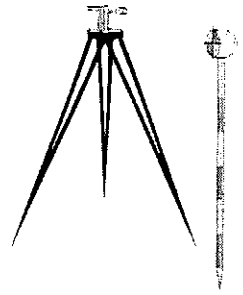


SPARACO & YOUNGBLOOD, PLLC
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April 19, 2021

Planning Board
Town of Haverstraw
1 Rosman Road
Garnerville NY 10923

Att: Annette Hendrie, Chief Clerk to Planning Board

Re: Response to Civil Design Works, LLC letter dated 6-30-20
Oak Tree Site Plan (SY#1385)
1-72 Oak Tree Lane and 22 Rosman Road, Haverstraw, NY 10962
Tax Lots # 26.05-1-42 & 26.09-2-8

Dear Ms. Hendrie:

We reviewed the letter from Civil Design Works, LLC referenced above for the 14 acre Oak Tree project located in the Town of Haverstraw, NY and offer the following responses in like manner they appear in the letter:

Plan Sets:

1. This project will disturb 11.63 acres and is now phased to not disturb more than 5 acres at a time in 3 phases. More detailed sequencing plans will be added when the Town has made a decision on the phase lines currently proposed on the plan. This work will also include more detail on erosion control methods to be utilized, including temporary swales, stockpiles, staging areas, settling ponds, check dams, water bars, etc.
2. All ingresses/egresses and their respective elevations have been added to the plans.
3. Top and bottom of curb elevations have been added at the corners of parking areas, in front of building entrances and at significant grade changes.

4. Dumpster enclosure locations have been provided in three strategic locations on the plans.
5. ADA pedestrian access points are depicted on the plan with the curb access ramps and details have been provided.
6. ADA access routes are not depicted; however, the HC parking spaces are located as close as possible to the nearest accessible building entrances.
 - a. Parking stalls and aisles are depicted on the plan in accordance with Haverstraw zoning and a detail with dimensions has been provided.
 - b. Walking surfaces are standard sidewalks which are at a minimum 5' in width.
7. We have provided details for both road and parking pavement areas. We will coordinate with your office to ensure the next set of plans contains compliance with current Town of Haverstraw specifications.
8. We have adjusted the parking space dimensions as per Town zoning specifications on the plan. The parking areas inside the buildings will be addressed under separate cover by the architect.
9. Any remaining discrepancies with our plans and the site architect will be rectified with the next set of plans submitted to the Town.
10. We have added Envirohood oil water separators as a standard for all catchbasins on site. In addition First Defense Vortex water quality pretreatment structures have been added prior to all infiltration systems.
 - a. We have removed the use of the isolator row as pre-treatment in favor of the Vortex structures.
 - b. Runoff toward the larger infiltration/detention basin on site has been pre-treated by the Vortex devices prior to entry into the first infiltration system. As this water has now been pre-treated and water quality volumes stored via infiltration already, there is no need for a tertiary treatment prior to release to the larger infiltration/detention basin at this location.
 - c. Envirohood Oil Water Separators, Three Vortex structures and a grass swale all contribute to the required pre-treatment of the water quality volume in this direction of runoff offsite. As there is a greater than 25% reduction in overall impervious area in this direction, there is no further water quality nor runoff reduction requirement for flows in this direction beyond its pre-treatment requirements. All flows are reduced in this

direction due to the overall reduction of impervious area and contributing drainage areas offsite.

11. The grass swale is graded and the supporting pre-treatment water quality calculations are documented in the drainage analysis.
12. Details for the proposed Stormtech detention/infiltration system have been provided.
13. Pool equipment location will be provided as the plans progress further along the approval process.
14. A 6' high chain link fence with gates has been depicted around the proposed open basin on the plan and a detail has been provided.
15. A 6'-high chain link fence with 1' buried in the ground is depicted around the dog park and a detail is provided.
16. Spot elevations have been provided and all tiered walls have been removed.
17. Grading around headwalls have been provided.
18. A detailed storm drainage structure capacity analysis to be provided with plans provided further along in the process after positive feedback has been received by the Town on the current infrastructure indicated on the plans. Preliminary sizing has been provided based upon our drainage report Hec-1 output data.
19. All Drainage and Sanitary Structures have been numbered and labeled on the plans.
20. All pipes are labeled with size and type of pipe except unlabeled drainage pipes which are all to be HDPE and a note has been added to the General notes as indicated in note # 10.
21. See response to item number 18.
22. Sewer capacity was prepared and submitted to the Regional Joint Sewer Board prior to the zone change approval.
23. Water services both domestic and fire to each of the buildings are depicted on the plan. We have had difficulty making contact with Suez to determine if above ground heated structures are required for this project or not, when we get confirmation, we will make the changes as necessary. This work will be coordinated with the site architect.

24. A Lighting plan will be provided under separate cover.
25. A landscape plan will be provided under separate cover by Yost Design.
26. The fire truck maneuverability plan is included as a part of the site plan set. We added the dumpsters with this revision and have taken into consideration that a truck will have to access them. The locations appear to be easily accessible but would like clarification from the Town on the maximum size garbage truck if this requirement will still be necessary in the future.
27. We will provide quantification on the amount of cut and fill once we receive the Town's general acceptance of the Preliminary Plans submitted at this time.
28. More detailed erosion control devices will be added to the plans when the Town has made a decision on the phase lines currently proposed on the plan. This work will also include more detail on erosion control methods to be utilized, including temporary swales, stockpiles, staging areas, settling ponds, check dams, water bars, etc.
29. The disturbed areas are depicted on the phasing plan and each area is labeled with the area of disturbance. Also, the area to remain undisturbed is also depicted. None of the three phases will exceed 5 acres.
30. See response to items 28 & 29.
31. A gravel access road has been depicted on the plan with a gated entrance.

Drainage Report Comments:

32. A detailed narrative has been provided in the drainage narrative description in Appendix A.
 - a.) Summary tables have been provided in the later portions of the drainage report, specifically to address water quality requirements and provisions as requested.
33. All orifice sizes have been adjusted to half inch or full inch increments with a minimum orifice size of 3 inch held as a minimum.
34. See response to item #18.

- 35. Groundwater elevations have been provided in the hydrologic analysis with deep hole testing results and also on the grading and utility plans sheets 7 & 8 of 17.
- 36. Pre-treatment has been sized and provided on the plans and is supported by the hydrologic analysis.
- 37. See response above for items 32a and 36.
- 38. See response above.
- 39. See response above.
- 40. Comment noted. A minimum freeboard of 1' has been provided for the 100-year storm for each system to its overflow point.
- 41. Volume calculations and water quality levels for each infiltration basin has been specified. Each basin invert to orifice outfall contains full water quality volume storage as required.
- 42. Similar to above, channel protection volumes have been provided for in the infiltration basins where required. Detailed calculations have been provided in the appendix of the hydrologic report and is clearly identified in the table of contents in this report.

SWPPP Comments:

- 43. Comment noted.
 - a.) Unexecuted Certification statements have been provided in the SWPPP
 - b.) A copy of GP-0-20-001 has been included as Appendix E.
 - c.) A full SWPPP has been prepared.

Miscellaneous comments:

- 44. Cost estimate will be provided with plans submitted for final approval.
- 45. Notice of Intent (NOI) in addition to the MS4 acceptance form has been provided in the SWPPP.

46. During the preparation of the drainage report submitted for review by the Town, our office performed extensive deep hole and percolation testing throughout the site which led to the design of the current drainage facilities on site. As requested by the review engineer, we will retest the areas to be used for our final design at design depths and invite the Town to join us for the formal testing prior to final approval.

47. Comment noted. Retaining walls will comply with Town requirements.

48. A stormwater maintenance agreement will be prepared at a later date prior to final site plan approval.

49. Comment noted. Traffic report prepared by Maser Consulting and submitted to the Town for review.

50. Comment noted. Fire department to be contacted for review of all required fire truck turning movements. These have been added to the current set of plans.

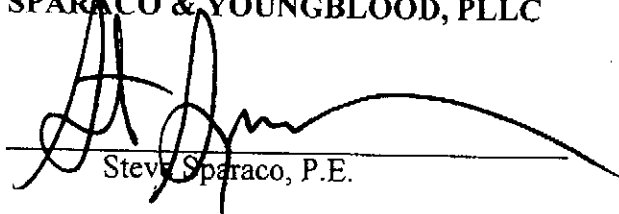
51. Comment noted. Responses to all comments to be provided by the applicant and his team.

Environmental Assessment Form Review comments Part 3:

These comments have been addressed by the design team's planner, John Lange under separate cover.

Very truly yours,

SPARACO & YOUNGBLOOD, PLLC



Steve Sparaco, P.E.

cc.: Jake Berdugo, Terry Rice, John Lange, Ron Rieman, Barry Haberman



CIVIL DESIGN WORKS
LLC

June 30th, 2020

Town of Haverstraw Planning Board
One Rosman Road
Garnerville, New York 10923

~|

Attn: Annette Hendrie – Planning Board Secretary

Re: Review of Planning Board and Town Board Submission
Tax Lots 26.05-1-42 and 26.09-2-8
CDW# THAV19-603 Oak Tree

Ms. Hendrie,

We have received the Overall Working Plan Set, prepared by Sparaco & Youngblood, PLLC., dated February 6th, 2020, and associated Drainage Report, also dated February 6th, 2020. The Architectural Plan Set, prepared by Poskanzer Skott Architects, dated December 9th, 2019 was also been reviewed along with the Part 3 Environmental Assessment Responses, prepared by Lange Planning and Consulting, dated June 18th, 2020. We offer the following comments:

Plan Sets

1. The project appears to disturb over 10 acres.
 - a. Total area of disturbance to be added to the Soil Erosion and Sediment Control Plan.
2. All first-floor ingresses/egresses, and their respective elevations are to be provided.
3. Top of curb and bottom of curb elevations to be added at corners of parking areas and in front of entrances, and at significant grade changes.
4. Dumpster location(s) to be provided.
5. ADA pedestrian ramps to be provided where necessary.
 - a. Detail to be added to the plan set.
6. Provide confirmation of ADA accessible access route(s) from proposed ADA parking spaces to ADA building entrance(s) per the current ADA and ICC standards.
 - a. Parking stalls and striped access aisles to be dimensioned.
 - b. Walking surfaces shall be provided per ICC A117.1, Chapter 4.
7. Driveway pavement section and parking lot pavement sections to be modified in accordance with Town of Haverstraw Standard Construction Specifications for private roadway and parking lot.
8. Per §167-68 (F) – Parking spaces are to be 9' x 18' with a drive aisle of 25'.
 - a. There are a few areas of proposed parking where the stalls are 9' x 19', with 24' aisles. Revise to 9' x 18' with 25' aisles.
 - b. Dimensions to be added to parking stalls and aisles for proposed parking beneath buildings B, C and D on the Architectural plans.
9. There are discrepancies with the parking counts provided on both the engineering and architectural plan sets. Please review all surface and subsurface parking and update plans accordingly.
10. Pre-treatment (sized for 100% WQv) to be provided on the plans before entry into any infiltration basin/system.

- a. Stormtech isolator rows are not a NYSDEC approved method for pre-treatment. Provide alternate methods to meet the pre-treatment requirements.
(<https://www.dec.ny.gov/chemical/29089.html>)
 - b. Proposed detention/infiltration basin (east) has a section of inlet pipe that discharges directly into the wet pond and not into the forebay. All inlets must first be routed through pre-treatment measures prior to entry into the infiltration basin. Revise to route through DEC approved pre-treatment device or to a forebay.
 - c. Proposed water quality/pre-treatment vault at northwest portion of property to be designed and sized for the contributing drainage area with respect to its required pre-treatment, and water quality volumes.
 - i. Must be installed upstream of any proposed detention system.
11. Proposed vegetated swales and the surrounding area to be graded and supporting runoff reduction calculations to be included in drainage analysis.
 12. Design details from Stormtech to be provided for the proposed detention/infiltration systems.
 13. Location of pool equipment to be provided.
 14. Fences with gates to be provided around proposed open basin areas.
 - a. Detail to be provided.
 15. Height and style of fence around dog park to be identified.
 - a. Detail to be provided.
 16. Additional top of wall, and bottom of wall elevations are required at all significant grade changes. There are some wall sections that appear to be tiered.
 - a. Details to be provided.
 - b. Walls over 4' shall be engineered by a Licensed Professional Engineer.
 - c. Tiered walls shall be set apart, so the influence angle of the upper wall does not impact the lower wall section.
 17. Proposed grading around headwalls to be provided.
 18. Outlet channel(s) to be provided and designed for 100-year storm events from respective stormwater management systems.
 - a. Capacity analysis('s) to be provided in drainage analysis.
 - b. Detail(s) to be provided in plan set.
 19. Identification numbers to be added to proposed sanitary manholes and drainage inlets.
 - a. Profiles to be updated with the respective identification numbers as well.
 20. Drainage pipe material and size to be added to each pipe label.
 21. Stormwater conveyance system capacity analysis to be provided.
 22. Sanitary sewer capacity analysis to be provided.
 23. Water main, services and any required hot boxes (if applicable) are to be added to the plans.
 24. Photometric lighting plan to be provided.
 - a. Illumination not to exceed 0.1 foot-candles at property lines.
 - b. Walking paths shall be adequately illuminated.
 25. Landscaping plan to be provided.
 26. Truck maneuverability plan to be added to the plan set.
 - a. Including maneuverability to any proposed dumpster location.
 27. Quantify cut/fill. Does the project anticipate any import or export of soil?
 28. Temporary sediment basin(s) to be provided.
 - a. Detail(s) to be provided.

29. Total proposed area of disturbance to be added to the plans.
30. Total and phased areas of disturbance to be labeled. Soil erosion and sediment control plans must be provided for each proposed phase of the project.
 - a. Note: Not more than 5 acres may be disturbed at any one time without prior authorization from the NYSDEC and the Town. Justification will be required.
31. Vehicular access is to be provided to the detention basins for maintenance.

Drainage Report Comments

32. Detailed narrative describing the pre-treatment, water quality and runoff reduction methods utilized shall be provided.
 - a. Clear and legible summary tables to be provided.
33. Proposed orifice sizes to be in full inch or ½ inch increments with a minimum orifice size of 3" to prevent clogging.
34. Stormwater conveyance capacity analysis to be provided.
35. Groundwater elevation to be provided.
 - a. Note: 3' separation required between seasonally high ground water table and bottom of any infiltration zone (bottom of infiltration basin for pond or stone base for Stormtech).
36. Pre-treatment is required prior to entry into any infiltration system.
37. Pre-treatment sizing requirements and design not provided.
 - a. Provide information clearly in drainage analysis.
 - i. Required Pre-Treatment Volume to infiltration basin X =?
 - ii. Provided Pre-Treatment Volume prior to entry into infiltration basin X =?
38. The water quality calculations as provided are not sufficient. All supporting calculations, including the volumetric calculations shall be provided.
 - a. Water Quality Volume and Runoff Reduction requirements and design for each individual sub-basin shall be clearly provided.
 - i. Required Water Quality Volume =?
 - ii. Provided Water Quality Volume =?
 - iii. Required Runoff Reduction Volume =?
 - iv. Provided Runoff Reduction Volume =?
39. The design percolation rate is greater than 2"/hour, therefore a minimum of 50% of the required WQv must be pre-treated. Any design points where the actual percolation rate is greater than 5"/hour, 100% of the required WQv must be pre-treated prior to entry into any infiltration basin/system.
 - a. Conservative infiltration rates may not be used to justify lower required pre-treatment percentages.
 - b. Detailed design calculations for each drainage sub-basin to be provided, including the forebay sizing, runoff reduction volume and water quality calculations.
40. Provide 1 foot of freeboard between the 100-year storm event and the lowest elevation of the connected storm system structures or basins.
41. Clear and legible stage-storage tables for proposed infiltration basins to be provided.
 - a. Note: 100% WQv must be stored below any proposed orifice(s).
42. Channel protection volume attenuation is required.
 - a. Detailed design calculations to be provided in the drainage analysis.

Stormwater Pollution Prevention Plan (SWPPP) Comments

43. The proposed project disturbs over 1.0 acres. Full SWPPP to be provided in compliance with GP-0-20-001.

- a. Certification statements by all contractors, the owner and the design professional will be required in the SWPPP book. These documents should be included but may remain unexecuted until such time that the document is filed for permit coverage with the NYSDEC.
- b. A copy of GP-0-20-001 must be included in the SWPPP document.
- c. The SWPPP can be provided after the Zone Change is adopted but is required prior to any preliminary approvals.

Miscellaneous Comments

44. Cost estimate of improvements to be provided prior to any final approvals.
45. Notice of Intent to be provided.
46. Formal test pits, permeability and percolation testing is required and must be witnessed prior to final approval.
 - a. Percolation testing to be performed at the proposed depths of infiltration.
47. Any proposed retaining wall located near a property boundary will need to be faced on both sides of the wall.
48. Stormwater Maintenance agreement to be provided prior to any final approvals.
49. Traffic reports to be reviewed by and approved by the Town Traffic Consultant.
50. Fire Department to review for adequate maneuverability and fire hydrant locations.
51. Responses to all outside agency comments to be provided.

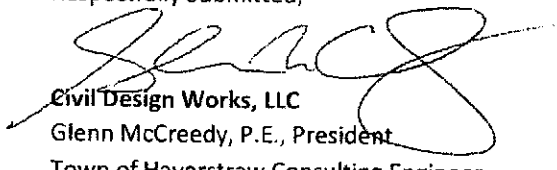
Environmental Assessment Review (EAF) Part 3 Response Comments

1. The alternatives in Item 2 are not translatable to the current site plans since the size of the buildings and expansion of the parking would be directly impacted by this change in unit size. Comparison of the impacts between the proposed one and two-bedroom units and larger three and four-bedroom units has to translate to direct comparison or the exercise is just random ideas rather than a direct cause and effect. The conclusions should justify that the selected unit size and density provide a benefit over the current zoning potential.
2. Reference to adequate sewer capacity and an analysis was mentioned but no such report has been submitted. Sanitary sewer capacity analysis to be provided.
3. Areas for electric charging stations to be added to the plans as described in the EAF Part 3 responses.
4. The water and sewer usage data in Item 7 along with the supporting narratives should be revised to reflect constructible conditions per the maximum allowed coverages while providing adequate parking for the proposed three and four-bedroom units, not using the same density as the studio, one and two-bedroom design.
5. Layout of the proposed water system to be added to the plans and submitted to Suez Water NY for their review and comment.
6. The response to Item 12 states that all requirements related to stormwater runoff and mitigation have been met or exceeded. Stormwater design, report and plans have not been accepted at this time. However, our office can verify that the applicant has provided good faith to provide the necessary mitigation and this will continue to be evaluated as part of the site plan process.
7. The reports mentioned in the response to Item 13 and Item 15 are to be submitted to the Town for proper review.
8. As mentioned above, the project must be completed in phases with no more than 5 acres of disturbance occurring at any given time. Phasing plans to be submitted including all mobilization and staging areas needed for construction clearly identified. The soil erosion and sediment control plans must be provided for each proposed phase of the project.

- a. If more than 5 acres of disturbance is desired at any one-time, prior authorization is required from the NYSDEC and the Town with adequate justification provided.
9. The construction was identified as 12-18 months. Submit construction phasing plans and timeline in support of this time estimation. 24-36 months seems more appropriate for a project of this size that is required to be completed in multiple phases.
10. The EAF mapper indicated that the site contained rare, threatened, or endangered species. This must be expanded by the applicant and resolved.

We will continue our review upon submission of revised documents. A detailed narrative responding to each item above is to be provided with the applicant's ensuing submission.

Respectfully Submitted,



Civil Design Works, LLC
Glenn McCreedy, P.E., President
Town of Haverstraw Consulting Engineer

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