

June 27, 2025

Michael Greco, Board Secretary
Joint Planning Board
Borough of Demarest
118 Serpentine Road
Demarest, NJ 07627

44 Pine Terrace
Block 84, Lot 3.07
Borough of Demarest, Bergen County, NJ
Joint Planning Board Subdivision Application - **Engineering Review #2**
Colliers Engineering & Design Project No. DEZ0049

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 subdivision Application with variances related to lot area and lot frontage. The Applicant is proposing to subdivide the existing Lot 3.07 into two Lots 3.08 & 3.09 and construct two, two-story dwellings, and other related improvements at the subject properties. For ease of review, updated comments are provided in **bold**:

- a) Site plans consisting of four (4) sheets, prepared and signed by Robert L. Costa, PE, of Costa Engineering Corporation, dated December 3, 2024, **last revised June 20, 2025**;
- b) Architectural Plans consisting of three (3) sheets, prepared and signed by Pierre F. Gabuchi, AIA, dated February 24, 2025;
- c) Topographic survey of the property consisting of one (1) sheet, prepared by David Jamiolkowski, PLS, of Costa Engineering Corporation, dated December 3, 2024;
- d) Variance Application for the subject property and attachment signed and undated;
- e) **Drainage calculations prepared and signed by Robert L. Costa, PE, of Costa Engineering Corporation, dated June 20, 2025**;
- f) **Soil Permeability testing report prepared and signed by Lisa V. Mahle-Greco, P.E., dated June 18, 2025.**

The Property Owner/Applicant is:

BF Development LLC
c/o Matthew Capizzi
205 Fairview Avenue
Westwood, NJ 07675

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 site fronts Pine Terrace and is located in the R-BB zoning district.

The Applicant is proposing to subdivide the existing Lot 3.07 consisting of 49,815 SF into two separate lots. The proposed Lot 3.08 will consist of 25,047 SF and the proposed Lot 3.09 will consist of 24,766 SF. The minimum lot area in this zone is 30,000 SF.

On the proposed Lot 3.08, the existing dwelling is to remain. The Applicant is proposing to remove the existing wood deck and gravel driveway to construct a new paver walkway, macadam driveway, drainage improvements and other related improvements. A portion of the existing dwelling is to be removed on the eastern side in an effort to comply with side yard setback requirements.

On proposed Lot 3.09, the Applicant is proposing to construct a new 2 story dwelling, pool, patio, paver walkway, macadam driveway, drainage improvements and other related improvements.

The property is rectangular shaped parcel consisting of 49,815 SF. The property is located on the west side of Piermont 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 Lot 3.07	Proposed Lot 3.08	Proposed Lot 3.09	Complies
Lot area*	30,000 sf.	49,815 sf.	25,047 sf.	24,766 sf.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Lot Frontage*	150 ft.	289.79 ft.	144.90 ft.	144.89 ft.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Lot depth	150 ft.	172.86 ft.	172.86 ft.	172.86 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Front yard setback	50 ft.	50.23ft.	50.23 ft.	51.09 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Side yard setback	25 ft.	31.11 ft.	25.0 ft.	27.41 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Rear yard setback	50 ft.	63.68 ft.	63.68 ft.	67.27 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Livable Floor Area	22.50%	10.82%	21.53%	22.5%	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Building Height	30 ft.	<30 Ft	<30 ft.	To conform	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Max Building Coverage	15 %	11.63%	14.52%	14.46 %	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Improved Lot Coverage**	30 %	40.22%	26.23 %	29.80 %	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Residential Parking Coverage	25 %	14.44%	20.97%	21.04 %	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

Accessory Structures	Required	Existing Lot 3.07	Proposed Lot 3.08	Proposed	Complies
Max Height	12 ft.	<12 ft.	<12 ft.	<12 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Front yard setback	35 ft.	>35ft.	>35ft.	>35ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Side yard setback	25 ft.	25.99 ft.	38.83 ft.	53.42 ft.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Rear yard setback**	10 ft.	1.58 ft.	15.97 ft.	31.54 ft.	<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:

- Minimum Lot Area – The Applicant is proposing lot areas of 25,047 SF and 24,768 SF for proposed Lots 3.08 and 3.09 respectively where a minimum of 30,000 SF is required.
 A variance is required for this condition.
- Minimum Lot frontage – The Applicant is proposing lot frontage of 144.90 and 144.89 respectively for proposed Lots 3.08 and 3.09, where a minimum of 150 Ft is required.
 A variance is required for this condition.
- Lot coverage – There is a pre-existing non-conformance for building coverage of 40.22% where a maximum of 30% is permitted. The Applicant is proposing a lot of coverage of 26.23% and 29.80% for proposed new Lots 3.08 and 3.09 respectively.
 The Applicant is proposing to eliminate this existing non-conformance.
- Rear yard Accessory Structure Location – There is a pre-existing non-conformance in the rear yard of 1.59 ft for accessory structures where the minimum is 10ft due to the rear pergola. The Applicant is proposing to remove the pergola thus eliminating this non-conformance.

III. Engineering Review

- A. The Applicant is proposing an improved lot coverage of 6,571 SF (26.23%) for the proposed Lot 3.08 and an improved lot coverage of 7,382 SF (29.80%) for proposed Lot 3.09. The existing lot coverage on the property is 20,036 SF (40.22%). The net decrease in coverage proposed is 6,083 SF.
- B. The Applicant is proposing a total of six (6) precast concrete drywells (three new drywells are proposed for each lot).

Lot 3.08 – The Applicant is proposing one (1) drywell in the front yard area of the property and two (2) drywells in the rear yard area. The drywells in the rear collect roof runoff and the drywell in the front collects runoff from the driveway area. We note that the previous plans provided three (3) drywells in the rear yard area.

Lot 3.09 – The Applicant is proposing three (3) drywells in the front yard area. The drywells collect stormwater runoff from the roof area of the proposed dwelling and the driveway area. We note that the previous plans provided three (3) drywells in the rear yard area which have now been relocated to the front. Additional collection has been added to the driveway area based on comments received at the prior hearing.

We offer the following comments related to drainage design:

1. The Applicant has provided design calculations which indicate approximately 3,870 SF and 3,581 SF of roof area to be collected and conveyed to the proposed drywells for Lots 3.08 and 3.09 respectively. The Applicant has provided adequate storage for this drainage area. We take no exception to the calculations provided. **The Applicant has provided updated design calculations for the revised drywell systems. We have reviewed the calculations and take no exception. We note that the drywells are designed for 3" of rainfall over a one-hour period (100-year design storm) where they are only required to be designed for 2" of rainfall over a one-hour period.**
2. The Applicant should provide rim and invert elevations for the proposed seepage pits. **Rim and invert elevations have been added to the detail sheet for both Lots 3.08 and 3.09. Comment addressed.**
3. The driveway to proposed Lot 3.09 slopes downward from the roadway to the garage. No drainage improvements are proposed within the driveway area. CED suggests stormwater collection be considered for this area to prevent pooling at the end of the driveway. **The Applicant has relocated the drywells from the rear to the front of the property and added an inlet to capture runoff from the driveway. We note that there are currently no stormwater improvements in place to collect runoff from the proposed pool and patio areas in the rear of the property.**

4. On Lot 3.09, we note there is no stormwater mitigation provided for the pool and patio area located in the rear yard. Due to the net decrease in impervious coverage on-site, we take no exception.
 5. The Applicant should provide testimony clarifying where the seepage pits are designed to overflow. **Continuing comment.**
 6. The Applicant shall be made aware that soil testing is required at the location of the proposed seepage pits. Soil testing should include the elevation of the Seasonal High-Water Table (SHWT) and the percolation rate of the soil. It shall be confirmed that the bottom of the seepage pit is at least two (2) feet above the SHWT. It is suggested that soil testing be performed before installation of the seepage pits. **The Applicant has provided soil testing information as requested. We offer the following comments:**
 - i. **The designations provided for the test pits are unclear and inconsistent between the plan and soil report. The designation TP-1 is used twice. We recommend revising the test pit designations to TP-1 through TP-3 to avoid confusion.**
 - ii. **The results do not provide information on the elevation of the seasonal high-water table. The Applicant should be prepared to provide this information at the hearing.**
 - iii. **The design calculations should be updated to include a drain time calculation based on the measured permeability tests. It should be confirmed that the pits can drain within 72-hours.**
 7. The Applicant has provided an at-grade manhole cover for future maintenance in the seepage pit detail. We take no exception.
 8. The Engineer shall be notified to inspect the seepage pit system prior to backfilling. **Continuing comment.**
 9. **We recommend that the drywell in the front yard area on Lot 3.08 be relocated to the other side of the driveway. It is recommended to keep drywells at least 15 feet away from property boundaries if feasible.**
- C. The Applicant has not indicated any tree removal on the site plan. The provided survey indicates several trees on site within the limit of disturbance and construction area of proposed Lot 3.09.
1. The Applicant should confirm in testimony if there are any trees or other improvements that may be impacted by the proposed construction. We defer to the Shade Tree Commission for final comment and approval for any proposed removal and replacement of trees. **Continuing comment.**

2. A revised site plan should be provided with a tree removal and replacement schedule included. **Comment remains outstanding.**
- D. The Applicant shall provide testimony regarding the re-use of existing and/or installation of proposed utilities on site. **Continuing comment.**
 - E. The dimensions of the proposed driveway including apron and length of proposed drop curb should be noted on the site plan. The Applicant should be prepared to provide testimony to clarify the dimensions of the driveways. **Comment remains outstanding.**
 - F. The site plans note the proposed building height for proposed Lot 3.09 as “To conform” Testimony should be provided regarding the proposed building height for proposed Lot 3.09. **The site plan has been updated to provide building height calculations for proposed Lot 3.09. Revised architectural plans should be provided.**
 - 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 generally from west to east / northeast. The highest point of the property is in the southwestern side where elevations are approximately 76 and the lowest point of the property is in the northeastern corner, where elevations are approximately 67.
 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.
 - H. The architectural plans provide renderings, elevations and floor plans for the proposed dwelling on Lot 3.09. The plans do not provide any information detailing modifications to the existing dwelling on proposed Lot 3.08. We note the plans show removal of a portion of the dwelling on the eastern side to comply with side yard setback requirements. The Applicant should be prepared to provide testimony on the nature and extent of renovations to the dwelling on Lot 3.08.
 - I. The Applicant should update the site plans to provide detailed soil moving calculations including cut and fill calculations. Based on the proposed improvements a soil movement permit will be required. 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. **Comment remains outstanding.**
 - J. 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., C.M.E.
Joint Planning Board Engineer

CC: Board Members (via Board Secretary)
Matt Capizzi, Esq, Applicant's engineer (matthew@capizzilaw.com)
Robert L. Costa, Costa Engineering Corporation, Applicant's Engineer (jeysonf@costaeng.com)