KSCJ CONSULTING

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MEMORANDUM

TO: Thomas Burt, Chairman

CC: Village of Mamaroneck Harbor & Coastal Zone Management Commission
Carolina Fonseca, Building Inspector

FROM: John Kellard, P.E.
KSCJ Consulting
Consulting Village Engineer

DATE: May 15, 2024

RE: Kevin Valles & Madelyn Moelis
1011 Greacen Point Road
Section 9, Block 49, Lots 12 & 230

PROJECT DESCRIPTION

At the request of the Village of Mamaroneck Harbor & Coastal Zone Management Commission, KSCJ Consulting has reviewed the site plan and supporting documents submitted in conjunction with the above-referenced application. The applicant is proposing to construct a single-family home with inground swimming pool on a 40,689 s.f. parcel within the R-20 Residential Zoning District. The property is the site of a former single-family residence, which was previously removed. The applicant also owns an adjacent 33,242 s.f. Parcel Lot 230, which is bisected by Greacen Lane, a paper street. The present application proposes improvements and site disturbance only within Parcel Lot #12.

The subject property contains wetlands within the western portion of the property. The western portion of the site is also within the FEMA Special Flood Hazard Area AE Zone with a Base Flood Elevation of 13 feet. The proposed application includes disturbance and improvements within the FEMA Special Flood Hazard Area.

The residence will have a full basement, which will include a walk out within the rear onto a lower terrace, with an upper terrace, at the first floor level above. An inground 18' x 40' swimming pool will be located off the lower terrace.

Sanitary sewage service is proposed to the municipal sewer system by an E/One Grinder Pump with a connection to an existing private force main which was previously installed to service the subject property.

The sewer force main will be installed within a ten (10) foot wide easement across the front yard of the neighboring property at 943 Greacen Point Road where the service presently terminates. Stormwater runoff will be mitigated within two (2) Cultec infiltration systems to be located within the rear yard. Regrading within the rear yard within the vicinity of the pool and rear terraces will result in the loss of some floodplain volume. Compensatory storage, however, has been proposed through regrading of a portion of the rear yard.

GENERAL COMMENTS

1. The applicant has depicted the limits of disturbance and quantify the proposed area of disturbance on the plans to be 22,852 s.f.

   Projects with limits of disturbance greater than 1,000 s.f. require the applicant to prepare a Stormwater Pollution Prevention Plan (SWPPP) consistent with the requirements set forth in Chapter 294-8B (Subsections 1 - 3) of the Village Code.

   Projects with limits of disturbance between 2,000 s.f. and one (1) acre require the applicant to provide erosion and sediment controls, stormwater quality controls, and stormwater quantity controls. Stormwater quantity controls includes attenuation of the post-development, 100-year storm event to pre-development flow rates. Stormwater quality controls require the applicant to provide treatment for the Water Quality Volume (WQv) through runoff reduction. Stormwater mitigation designs shall include calculations which base the pre-development runoff on the unimproved lot area and the post-development runoff on the area of all existing and proposed improvements.

   The applicant has prepared a SWPPP for the project, which includes the design of two (2) Cultec infiltration systems within the rear yard which are designed to mitigate runoff from the proposed driveway, roof and terraces. The SWPPP also includes temporary erosion and sediment controls to be implemented during construction.

   Our comments with regard to the SWPPP follow.

   a. In accordance with Section 294-8 (B) (2) (c) of the Village Code, all treatment of water quantity must attenuate the 100-year, 24-hour storm event. The stormwater computations and mitigation design must be updated to address the 100-year storm event.

   b. Pre-treatment is proposed through the use of two (2) hydrodynamic separators located immediately upstream of each infiltration practice. The project's pre-treatment requirements should be explained within the SWPPP.

c. Pre-Treatment Facility PTF-1 is proposed at grade elevation 13.0 with an outlet invert of 11.75 feet. The stormwater practice connected to the device is designed to hold water to an Elevation of 13.03 feet, which will back up into the pre-treatment facility. PTF-1 appears to receive flows from the roof and upper terrace which should permit relocating the facility to a higher elevation which could prevent the back up of stormwater from the infiltration units.

d. The applicant shall conduct deep tests and provide test results on the project plans and within the SWPPP Report to certify that minimum separation of three (3) feet exists between the bottom of the proposed infiltration system and the groundwater table (or mottled soil layer) or bedrock. The applicant shall show the location of the deep test holes on the plans.

e. The applicant shall submit infiltration testing results signed and sealed by a Professional Engineer licensed in the State of New York. The applicant shall show the location of the infiltration tests on the plans. Infiltration test results shall be conducted following the prescribed testing methodology in Appendix D of the New York State Department of Environmental Conservation (NYSDEC) Stormwater Management Design Manual (SMDM), which requires the use of a four (4) or six (6) inch diameter solid casing, filled with 24 inches of water, and set at a depth of two (2) feet below the anticipated bottom elevation of the proposed stormwater infiltration system. Please confirm on the project plans and within the SWPPP Report that protocol was followed.

f. Per the NYSDEC SMDM, infiltration practices shall be installed in virgin soils. If located within fill, the infiltration trench shall have no more than 25% of its depth within fill. It appears a portion of Stormwater Practice #1 exceeds the requirement. The applicant should provide a cross section through the proposed treatment practice confirming compliance with the regulations.

g. The applicant shall revise the project plans to include construction fence or other barrier surrounding the proposed infiltration practice during construction.

h. The applicant should include realistic stockpile sizes necessary for the project, on the erosion and sediment control plan.

i. The applicant shall update the SWPPP to include:

   - A maintenance schedule and procedures for the proposed stormwater management system.

- The applicant shall provide a maintenance schedule and procedures for all proposed temporary erosion and sediment controls.

- The applicant shall include the Contractor Certification Statement, as per Chapter 294 of the Village of Mamaroneck Code.

j. The applicant should provide the following stormwater notes on the project plans:

- Prior to the issuance of a Certificate of Occupancy, the applicant shall provide a maintenance agreement for the proposed stormwater management features for review by the Village Engineer.

- Prior to the issuance of a Certificate of Occupancy, the applicant shall submit a stormwater As-Built Survey that includes topography and the location, rim elevations and invert elevations of all on-site stormwater facilities for review by the Village Engineer.

- Prior to the issuance of a Certificate of Occupancy, a Construction, Maintenance and Inspection Declaration for the stormwater management facilities installed, in a form satisfactory to the Village, shall be fully executed and submitted to the Building Department with proof that the Declaration has been recorded in the Westchester County Clerk's office.

k. The applicant should specify on the plans the required separation distance between the proposed inground swimming pool, property lines and the stormwater infiltration systems.

l. The applicant should provide locations and elevations of footing drains.

2. The project site is partially within the FEMA Special Flood Hazard Area Zone AE – 13 feet. A portion of the proposed swimming pool, stormwater mitigation systems and fill within the rear yard will be within the floodplain.

The applicant will need to file an application for Floodplain Development Permit, in accordance with Chapter 186 – Flood Damage, within the Village Code. The applicant should include a compensatory storage analysis which confirms that the volume of space occupied by the fill and structure below the base elevation is compensated for and balanced by a hydraulically equivalent volume of excavation taken from below the base flood elevation.

The proposed residence will be located within a portion of the project site which is outside of the Special Flood Hazard Area, above existing site elevation of 15 feet. The applicant, however, is

proposing to lower the grade along the rear wall of the residence to Elevation 13.1 feet, which will expose the structure to floodwaters of Long Island Sound. The Village Flood Damage Regulations Section 186-5(E)(1) requires new construction within the AE Zone to have the lowest floor elevated two (2) feet above the base flood elevation. The new residence will include finished living space within the lower level at Elevation 13.5 feet, six (6) inches above the base flood elevation. Since the structure is located outside of the AE Zone, technically the structure need not comply with the Village Code, however, since the grade adjacent to the rear wall of the structure will be removed, the structure will be exposed to the flood waters and the lower level will flood during a storm event which exceeds the projected base flood elevation by six (6) inches.

It is good design practice when buildings adjacent to flood-prone areas to incorporate free board into the elevation of the new structure. Designing freeboard into the project will provide a hedge against backwater conditions caused by ice jams and debris dams, protect against uncertainties inherent in flood hazard modeling, will permit footing drains to operate by gravity instead of pumping during significant events, provides an added level of safety and should result in lower flood insurance rates. I therefore strongly suggest that the applicant raise the lowest finished floor elevation of the residence to 15.0 feet.

The applicant is also proposing a golf simulator area within the lower level, which will step down to Elevation 11.5, which will be 18 inches below the base flood elevation. Foundation drainage systems with positive pitch from the structure cannot be provided during the base flood event.

3. The applicant should illustrate the location of the pool equipment on the site plan. The equipment needs to be located above the base flood elevation. The applicant should also explain the means of disposing of the pool water during winterization drawdown of the pool.

In order to expedite the review of subsequent submissions, the applicant should provide annotated responses to each of the comments outlined herein.

PLANS & REPORT REVIEWED, PREPARED BY ALP ENGINEERING, DATED APRIL 12, 2024:

- Overall Property Plan (C-100)
- Site Layout Plan (C-101)
- Grading and Utilities Plan (C-102)
- Erosion and Sediment Control Plan (C-103)
- Landscape and Mitigation Planting Plan (C-104)
- Sanitary Sewer Plan (C-105)
- Tree Preservation Plan (C-106)
- Construction Details (C-111)
- Construction Narrative for Erosion Control Plan (C-112)

- Construction Details (C-113, C-114)
- Stormwater Pollution Prevention Plan Report
- Average Grade Calculation (1), dated January 3, 2024

PLANS REVIEWED, PREPARED BY CARDELLO ARCHITECTS, DATED APRIL 24, 2024:

- Architecturals (G-1.0, FAR-1.0, FAR-1.1, FAR-1.2, FAR-1.3, A-1.0, A-1.1, A-1.2, A-1.3, A-1.4, RCP-1.0, RCP-1.1, A-2.0, A-2.1, A-2.5, A-3.0, A-3.1, A-3.2)

JK/dc