

December 5, 2024

Michael Greco, Board Secretary
Zoning Board of Adjustment
Borough of Demarest
118 Serpentine Road
Demarest, NJ 07627

20 Pine Hill Road
Block 84.07, Lot 12
Borough of Demarest, Bergen County, NJ
Zoning Board Application Engineering Review
Colliers Engineering & Design Project No. DEZ0047

Dear Mr. Greco:

Pursuant to your request, our office has reviewed the following plans and other documents filed by the Applicant in support of a Variance Application. The Applicant is proposing to demolish the existing dwelling and related improvements to construct a new 2 ½ story dwelling, driveway, rear patio, pool, walkways, drainage improvements and other related improvements.

- a) Site plans consisting of one (1) sheet, prepared and signed by Sean P. McClellan, PE, of McClellan Engineering, dated October 23, 2024;
- b) Architectural Plans consisting of four (4) sheets, prepared and signed by Uri Rapaport AIA, dated May 19, 2024;
- c) Variance Application for the subject property and attachments; signed and dated November 22, 2024;

The Property Owner/Applicant is:

Mia Rapaport
20 Pine Hill Road
Demarest, NJ 07627

The Applicant/Owner shall notify the Borough of Demarest Zoning Board of Adjustment of any changes to the above information.

Engineering Review

I. Project Description & Location

According to the site plans, the site is currently occupied by a single-family dwelling with associated driveway, walkways, patio, and other related improvements. The Applicant is proposing to construct a new 2 ½ story dwelling, driveway, rear patio, pool, walkways, drainage improvements and other related improvements.

The property is rectangular shaped parcel consisting of 28,000 SF. The property is located on the west side of Pine Hill Road. The property is located in the residential BB Zone according to the Borough Zoning Map.

The property is located in Zone X (area determined to be outside the 0.2% annual chance floodplain) as shown on the Flood Insurance Rate Map (FIRM) for the Borough of Demarest dated August 2019.

II. Zoning Requirements & List of Variances / Waivers Requested

A. Bulk Zoning Requirements:

Zone: BB

Use: Single Family Residential

Description	Required	Existing	Proposed	Complies
Lot area**	30,000 sf.	28,000 sf.	28,000 sf.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Lot Frontage	150 ft.	160.00 ft.	160.00 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Lot depth	150 ft.	175.00 ft.	175.00 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Front yard setback	50 ft.	50.9 ft.	50.2 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Side yard setback	25 ft.	43.5 ft.	30.5 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Side yard setback	25 ft.	37.6 ft.	30.8 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Rear yard setback	50 ft.	93.8 ft.	73.8 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Building Height	30 ft.	-	25.7 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Max Building Coverage	15 %	9.3%	11.9 %	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Bldg./ Drive Coverage	25 %	16.0%	17.0 %	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Impervious Coverage	25 %	19.2%	24.8 %	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
FAR	22.5%	-	14.4%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

N/A = not applicable
 * = variance required
 ** = pre-existing non-conformance

B. The Following Variances Appear to be Required:

1. Minimum Lot Area – There is a pre-existing non-conformance for lot area of 28,000 SF where a minimum of 30,000 SF is required. The Applicant does not propose to change the lot area.

A variance is required for this condition.

2. Accessory Structure Location – The Applicant is proposing a 3-foot maximum height keystone wall in the front yard area. Retaining walls with height of 2-feet or greater are considered accessory structures and are only permitted in the rear yard.

A variance is required for this condition.

III. Engineering Review

- B. The Applicant is proposing to increase improved lot coverage from 5,380 SF (19.2%) to 6,946 SF (24.8%) with a net increase in coverage of 1,566 SF.

- C. The Applicant is proposing two (2) precast concrete drywells in the front yard area to collect and store stormwater runoff from what appears to be the roof area of the proposed dwelling. We offer the following comments related to the drainage design:

1. The Applicant has provided design calculations which indicate approximately 3,322 SF of roof area being collected and conveyed to the proposed drywells. The Applicant has provided adequate storage for this drainage area. We take no exception to the calculations provided.
2. The Applicant should provide testimony indicating where the drywells are proposed to overflow.
3. A soil test shall be provided prior to the installation of the proposed seepage pits. Soil test shall include information regarding the location of the seasonal high-water table (SHWT) and percolation rate of the soil.
4. The Applicant has provided an at-grade 6-inch PVC observation port cap for future maintenance in the seepage pit detail.
5. The Borough Engineer shall be notified to inspect the seepage pits prior to backfilling.

- D. The Applicant proposes to remove seven (7) trees to construct the proposed improvements. The Applicant should confirm in testimony if there are any additional trees or other improvements that may be impacted by the proposed construction. We defer to the Shade Tree Commission for final comment and approval of the proposed removal and replacement of trees.

- E. The Applicant shall provide testimony regarding the re-use of existing and or installation of proposed utilities on site.

- F. The dimensions of the proposed driveway including apron and length of proposed drop curb shall be noted on the site plan.

- G. The Applicant has depicted existing and proposed contours on the property. We offer the following comments related to grading:
1. Under existing conditions, the site drains from southeast to northwest. The highest point of the property is in the southeastern side where elevations are approximately 111 and the lowest point of the property is in the northwestern corner, where elevations are approximately 97.
 2. Under proposed conditions, the high and low points are generally maintained, and drainage patterns should not be substantially impacted. Grading changes do not appear to exceed more than one (1) foot in most locations.
 3. Retaining walls are proposed along the driveway area (implying changes in grade) but no proposed contours are shown. The Applicant should be prepared to provide testimony related to grading of the driveway and the apparent need for retaining walls in this area.
- H. The Applicant has indicated a total cut of 659 CY, a total fill of 154 CY and a net export of 505 CY of soil is anticipated to complete the proposed improvements. The Applicant should be aware that any soil movement quantity in excess of 250 CY will require Mayor and Council approval pursuant to Chapter 147 of Borough Ordinance
- I. Should the Board act favorably upon this application, the Applicant is hereby made aware that drainage issues may arise during or after the proposed construction. It will be the Applicant's responsibility to remedy any drainage issues caused by the proposed improvements. In addition, water runoff directed to neighboring properties is prohibited. If runoff water does enter neighboring properties as a result of the proposed improvements, the Applicant will be responsible to remedy the situation at no cost to the Borough.

Should you have any questions, you may contact me at (201) 775-1283.

Sincerely,

Colliers Engineering & Design



Nick Chelius, P.E.
Zoning Board Engineer

cc: Board Members (via Zoning Board Secretary)
Sean McClellan, Applicant's Engineer (via mail)