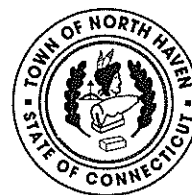


TOWN OF NORTH HAVEN

MEMORIAL TOWN HALL / 18 CHURCH STREET

NORTH HAVEN, CONNECTICUT 06473



REPLY TO:

INLAND WETLANDS COMMENTS

for 18 NOVEMBER 2020

318 KINGS HIGHWAY

(MAPS 98, LOT 1)

**GBRSTORZ, LLC, APPLICANT & OWNER
PUBLIC HEARING – SUBDIVISION REFERRAL**

Tel. (203) 239-5321

Fax (203) 234-2130

#I20-04

R-40

Application consists of:

1. Plan Entitled: Resubdivision of Anderson Sunnyside Farm, Land of GBSTORZ, LLC, 318 Kings Highway, Town of North Haven, Connecticut. Prepared By LRC Group. Dated 8/27/2020. Scale 1" = 60'.
2. Soil Scientist Report: Prepared by Martin Brogie, Inc., Environmental Services. Entitled: Wetlands Delineation and Assessment Report, 318 Kings Highway, North Haven, Connecticut. Dated: September 2020.

Review Comments:

1. This application is for a subdivision referral. The developer is proposing to subdivide this approximately 14 acre property into eight (8) single family, residential building lots. Wetlands have been identified in the southeast corner of the property and lie entirely within proposed Lot 7. Public water and septic systems are proposed for all lots. Lots 1 & 2 are proposed to be accessed from Hartford Turnpike while lots 3 through 8 would be accessed from Kings Highway.

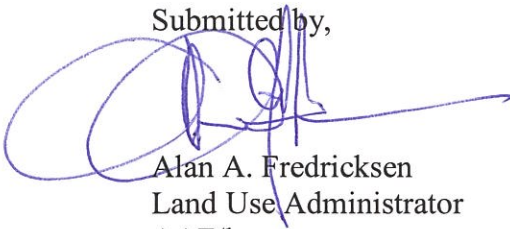
The drawings have been revised to include three detention basins along the easterly property line in an effort to intercept and store sheet flow to benefit the downslope Hartford Turnpike abutters.

2. Alternatives to this proposed layout should be discussed.

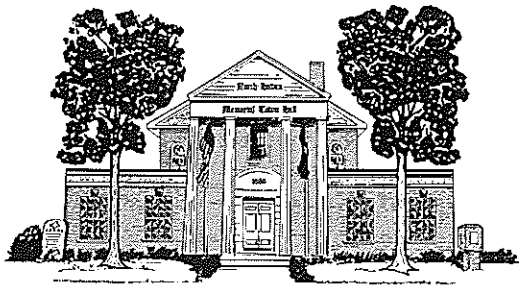
3. Submit revised plans which include:
 - * a. A note on the cover sheet indicating "I20-04, Subdivision Referral".
 - * b. Zoning data table added to Subdivision Plan and Site Development Plan.
 - * c. Provide dimensioned width for all proposed lot access strips.
 - * d. Wetland soil type indicated on the drawings.
4. Soil and erosion controls must be inspected by the Zoning Enforcement Officer before work may commence.
5. The owner must maintain (repair/replace when necessary) the siltation control until all activity is completed and all disturbed areas are permanently stabilized.

*** Indicates that these items have been addressed.**

Submitted by,



Alan A. Fredricksen
Land Use Administrator
AAF/lc
#I20-04



TOWN OF NORTH HAVEN
 MEMORIAL TOWN HALL / 18 CHURCH STREET
 NORTH HAVEN, CONNECTICUT 06473



REPLY TO: Engineering

Tel. (203) 239-5321
 Fax (203) 234-2130

INLAND WETLANDS

Date of Meeting: 11/18/2020

Dev: Subdivision
 Loc: 318 Kings Highway
 File: I20-04

Comments: (Latest updates are in **BOLD**)

1. Although not strictly an Inland Wetland issue, we have concerns over the historic effects of direct stormwater runoff from this site on downstream properties to the east. Neighboring residents have reported excessive sheet runoff from this site that has been exacerbated by past clearing and other activities on the property. The Developer's Engineer has provided a distributed system of rain gardens designed to retain the first 1" of runoff from proposed impervious areas. Due to the downstream drainage concerns, an overall analysis is needed to review the effectiveness of this system on overall site runoff. Items for further consideration include:
 - a. Ability of the existing site soils to effectively infiltrate site runoff within the proposed rain gardens. The design narrative discusses soils testing that has been performed in support of on-site septic disposal systems. Please provide details on this soil testing indicating soil types, seasonal high groundwater levels, and infiltration rates. 20201026 – Soil testing data has been added to the plans. **20201106 – No further comments**
 - b. Understanding of the movement of groundwater within the existing site soils, and the overall effect of the distributed rain garden approach on groundwater levels, downstream basements, and possible groundwater surface breakout. 20201026 – No information has been provided to date addressing the possible effects of stormwater infiltration on downslope groundwater levels, and impacts to neighboring residents. **20201112 – Plan has been revised, and a new series of detention basins has been added to the easterly side of the site. In order to limit possible groundwater impacts from these basins on downstream properties, we recommend that the basins be lined with low permeable soils.**
 - c. The proposed stormwater management approach relies on the action of individual residents for long term maintenance of the individual rain garden systems. How will property owners within this development be compelled to perform the long-term maintenance that these systems will need to ensure proper long-term function? The Town does not have the resources to inspect and track each individual system on an annual basis to ensure that the required maintenance is performed. 20201026 – Per the Developer's Engineer, Maintenance Agreements will be included in property deeds. The Commissions may wish to include bonding and reporting requirements on the individual lots to ensure that long term maintenance is performed. **20201112 – In the revised plan, it appears that maintenance responsibility remains with the individual lot owners. Our prior concerns over ensuring maintenance is performed still remain.**
2. The proposed design plans show a direct connection of site drainage to an existing Town drainage system in Hartford Turnpike. Calculations must be provided to show that this drainage system has adequate capacity to properly convey drainage from this site. Analysis of this system should extend to the system outfall, and include an assessment of the ability of downstream channels and features to convey post development flows.

20201026 – The Developer’s Engineer has surveyed the existing drainage system on Hartford Turnpike, and performed an analysis of existing and proposed drainage system conditions. The analysis indicates that the existing drainage system exceeds capacity downstream of the connection point from this development for even a two-year storm event. The proposed development will generate an approximately 5% greater peak site runoff for all storm events analyzed. Since the existing drainage system lacks available capacity to accommodate this increase in site runoff, additional mitigation measures will be needed. In addition, no evaluation of conditions downstream of this outfall was provided. **2020112 – The revised plans include a series of detention basins along the easterly boundary of the site. In a detailed review of the calculations, it appears that the existing runoff curve numbers for the wooded site are slightly higher than the proposed lawn condition. The Developer’s Engineer must reevaluate these factors to reflect a higher value in the proposed condition. The proposed detention basins will likely need to be expanded slightly in order to accommodate this change. As long as the revised calculations continue to show a reduction in overall site runoff, our concerns over the downstream pipe capacity have been adequately addressed.**

3. Based on a review of the above requested information, further Engineering comments may be forthcoming.

20201026 – Comment remains. **2020112 – The following additional comments also apply:**

- a. **We are concerned over the 6” low level outlet from the ponds, and the likelihood of clogging due to debris and vegetation. Proper maintenance of the basins will be critical in their long-term effective function. A clogged outfall could result in long term ponding in the basin, adversely effecting available storage volume, and risking possible overtopping of the basin berm.**
- b. **An additional swale is needed at the rear of Lot 8 in order to direct runoff away from 1952 & 1954 Hartford Turnpike.**
- c. **The detention systems and downstream piping should be constructed first, prior to clearing of the balance of the site.**
- d. **Grass swales should be provided with a jute mesh or other type of temporary liner until sufficient vegetation is established to limit erosion.**
- e. **Detailed site plans must be submitted and approved for each individual building lot prior to issuance of a building permit**

[] Above comments are relatively minor in nature and can be addressed subsequent to an approval.

BOND RECOMMENDATION: \$12,000

DATE REVIEWED: 11/12/2020

TOWN ENGINEER: J. Andrew Bevilacqua, P.E. *AB*

[] Above comments (*) should be addressed prior to deliberations