



BROOKER ENGINEERING

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November 28, 2023

Village of Wesley Hills
Planning Board
432 Route 306
Wesley Hills, New York 10952

Attn: Alicia Schultz, Deputy Village Clerk
Re: 33 Astor Place
Clearing/Filling/Excavation Application Review

Dear Planning Board Members,

Our office has reviewed the submission of documents in support of the above captioned project consisting of:

1. Plan entitled "Wall Plan for 33 Astor Place", prepared by Paul Gdanski, PE, dated 11/5/23, 1 sheet.
2. Plan entitled "Nussen Residence Screen Planting Plan", prepared by Yost Design, dated April 23, 2022, sheet L-701. Our office offers the following comments:

General

1. During prior site visits, our office observed large stockpiles of wood chippings which appeared to be subsequently backfilled. Permanent backfilling of wood chippings will result in prolonged settlement of the earth. Our office recommended exposure and relocation to prevent risk of shear failure of slopes. Our office requests a certification letter from the contractor stating that the wood chippings were not used as backfill and removed from the site, as suggested in the applicant's response letter.
2. Due to the large import of soil from varying sources outside of the Village, we recommend the soil be tested in accordance with 375 Soil Test Parameters for Residential Use. The chain of command in collecting samples shall be adhered to and the results submitted.
3. Structural design and calculations, and specifications shall be submitted for the proposed retaining walls and reviewed by our office prior to the start of retaining wall construction. Certification of completed retaining walls to be provided prior to the issuance of a C.O.

Plot Plan

4. A standard detail for a Cambridge Sigma 8 wall has been provided. The detail does not indicate the proposed fence on top of the retaining wall as shown on the Civil Tec Plan. The discrepancy shall be resolved.
5. Pervious pavers are proposed in the rear yard; however, the previous response letter discussed high bedrock in the rear yard. Infiltration in fill is permitted, subject to minimum separation and testing requirements. Consideration as pervious area is not recommended if minimum requirements are not met. Applicant has responded that 'the pavers will all be fill so there will be

no separation issues with groundwater' This does not address insitu bedrock separation or insitu soil testing. We request the following criteria be provided as per NYS DEC guidance to be considered pervious:

- a. Insitu/natural soil layer below infiltration system has an infiltration rate greater than or equal to the 0.5 in/hr
- b. Ground water and bedrock levels in insitu/natural soil should be two to three feet below grade
- c. Fill material is an engineered fill that is tested after placement (by geotechnical firm) and demonstrated to be equivalent to a soil material acceptable for the installation of an infiltration system (i.e. infiltration rate greater than or equal to 0.5 inches /hr, etc.). Infiltration rate of fill material should be similar infiltration rate as insitu/existing soil.
- d. If there is a difference in the infiltration rates between the fill and insitu/native soil, the designer should use the more conservative (i.e. slower infiltration rate) when determining whether the infiltration system will dewater (exfiltrate) within the required 48 hours (see Section 6.3.2 "Conveyance" of the Design Manual).
- e. Required vertical separation distances to groundwater/bedrock are maintained
- f. Required horizontal separation distances to surface waters, wells, etc. are maintained
- g. There is adequate fill along the edges of the infiltration system to prevent seeps/breakouts
- h. As per guidance from the new draft NYS DEC Stormwater Management Design Manual, infiltration facilities proposed on naturally steep slopes require additional analysis. A slope stability / global stability analysis of the retaining wall shall be provided from a structural or geotechnical engineer.

This remains to be addressed – soil test results to be submitted

Drainage Calculations –

6. As per comment 8 of our previous memo dated September 14, 2023, our office takes partial exception to the drainage design methodology. Drywell storage is sized to accommodate increase in runoff for the entire property, however, only the roof runoff is currently proposed to be conveyed to the system. Drainage areas should be delineated to differentiate between detained and bypass runoff. Our office suggests SCS method modeling to compare the pre clearing conditions to the future proposed conditions for accurate sizing of storage facilities and to verify a zero-net increase in peak runoff. Applicant has responded that 'other impervious area is offset by the prior development onsite so there is no net increase overall.' This shall be demonstrated in the drainage calculations/report.

Applicant has responded that 'the site will also be aided by leveling the property which will slow down the water as it runs across the property. In the past, the yard was very sloped where in the future it will have level tiers.

While we don't disagree with this statement, the response given does not address the original comment. Please provide updated drainage calculations/report to demonstrate that area bypassing the drywell system is offset by the prior development onsite.

This remains to be addressed

Recommended fees and dates are as follows:

7. Clearing/filling application fee: \$1,000 based on additional disturbance area of approximately 19,000 square feet.
8. Performance bond: \$118,000
9. Installed and proposed erosion control devices shall be maintained throughout construction.
10. We recommend final stabilization, including topsoil and seed, be completed no later than twelve months after commencement of retaining wall construction.

Sincerely,



WESTON & SAMPSON, PE, LS, LA, Architects, PC
Eve Marie Mancuso, P.E.
Principal Engineer

CC: CC. Jonathan Lockman, AICP – Village Planner
Frank Brown, Esq.- Planning Board Attorney
Camille Guido-Downey – Village Clerk
John Layne – Building Inspector
Paul Gdanski, PE – applicants Engineer

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