

January 15, 2023

Anthony Oliveri, P.C.
AI Engineers - Dolph Rotfeld Engineering Division
570 Taxter Road - Suite 300
Elmsford, New York 10523

Re: Giglio Residence
0 North Mountain Drive
3.10-1-3

Dear Mr. Oliveri:

This letter is to respond to the comments in your Memorandum prepared for the above referenced project, noted as Site Plan Review - 0 North Mountain Drive, Village of Dobbs Ferry, New York, dated December 27, 2022.

The enumeration below follows that in your Memorandum. Our responses are in *italics*:

1. The survey must be signed by a licensed surveyor.

Response: Sealed and signed copies of the Surveys prepared by Summit Land Surveying P.C., dated July 22, 2017, and by The Munson Company, dated August 3, 2018, have been submitted.

2. The Traffic, Parking, and Driveway Analysis, prepared by Gotham Design, must be signed and sealed by the design professional.

Response: This Analysis has been reviewed by Sirus Miandoabi, P.E. of Integral Engineering Services. A Memorandum, dated January 11, 2023, sealed and signed by Mr. Miandoabi has been provided certifying the document.

3. NYSDEC Design Manual does not allow for infiltration practices within areas of natural slopes exceeding 15% as is proposed on this site. Additional Information supporting this methodology should be submitted. As previously noted, any storm system design should be supported by a geotechnical engineering analysis regarding feasibility.

Response: The Stormwater Management Plan has been prepared by Hudson Engineering & Consulting, Inc., Michael Stein, P.C. Mr. Stein is a licensed professional engineer who is well experienced with this area, and who has a long history of designing successful stormwater management systems on this type of terrain in Dobbs Ferry, as well as the surrounding communities. We will defer to Mr. Stein's and Mr. Miandoabi's opinions as to whether or not a geotechnical engineer is required for this project.

The proposed system is located in the flattest possible location on the site, most of which is sloped less than 15%. Additionally, the top of the system is located at elevation 266, which is located below the sloped areas above and subsequently is not at risk of bleeding through the slope.

The fact is that the geological character of this site is consistent with the surrounding area, including many neighboring properties that have been successfully developed with single family homes with similar conditions.

4. Impervious surface area noted in the Drainage Analysis must be coordinated with the impervious surface areas as noted on the site plan.

Response: Agreed. The Drainage Analysis has been revised with the impervious areas accounted for in the design adjusted to coordinate with the areas on the Site Plan.

5. Proposed infiltration practices must be at least 10' feet from the house foundation and property lines.

Response: The length of the previously proposed dry-stone retaining wall has been shortened to improve the placement of the Cultec array on the site so that the system maintains 10 feet from foundations and 10 feet from property lines.

6. Infiltrator elevations on the plan do not agree with the Drainage Analysis; plan also shows a trench drain rim lower than the infiltration systems elevation. Elevation of the infiltration practice must maintain 3 feet separation from ledge rock.

Response: The Drainage Analysis and the drainage components have been revised and adjusted as required to match and to meet these requirements. The 3 foot separation to ledge rock has been met.

7. A cross section through the house/infiltration system/wall should be included.

Response: This cross section has been provided by Hudson Engineering on Sheet C-3.

8. Tree protection overlaps with the proposed temporary sediment trap; in addition, much of the site will not be tributary to this best management practice; this should be examined.

Response: The details for the tree protection and sediment trap have been revised to be compatible with one another. Due to site constraints and overall grades, there is no feasible way to direct more of the site directly to the sediment trap.

9. Water quality pre-treatment to the proposed infiltration practice should be provided.

Response: *Sump boxes with 2 foot deep sumps have been provided prior to any connections to the infiltration system.*

10. The proposed pervious paver system notes "full infiltration," this should be substantiated by appropriate test pits demonstrating 3' separation to ledge rock. If not achievable, an underdrain may be needed.

Response: *The "full infiltration" refers to all of the rain water that falls on the permeable pavers being able to penetrate to the basin that is created by the gravel base under the permeable paving. The storage capacity of the pervious paver system has not been factored into the capacity of the Stormwater Management Plan and system designed by Hudson Engineering. The pervious paver system is only partially intended to take advantage of the areas of pervious soils under the terrace. The primary intent is to create a gravel base at least 12 inches in depth under the permeable pavers so that rain water can be detained in the 40% voids of the gravel as a reservoir. Underdrains are integrated with the catch basins located in the area of the permeable paving.*

11. All work within the ROW will require a street opening permit.

Response: *Agreed. A street opening permit will be pulled by the General Contractor prior to initiating any work in the ROW.*

12. As noted previously retaining walls have been submitted at 10' maximum height. Full engineering design calculations and design details will be required prior to any building permit issuance.

Response: *Agreed. The Construction Documents submitted for the Building Permit will include full engineering calculations and design details as required by the Dobbs Ferry Building Department.*

13. Additional top/bottom wall elevations for the proposed wall at the front of the lot should be provided.

Response: *Agreed. Additional top and bottom wall elevations have been provided for the proposed wall at the front of the lot, as well as for other proposed retaining walls.*

14. The Excavation and Mechanical Rock Removal plan prepared by Gotham Design must be signed and sealed by the design professional. The notes should be included on the site plan: it is anticipated that 5 days of soil removal and 15 days of rock removal including trucking from the site is needed. This is based on assumptions of rock/soil ratios, as discussed, a geotechnical analysis would need to be undertaken for more certainty on the rock/soil numbers.

Response: This Analysis has been reviewed by Sirus Miandoabi, P.E. of Integral Engineering Services. A Memorandum, dated January 11, 2023, sealed and signed by Mr. Miandoabi has been provided certifying the document.

A geotechnical engineer would be retained, if there were questions about subsurface stability, bearing capacity, or the best way to accommodate inconsistent subsurface conditions. As evidenced by the test pits conducted and evaluated by Hudson Engineering and documented in their Report, the entire subsurface area on which the proposed house will be built is rock ledge. While the depth of soil to that rock ledge varies from 1 foot to more than 8 feet, the structural support for the house foundation will be consistent and stable.

The reason given for recommending a geotechnical engineer's participation for this project has been to have a more accurate understanding of the extent of rock removal and subsequent cost. By conducting numerous borings or probes, more information could be obtained to better determine the profile of the ledge below the house, which could then be used to better predetermine the cost of rock removal. However, the cost of doing that investigative work is not inconsequential and, in the end, would not change the Site Plan of the house.

The design of the house already anticipates a combination of foundation types, including slab on grade pinned to rock ledge, crawl space foundations, and full depth basement foundations where viable. As the rock and soils are excavated, the type and depth of the foundation can be varied to take best advantage of the subsurface conditions and the rock profile.

The extent to which these decisions will be based on economics should remain within the purview of the property owner. As long as the engineering of the foundation is properly designed, as can be verified by the project engineer and the Village Building Department prior to pouring the concrete footing, the methods do not need to be a concern for the Planning Board.

Gotham Design's experience in Irvington has required working with Irvington's highly detailed rules and regulations for rock removal. The intent of Irvington's Code governing rock removal is focused on reducing potential adverse impacts on neighbors. Since Dobbs Ferry does not have a similar set of rules and regulations, Gotham has adapted the provisions in Irvington's Code to provide guidelines and limits that will be self-imposed on this project. The Notes for these guidelines and limits has been added to Gotham Design's Site Plan submission, both in the Memo and on the Drawings.

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This January 15, 2023 Response Memo has been provided to address the comments in the December 27, 2022 AI Memorandum as required.

Please let me know if you have any questions or if there is anything else that you need at this point in the process.

Thanks,

Gotham Design Planning & Development Ltd.
Padriac Steinschneider, President
As Agent for Applicant