAJOR ENGINEERING ISSUES

- ❖ **Stormwater**—Since the principle buildings on the existing parcels have been or will be demolished, stormwater rate and volume controls must be provided considering the pre-development ground cover condition as meadow. All proposed drainage patterns have also not been clearly shown on the plan. Areas to be directed to a stormwater bed and those to be uncontrolled are not clearly defined. The requested stormwater facilities must also demonstrate to be capable of recharging the minimum infiltration volume (Re_v) and be able to drain in the code required ninety-six (96) hours for the water quality recharge volume and twenty-four (24) hours for the rate control volume. Infiltrometer tests must be performed in the vicinity of the stormwater facility and at the required depth and must be submitted for review in order to demonstrate that code requirements have been met. If soil conditions do not permit the required operation system, waivers will be required.

Should the existing stormwater management basin be reused for the proposed development, a comprehensive inspection of the size and condition of the facility will be required, and testing performed to verify the infiltration capacity.

- ❖ **Traffic**—The access drive has been relocated to provide separation in excess of 10 feet between the existing driveways to the west and east of the property. A Study should be prepared for the site to evaluate the optimum driveway location, including the length of time that the queue blocks the driveway location(s).

The actual sight distance triangles shall be shown for each driveway. The sight distance must meet the desirable sight distance as specified by PennDOT. The Township Traffic Safety Division must approve the final location.

With resolution of the preceding major engineering issues and the other items in this letter adequately addressed, we recommend that the Tentative Sketch be approved.

B. ORDINANCE REQUIREMENTS

1. Section 121-4A(1b)1—As the property is located within the Lower Merion Act 167 Drainage Area Release Rate District, the two (2) year post development peak rate of runoff shall be controlled to the one (1) year pre-development peak rate of runoff. The five (5) year frequency storm must be controlled to the lesser of the two (2) year pre-development rate of the percentage of the pre-development rate as listed in Appendix B for the particular sub-watershed district. For the ten (10) and twenty-five (25) year storm, the post-development rate shall be controlled to the percentage of the respective pre-development rate. The fifty (50) and one hundred (100) year storms shall be controlled to the peak discharges which occurred prior to development in the respective storm frequencies.
2. Section 121-2C, 121-15—In order to provide required recharge and water quality, a seepage bed shall be provided. The volume shall be based on the National Resource Conservation Service, Type II storm distribution. The calculations and final seepage bed dimensions shall be revised to reflect this requirement.
3. 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. Accurate location of the driplines and fence must be provided with the Preliminary Plans. A detail shall be included on the plans that complies with township standards. If the tree protection fence is not shown at the driplines of all trees to remain, the Township Arborist must approve the location of the tree protection fence. This must be fully evaluated with the Preliminary Plans.
4. Section 101-6A(5)—No impervious cover shall be permitted within the driplines of trees to remain without approval from the Township Arborist. The Township Arborist must approve the location and extent of the paving if the impacted trees are scheduled to remain. This shall be fully evaluated with the Preliminary Plans.
5. Section 101-6A(6)—Grade changes around the driplines of trees to be retained shall be minimized. Treatment of the trees prior to construction to protect the root system shall be performed. The Township Arborist must approve the procedure. This shall be evaluated at the Preliminary Plan stage.
6. Section 121-4B(2a)1, 121-15—Where feasible, the increased volume of stormwater generated by the proposed development for the twenty-five (25) year storm shall be recharged. Meadow land cover condition must be used as the base line for determining the volume. Calculations documenting this shall be submitted with the Preliminary Plans.
7. Section 121-5B(4A), 121-15—The runoff curve number for the pre-development land cover conditions on the site shall be considered as meadow for all rate and volume control analysis. This shall be fully evaluated with the Preliminary Plans.

8. Section 121-4E(2c)—Seepage beds shall be designed to empty the total design storm volume needed for peak rate control in twenty-four (24) hours or less. Calculations verifying this shall be submitted with the Preliminary Plans.
9. Section 121-6J—A sequence of construction activities shall be submitted with the Preliminary Plans. Installation of tree protection fence, a temporary basin, seepage bed, roof collection system, and installation of a level spreader 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 existing paving shall be listed. Notification of the Township Engineer for inspection shall be listed prior to installation of the seepage bed, piping and roadway construction.
10. Section 135-16B(14)—Proposed drainage patterns have not been clearly indicated on the plans. The areas that are developed that will be directed to the stormwater facilities shall be clearly shown. Details of the design shall be submitted with the Preliminary Plans.
11. Section 121-15—The runoff crossing to the adjacent properties during the construction phase of the project shall be managed so that impacts to the water quality/quantity are minimized onto the adjacent properties. Diversion berms, stoned construction staging areas, and inlets/piping shall be provided in order to ensure acceptable conditions during the construction phase. This shall be evaluated with the Preliminary Plans.
12. Section 135-19B(8)—The sight distance for the driveways must meet the desirable sight distance as specified by PennDOT. The Traffic Safety Unit of the Lower Merion Police Department must approve the final driveway configuration/location. Sight distance triangles shall be indicated on the plans. This shall be fully evaluated with the Preliminary Plans.
13. Section 135-32—Concrete control monuments shall be shown to be installed at the intersection of each property line and at all changes in direction.
14. Section 121-4B(2d)3—Field tests such as double ring infiltrometer or hydraulic conductivity tests shall be performed at the level of the soil infiltration in order to demonstrate adequate design parameters. Complete test reports must be submitted. The location of each test must be indicated on the plan. This must be submitted with the Preliminary Plans.
15. Section 121-4E(4)—A description of how the permanent stormwater control facility will be operated and maintained shall be submitted by the design engineer. The frequency of inspection shall be listed on the plan. The maintenance of the storm sewers and associated structures shall be the responsibility of the property owner and shall be clearly listed on the Maintenance Plan. The contact information for the party responsible for the operation and maintenance of the facilities shall be listed. The plan shall be presented in recordable form as a covenant running with the land and must be approved by the Township Solicitor prior to recording the Final Plan.
16. Section 121-6C—The limits of disturbance shall be clearly delineated on the plan. The area in square feet of earth disturbance shall be listed. This shall be submitted with the Preliminary Plan.

17. 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 demonstrated with the Preliminary Plans.
18. Section 135-40—A Planning Module Exemption must be approved by the City of Philadelphia and PA DEP prior to recording the Final Plan.
19. Section 121-6F, 135-17C(1), 135-33—The existing and proposed contours shall be clearly shown on the plan and shall conform to Lower Merion Township Datum.
20. Section 135-16B(15)—Areas set aside for stormwater management during construction shall be clearly indicated.
21. Section 121-6F—Existing topography for a peripheral strip of forty (40) feet shall be provided on the adjacent property on all sides of the property in order to clearly define existing drainage patterns.
22. Section 121-5A(2)—The maximum time of exposure for bare soil areas shall be twenty (20) days before stabilization measures are implemented. This shall be clearly noted on the Preliminary Plan.
23. Section 135-17B(1)—Locations and information for the existing sanitary sewers within two-hundred (200') feet of the property shall be provided.
24. Section 135-17B(1)—All existing utility service locations shall be shown. Reuse of existing sanitary sewer services will require video inspection to confirm adequate condition of the existing pipe and appurtenances.
25. Section 121-4E(2f)—All seepage beds must contain a sediment trap accessible for maintenance. Details shall be submitted with the Preliminary Plans.
26. Section 135-41.1(A)—Adequate water supply must be documented for the subdivision. A letter from Aqua Pennsylvania must be submitted certifying adequate supply for the additional properties.
27. Section 155-167.7(B)—Wooded lot calculations shall be provided on the plans. The total number of trees removed for the proposed construction shall be indicated.

C. ENGINEERING COMMENTS

1. Erosion control measures shall be provided with the preliminary plans. The proposed construction access location shall be indicated. Details that conform to township standards shall be shown.
2. A Demolition Plan shall be provided with the Preliminary Plans. Existing conditions on the site shall be clearly documented.
3. Fill material and topsoil stockpile locations shall be provided with the Preliminary Plans.

4. A Lighting Plan shall be submitted with the Preliminary Plan. The Director of Building and Planning must approve the lighting plan.
5. The location of the proposed utility services shall be provided.
6. A Highway Occupancy Permit will be required from PennDOT.
7. A Planting Plan shall be submitted and must be approved by the Planning Department prior to recording the Final Plan.
8. All inlets in non-paved areas shall be shown to be graded in a twelve 12-inch sump condition in order to increase the efficiency of runoff collection. Spot elevations shall be added to the plan to clarify grading.
9. Depressed curb and a concrete apron shall be indicated at the new driveway access location. The length of depressed curb shall be dimensioned on the plan.
10. Details of the curb, concrete apron, and sidewalk shall be provided. Details must conform to township and PennDOT standards.
11. 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,



Joseph A. Mastronardo, P.E.

PENNONI ASSOCIATES

Township Engineer

Cc: Robert E. Duncan, Assistant Township Manager
Nave Newell, Inc.