

Memorandum

To: Ojetti Davis, Planning Board Secretary

CC: William Sullivan, Esq., Board Attorney
Greer Patras, PP, AICP, MCRP, Board Planner

From: Eric L. Keller, P.E., P.P., LEED AP
Planning Board Consulting Engineer

Date: December 30, 2020

RE: 201 and 167 Ridgewood Road North
PB Application No. 275
Block 1303, Lots 37 & 38
Minor Subdivision
Completeness Review #2/Technical Review #1
BCG Project # 080373-SO-028

We have received the following documents for the purposes of conducting an engineering completeness review:

1. Plan set entitled Minor Subdivision Development Plan, Lots 37 & 38 in Block 1303, Township of South Orange Village, Essex County, NJ” prepared by David E. Fantina, P.E. of Bernardsville, New Jersey, containing four (4) sheets, dated November 5, 2020 revised through December 10, 2020; **These plans are unsigned**
2. Architectural plan entitled “Ridgewood Residence Lot 38 (and Lot 37), North Ridgewood Road, South Orange NJ” prepared by Hayk Ekshian, R.T. of Space & Mark, LLC consisting of five (5) sheets dated October 15, 2020 unrevised; **These plans are unsigned**
3. Plan sheet entitled “Minor Subdivision, Tax Lots 37 & 38 – Block 1303, 167 North Ridgewood Road, Township of South Orange Village, Essex County, New Jersey” prepared by Andrew A. Schmidt, P.L.S. of Schmidt Surveying dated November 3, 2020 with no revisions; **This plan is signed but bears no seal**
4. Plan sheet entitled “Topographic and Boundary Survey, Tax Lots 37 & 38 – Block 1303, 167 North Ridgewood Road, Township of South Orange Village, Essex County, New Jersey” prepared by Andrew A. Schmidt, P.L.S. of Schmidt Surveying dated August 12, 2020 with no revisions; **This plan is signed but bears no seal**
5. Correspondence from the applicant’s attorney Day Pitney, LLP dated December 13, 2020 providing responses to BCG Completeness Review #1;

6. Abbreviated Environmental Impact Assessment from PK Environmental dated December 11, 2020;
7. Will serve requests to various utility companies prepared by Fantina Engineering, LLC;
8. Report entitled "Hydrologic and Hydraulic Narrative to analyze the impact of Residential Subdivision of Lots 37 & 38, Block 1303, Located in The Village of South Orange Township, Essex County, New Jersey" prepared by David Fantina, P.E. dated December 10, 2020;

The project site is located on the westerly side of North Ridgewood Road at the intersection with Redmond Road. Currently containing a single family home, the project proposes to demolish the structure in order to facilitate the subdivision of the parcel and construct two single family homes.

Topographically, the site contains steep slopes and the northern portion of the site is traversed by an existing stream.

The documents submitted are in response to our November 24, 2020 correspondence. Our updated completeness comments on the various submitted documents are as follows:

1. The attorney's letter indicates that a copy of a "Topographic Survey" dated August 12, 2020 was included in the package. It appears this document is submitted to also establish the property boundaries. If this is the case the title of the survey should be revised to "Boundary and Topographic Survey". If it is not the boundary survey, the boundary survey should be referenced on this Topographic Survey and a copy of the boundary survey submitted; **12/24/20 – the title on the survey is revised to indicate it is a boundary survey. Comment addressed**
2. Checklist Item 11 – Completed County Planning Board Application – Approval from the Essex County Planning Board is required. Our office has no objection to the filing of this application after the Planning Board has reviewed the application. However, the applicant should be aware that County approval will be required prior to signing of the plans and filing of deeds; **12/24/20 – The applicant's attorney has indicated that an application will be filed prior to signing the plans and filing deeds. Comment addressed**
3. Checklist Item 13 – Soil Erosion and Sediment Control Application – Our office has no objection to waiving this requirement for completeness. However, the plans shall have a note on same indicating that an application shall be filed and approved prior to issuance of any land clearing activity; **12/24/20 – Sheet 2 of the engineering plan set states that prior to land disturbance an application to the HEPSCD will be filed. Comment addressed**
4. Checklist Item 17 – Environmental Impact Assessment – Our office recommends that an abbreviated impact assessment be provided to the Board for review. While the

correspondence from PK Environmental indicates there are no wetlands on site, a riparian zone is identified. Information as to how the buffer distance was established should to be provided. We note that only the NJDEP can establish the applicable riparian zone. Furthermore, our office reviewed the contributory area to the stream utilizing StreamStats which shows the contributory drainage area to this stream is greater than fifty (50) acres. Our office recommends that a Flood Hazard Verification from the NJDEP be obtained to verify the appropriate riparian zone is shown and if a flood hazard area is associated with stream; **12/24/20 – an abbreviated EIA is submitted which verifies the drainage area is less than fifty (50) acres and has no regulatory flood hazard area. Comment addressed**

5. Checklist Item 29 – Professional Seals – Pending verification from the Board Secretary;
6. Checklist Item 32 – Boundary Information, Lot Lines – the site plan references a Topographic Survey. As in comment #1 of this correspondence, if the Topographic Survey is submitted to also establish the property boundary, the title of the plan should be revised or a separate survey provided. The subdivision plans should also be revised to reflect the correct drawing title; **12/24/20 – Comment addressed**
7. Checklist Item 35 – Existing critical environmental areas – see comment #4 above; **12/24/20 – The EIA provides an overview of any threatened or endangered species and other environmental impacts – Comment addressed**
8. Checklist Item 41 – Signature Blocks – Our office has no objection to waiving this item for completeness provided the plans are revised prior to any action taken by the Board; **12/24/20 – Signature blocks are added to the Minor Subdivision Plan**
9. Checklist Item 52 – Stormwater Management Plan – The plans depict stormwater management facilities. A drainage report for same should be provided for review. Same should address applicable regulatory requirements as well as depth to seasonal high ground water and soil permeability (if infiltration is to be relied upon); **12/24/20 – A stormwater management report has been submitted. See below for technical comments.**

Based upon the documents provided, our office has determined that the required information for review of the application has been submitted and the application may be deemed **COMPLETE** from an engineering perspective.

Below are technical comments for the application materials submitted to the Board:

1. Should the application be approved by the Board, our office recommends that a note be added to all plans indicating that deeds shall not be filed prior to the removal of the existing structures on the subject property;
2. Tax lot numbers should be confirmed with the Tax Assessor;

3. Our office recommends that the riparian buffer shown on the plan set be recorded as a Conservation Easement with the County. The deed should stipulate that no structures, sheds, patios, walks, swimming pools, etc. are permitted within the conservation easement;
4. The survey reference on the Minor Subdivision Development Plan set prepared by David Fantina, P.E. should be updated to reference the updated property survey;
5. The impervious cover calculations provided on Sheet 1 appear to be overstated. The driveway is not paved and therefore not impervious;
6. We offer the following comments with regard to Sheet 2 of 4 of the Fantina Plan Set:
 - a. The size and material of the existing storm sewer in North Ridgewood Avenue should be provided;
 - b. Details for the infiltration structures should be provided on the plan set;
 - c. Proposed Lot 38 proposes a ninety (90') foot section of driveway which is calculated to be at a slope of 12.6 percent. We recommend that the applicant reduce the driveway slope to ten (10) percent or under. This can be accomplished by either lowering the garage floor or lengthening the driveway;
 - d. Proposed Lot 37 proposes a driveway slope of ten (10) percent. As with Proposed Lot 38, the applicant should consider either lengthening the driveway or lowering the garage floor;
 - e. For both driveways, the grading should be verified to confirm the spot grades and driveway slopes while maintaining the cross slope of the existing sidewalk and not providing adequate transitions for vehicles to enter and exit each driveway without bottoming out;
 - f. Both proposed driveways will discharge uncontrolled stormwater into North Ridgewood Ave. The plans should incorporate measures to limit the amount of stormwater conveyed directly into the right-of-way. Our office notes that during heavy rainfalls, this can create a hazardous driving condition with runoff being directed into the roadway;
 - g. Testimony should be provided as to how the overflow pipe proposed on Lot 38 will be constructed under the wall. Our office has concerns with any footing associated with the wall and the impacts same will have upon the proposed PVC pipe;
 - h. A detail for the direct connection of the overflow pipe from the drywell on Lot 37 should be provided on the plan set;

- i. The plans should be revised to detail how the new openings will be made in the existing stone retaining wall across the frontage of the site and that adequate sight distance is provided. The plans should also indicate if the existing driveway opening through this wall will be closed;
 - j. The plans depict drywells and piping with no invert information, same should be provided. See additional comments below;
7. We offer the following comments with regard to the stormwater management report:
- a. Page 1 of the report indicates that stormwater runoff is calculated utilizing the Rational Method. The calculations within the report appear to be completed via the Modified Rational Method. The report should be updated to be consistent with the calculations;
 - b. The report makes assumptions based upon soil surveys. These surveys provide a generalization of the geology in the area and can vary greatly from site conditions. A note shall be added to the plan set indicating that a geotechnical investigation shall be completed and submitted to the Village Engineer to verify the stormwater design assumptions prior to issuance of any building permits;
 - c. As indicated above, it appears the existing impervious coverage has been overstated in that the existing driveway was considered impervious. Same is not impervious and a runoff coefficient similar to that of gravel roadway should be utilized in evaluating the existing stormwater runoff. Once the existing flow is established, the proposed condition can be calculated to verify that stormwater runoff rates are not being increased;
 - d. Hydrograph input information as well as the storage method utilized in the calculations (input) should be included in the stormwater report;
 - e. Time to drain calculations consistent with those provided in the New Jersey Department of Protection Stormwater Best Management Practices Manual should be provided;
8. The proposed infiltration structures will be privately owned and maintained. A maintenance manual for these structures should be submitted for review. Upon approval, these manuals should be recorded with the individual lot deeds;

Any revised plans and other documents should be accompanied by a cover letter responding individually to each of the comments presented in this review letter. The cover letter should also outline those changes to the plans that were required, as well as those not readily apparent.