



TOWN OF NEW CASTLE

200 S. Greeley Avenue, Chappaqua, New York 10514 • Ph. (914) 238-4724 • Fax (914) 238-5177

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(914) 238-4724

(914) 238-5177

Date: October 2, 2018

To: Planning Board

From: Town Engineer

Re: Chappaqua Central School District – Application for Preliminary Subdivision Plat, Tree Removal permit, Steep Slopes permit, and Stormwater Pollution Prevention Plan Approval – Buttonhook Road - Section 81.12, Block 1, Lot 8

I have performed a review of the submitted plans and associated stormwater report as referenced in a cover letter dated May 30, 2018 as prepared by J.D. Barrett & Associates, LLC on behalf of the above referenced application and offer the following comments:

Stormwater Comments:

ST1. The stormwater report, including all peak flow (cfs) and runoff volume (cf) computations at each respective design point, should be revised in order for the Total Area for the proposed condition subcatchment area of approximately 20.55 +/- acres to be equal to the Total Area for the existing condition subcatchment area, which is now approximately 10.50 +/- acres.

Based upon above-said revisions, the SWPPP should include a detailed discussion (qualitatively and quantitatively) which describes the proposed mitigation measures that would ensure that post development stormwater runoff volumes (cubic feet) from the project site would not adversely affect adjacent and downstream properties and existing off-site drainage infrastructure. In addition, based upon revised drainage calculations, the SWPPP should include a comprehensive evaluation of the qualitative and quantitative impacts to the existing downstream off-site drainage network in terms of capacity, hydraulic grade, increased pond elevation, water quality and water quantity (peak flows and runoff volumes) and any proposed appropriate mitigation that may be required.

ST2. The Routing Diagram for the Existing Conditions and Proposed Conditions should indicate each respective Design Point.

ST3. The SWPPP should provide a detailed drainage area map at a maximum scale of 1" = 40', which shows the following:

- a) East and West Watershed boundary
- b) Any and all off-site tributary areas that may be required to develop the subwatershed design points
- c) Clearly delineate each subwatershed boundaries and associated areas, which shall include any and all undisturbed on-site areas as well
- d) Dimensioned drainage flow paths and tc for each respective subwatershed boundary

ST4. The applicant has not satisfactorily addressed my previous comment regarding Green Infrastructure Practices as mentioned in my previous memo dated September 15, 2016 as outlined below:

The applicant should demonstrate that the forthcoming SWPPP incorporates the Green Infrastructure Practices as outlined in Chapter 5 of the NYS Stormwater Management Design Manual. Chapter 5 presents planning and design of green infrastructure practices acceptable for runoff reduction. Green infrastructure planning includes measure for preservation of natural features of the site and reduction of proposed impervious cover.

- ST5. The applicant should provide a hydraulic analysis, which includes the hydraulic grade, for the proposed drainage conveyance system in order to demonstrate that the system can safely handle a 10-year 24-hour storm event and safe passageway of a 100-year storm event. All piping located within the right-of-way shall be a minimum 15-inch HDPE ADS N-12.
- ST6. Provide profiles of the proposed stormwater conveyance system, which clearly indicates all crossing of all proposed and existing utilities (sanitary, sewer, electric, cable, etc.).
- ST7. Since more than one (1) acre of disturbance is proposed (within the East of Hudson Watershed) the applicant must demonstrate that they have obtained coverage from the NYSDEC under GP-0-15-002, including a Full SWPPP (Erosion & Sedimentation Control Plan including post-construction stormwater practices).
- ST8. Since the subject property is proposed to be developed as a new subdivision which is located within the New York City Watershed, the applicant must demonstrate that they have obtained approval from the New York City Department of Environmental Protection (NYCDEP) for a Stormwater Pollution Prevention Plan (SWPPP).
- ST9. According to Section 108A-9 C and E under Maintenance, inspection and repair of stormwater facilities. Prior to the issuance of any approval that has a stormwater management facility; the applicant must execute a formal stormwater maintenance agreement and access easement that shall be binding on all subsequent landowners served by the stormwater management facility. The stormwater maintenance agreement and access easement shall be in a form satisfactory to Town Counsel and shall be recorded in the Office of the County Clerk as a deed restriction on the property. Therefore, it is recommended that the applicant provide the required stormwater maintenance agreement and access easement in accordance with Section 108A-9 C and E as mentioned above.
- ST10. According to Section 108A-11 A and B under Performance guarantee; recordkeeping. The Town in its approval of the stormwater pollution plan may require the applicant to provide, prior to construction, a performance bond, cash escrow, or irrevocable letter of credit, which guarantees satisfactory completion of the project and names the Town of New Castle as the beneficiary. Also, the Town may require the applicant to provide, prior to construction, with an irrevocable letter of credit from an approved financial institution or surety to ensure the proper operation and maintenance of all stormwater management and erosion control facilities both during and after construction. Therefore, it is recommended that the applicant provide the required performance bonds in accordance with Section 108A-11 A and B as mentioned above.

Roadway and Driveway Comments:

- RD1. All sightline profiles for the establishment of the stopping sight distances and at the proposed driveway intersection with the proposed roadway should indicate the driver's eye height of 3.5' in all instances and in accordance with AASHTO.
- RD2. All stopping sight distances shall be based upon a speed limit of 30 MPH and increased/or decreased accordingly based upon approaching roadway gradient.
- RD3. The proposed centerline roadway profiles should be revised as follows:
- Indicate the existing roadway elevation at Station 0+00
 - The elevation at PVI Station 10+23 should read as 542.4'
- RD4. The **Typical Roadway Section** should include a curtain drain.
- RD5. Provide a NYSDOT Box Beam Guide Rail in accordance with NYSDOT Standard Specifications.

Utility Comments:

- U1. The proposed storm sewer construction plans shall indicate the rim elevation, invert elevation, pipe diameter and associated slope between each respective catch basin, drain inlet, stationing and HDS.
- U2. The plans should indicate the location of the existing water main, diameter and type at Button Hook Road, Garey Drive, Sabina Road and Pondfield Drive South.
- U3. The plans should indicate the location of the existing storm sewer system, rim elevations, invert elevation, type of pipe, diameter of pipe and slope.
- U4. All proposed water main piping shall be labeled as "8-inch diameter DIP Cement Lined Class 52 Water Main".
- U5. The proposed water main improvements will require the approval of the Westchester County Department of Health.
- U6. A street Opening permit will be required from the Department of Public Works regarding the installation of the proposed stormwater and water main improvements located within the Town right-of-way of Button Hook Road, Garey Drive, Sabina Road and Pondfield Drive South.

General Comments:

- GC1. According to Section 113-18 E. under Inspection fee; all applicants for approval of subdivisions involving the construction of streets and/or other improvements shall be required to submit an inspection fee, payable to the Town of New Castle, equal in the amount to 3% of the estimated cost of improvements as determined by the authorized board. Therefore, it is recommended that the applicant submit a detailed engineer's cost estimate for all site related items for review.
- GC2. The applicant shall submit the following documents in recordable form and acceptable to Town Counsel and approved by the Town Board:
 - a) Stormwater Maintenance / Access Agreement
 - b) Declaration of Street Maintenance and Access Easement
 - c) Declaration of Street Maintenance Security Agreement
 - d) Sight Line Easement Agreement
 - e) Water Main Maintenance / Access Agreement
 - f) Irrevocable Offer of Cession for roadway improvements and water main
- GC3. The following general notes shall be placed on the site plan:
 - a) Prior to the issuance of a building permit, the entire Limits of Disturbance and/or Clearing/Grading Limits shall be field staked as per the approved site plan and delineated with snow fencing and/or appropriate erosion controls. The applicant shall supply the Environmental Coordinator with a stakeout map (3 copies) prior to the inspection. **Contact Steve Coleman, Environmental Coordinator at 914-238-7278.** All staking and stakeout map shall be prepared, signed and sealed by a New York State licensed Land Surveyor.
 - b) Clearing and grading limit lines shall be clearly delineated in the field throughout the construction period and no encroachment beyond these limits by workers or machinery shall be permitted.
 - c) Prior to the backfilling of Stormwater Facilities, the Building/Engineering Department shall be notified at least 48 hours in advance in order to schedule a Stormwater inspection. **Contact Terry Rowe, Civil Engineering Technician at 914-238-1429.**
 - d) Each contractor and subcontractor identified in the SWPPP and/or successor or substituted contractor or subcontractor who will be involved in soil disturbance and/or storm water management practice installation shall provide proof that training and/or certification in proper erosion and sedimentation control practices has been obtained.

- e) Upon completion of the project an As-Built Site Plan will be submitted showing all improvements including the location of all stormwater structures and associated piping, patios, driveway improvements etc.
- f) At the completion of the project a Licensed New York State Landscape Architect shall submit a Certification of all Planting in accordance with the approved set of plans on file with the Town's Environmental Coordinator.
- g) At completion and prior to the issuance of a Certificate Occupancy, the applicant's engineer shall submit a **"Certificate of Construction Compliance"** and **"As-Built Sections"** for the retaining walls (including foundation depth, width, backfill material, weep holes, rebar size and spacing, keyway, etc.) which will certify that the retaining wall has been constructed in accordance with the approved plans on file with the Building\Engineering Department.
- h) All work regarding footing/foundations/steel reinforcement/walls for all site related retaining walls shall remain accessible and exposed until inspected by the Building/Engineering Department. The Building/Engineering Department shall be notified at least 48 hour **Terry Rowe, Civil Engineering Technician at 914-238-1429.**
- i) At the Completion of Construction, a Notice of Termination (NOT) form shall be completed and submitted to the Department. The Termination Letter and proof of mailing to the NYSDEC shall be submitted to the Town of New Castle Designated MS4 Official (Robert J. Cioli, P.E. – Deputy Town Engineer) prior to the issuance of a Certificate of Occupancy and in accordance with NYSDEC Permit GP 0-10-001.

ecc: Sabrina Charney Hull, AICP – Director of Planning
Janice Friend, Planning Board Secretary
Jennifer L. Gray, Esq., Planning Board Counsel
Randy Katchis, Chappaqua Central School District, Applicant's Representative
Michael Campbell, P.E., Campbell Engineering, LLP, Applicant's Engineer
Bill Beckman, P.E., WSP Engineering, Applicant's Engineer