



July 31, 2023

Building Department
Township of Verona
880 Bloomfield Avenue
Verona, New Jersey 07044

Attention: Tom Jacobsen, Construction Code Official

Re: Theo Silverberg and Elena Russo
Engineering Review
In-ground Pool and Patio
58 Durrell Street
Block 1306, Lot 13.02
Township of Verona
Our File No. VAES-145

Dear Mr. Jacobsen:

We have received copies of the following documents relative to the above referenced application:

- a. Site Plan (1 sheet) entitled, "Pool Plan, Soil Erosion and Sediment Control Plan, Notes, and Details for Silverberg, Located in the Township of Verona, Essex County, New Jersey, Lot 13.02, Block 1306", prepared by Paul Gdanski, P.E., PLLC, dated May 28, 2023.
- b. Survey (1 sheet) entitled, "Location and Topographic Survey of 58 Durrell Street, Lot 13.02 in Block 1306, Township of Verona, County of Essex, State of New Jersey", prepared by First Sight Surveying, LLC, dated May 4, 2023.

Application

1. Lot 13.02 in Block 1306 is approximately 16,735 square feet in area and is located in the Townhouse (A-3) Zone. This lot is bordered on all sides by the A-3 Zone except to the north where it abuts Public (P) Zone.
2. The lot is currently developed with a 2-story, single-family dwelling, front covered porch, paver/slate walkways, rear raised paver patio, gazebo, walls, and asphalt driveway.

3. The Applicant proposes to construct a new in-ground pool, pool patio, equipment pad, water feature, and associated drainage improvements in the rear yard of the property.
4. A portion of a 10 feet wide sanitary sewer easement runs through the rear of the property.

Plot Plan

5. The existing fence in the rear yard is to be utilized for the enclosure of the proposed pool. The fence shall comply with the requirements of Section 472-12 of the Township Code.

Stormwater Management

6. The Applicant proposes to direct runoff from the proposed improvements to six (6) Cultec Recharger 330XLHD chambers in the rear yard of the property.
7. Per Section 455-17, minor developments are defined as any development that results in 400 or more square feet of new impervious surface. The proposed net increase in impervious coverage is 3,686 square feet. Therefore, the project qualifies as a minor development and stormwater management is required in accordance with Section 455-17 of the Township Code.
8. Per Section 455-17A(1), for each square foot of new impervious surface, two gallons of stormwater is required to be managed using green infrastructure practices for minor developments.

The proposed drainage system provides runoff storage of approximately 629.6 CF where 7,372 gallons (± 985 CF) is required. The drainage system shall be revised to comply.

9. Our office will also be required to inspect the construction of any drainage improvements. All inspection shall be made at least 48 hours prior to the required inspection.
10. The applicant's design engineer must submit a letter to the Township engineer confirming the stormwater mitigation system was installed in accordance with the design. This letter must be signed and sealed by a professional engineer licensed in the State of NJ.
11. The stormwater mitigation design engineer must inspect the excavation, construction and final grades of the entire system.

12. The property owner is responsible for maintenance of the stormwater management facilities. All stormwater management facilities are recommended to be inspected annually.
13. The final grading of the lot must ensure additional surface runoff does not adversely impact any adjoining properties. Any required modifications shall be the property owner's responsibility, in coordination with their engineer.

Tree Removal

14. It is noted on plan that no trees are proposed for removal.

Retaining Walls

15. The Applicant proposes to construct gravity walls with a maximum exposed height of approximately 2.4 feet.
16. All retaining walls greater than three (3') feet in exposed height require retaining wall stability calculations to be provided by a licensed professional engineer in the State of New Jersey. The calculations must be signed and sealed, for the Township's review and approval prior to construction.

Soil Movement

17. The Applicant is proposing approximately 111 CY fill and 278 CY cut.
18. The Township of Verona has a Soil Removal Ordinance (Section 440) and any soil to be moved is subject to review and approval by Township Council.
19. The contractor must maintain soil erosion and sediment control measures throughout the duration of construction.

Roof Leaders, Sump Pump Discharge, Grading and Property Maintenance Guidelines

20. The owner/applicant must submit an as-built survey, post construction, mapping all the improvements, including the stormwater system. This survey must include finished elevations.
21. Sump pump, roof leaders and storm water pipe drain discharge shall preferably be directed onto an absorbent surface as grass, mulch, rock or soil so the discharge will be

dissipated and not immediately drain to the Township Right-of-Way or adjacent properties. The discharge location shall be as approved by the Engineer or Public Works Manager or his/her designee. In the event it is not feasible to direct discharge on to an absorbent surface, the discharge may be directed to a storm sewer, swale, ditch, detention basin, drainage basin or other drainage facility or location as approved by the Engineer, Public Works Manager or his/her designee. If a connection to the storm sewer is approved, a permit will be required from the Engineer, Public Works Manager prior to installation. The connection must also be inspected by the Engineer or Public Works Manager.

22. The discharge location shall not create a public nuisance. This includes any condition or act which is or may become injurious or hazardous to the public.
23. The discharge shall not create a build-up of icing, standing water or algae growth on the street, sidewalk or public Right-of-Way.
24. The discharge shall not be directed towards an adjacent property in such a manner as to cause damage to the adjacent property or create a nuisance.
25. No person shall connect, or cause or permit to be connected, any sump pump, pipe drain, floor drain, surface drain, subsoil drain or leader pipe with the house sanitary sewer, or to use the sanitary sewer connection or any pipe or drain connected therewith for the purpose of receiving and discharging drainage of any kind other than from plumbing fixtures.
26. Sump pump and pipe drain discharges may not be directed into a Township Street or Right-of-Way unless permission is granted by the Engineer, Public Works Manager or his/her designee.
27. Roofs and outdoor areas shall be sloped to direct water away from buildings. Roof drains shall be connected to an approved storm water drainage system where and when possible. If a subterranean leader system is to be utilized, the system must be approved by the Township Engineer.
28. Please note the following:
 - a. Water runoff which historically flowed from one property to another prior to an uphill home or developed area being built may continue to flow in the same direction after the home is built or area developed only if:

- There is no diversion or channeling which results in the water flow being concentrated in one area, and;
 - There is no substantial construction on the uphill lot resulting in increased rates of surface run-off.
- b. If a detrimental change in the natural pattern of drainage on an uphill lot has occurred, the uphill property owner is responsible for interception and piping or directing surface water to a natural drainage area or a storm water drainage system.
- c. The downhill property owner is responsible for providing proper drainage for water flow that occurs in accordance with natural drainage patterns, which existed prior to construction.
- d. Due to the inherent difficulty in accurately predicting post-construction water flow from a property, changes in water flow may not be discovered until well after the construction is completed. In such cases, if it is determined the lot is generating an additional flow or intensity of storm-water across an adjacent property, in excess of what existed prior to construction, the applicant, at the applicants expense, will be responsible for all measures necessary to abate the excess flow of stormwater.

Based on the report, we do not recommend the issuance of a Construction Permit for the proposed work. The above comment on paragraph 8 shall be addressed.

Thank you for your kind attention to this matter. Should you have any questions or require additional information, please do not hesitate to contact me.

Very truly yours,

BOSWELL ENGINEERING



Peter C. Ten Kate, P.E.

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