ALTUS
ENGINEERING, INC.

Civil
Site Planning
Environmental
Engineering

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DRIFTWOOD TOWNHOMES
MEMORANDUM

To: Rye Planning Board

Date: November 12, 2019

From: Eric Weinrieb, PE
Altus Engineering, Inc.

Re: Response to Consultant Reviews from October 18th submission
Tax Map 17.3, Lot 6
1215 Ocean Boulevard
Rye, NH
Altus Project #P4869

On October 18, 2019, Altus Engineering, Inc. submitted revised Site Plans to the Rye Planning Board. The submission followed a Board of Adjustment variance that allows for the septic tanks to be within 100-feet of the wetlands. The revised plan submittal also reduced the number of dwelling units from the original 8-units to 6-units.

The Planning Board's consultants and the department heads reviewed the submission and prepared letters/memorandums summarizing their findings. Altus offers the following in response to these comments.

ATTORNEY DONOVAN'S REVIEW DATED NOVEMBER 7, 2019

1. Building Bulk
   No comment
2. Height
   No comment
3. Architecture
   No Comment
4. Turnaround
   Altus provided a turning template for the turnaround area demonstrating the most likely vehicle that will use the turnaround, a UPS/FEDEX style delivery truck. As noted in the department head reviews of the original submission package, none of the department heads objected to a dead-end driveway. Fire apparatuses have safe access to the site from Ocean Boulevard. If Fire Department personnel elect to access the property via the driveway, fire trucks can back out of the site with guidance from personnel staffing the truck just as they would on other dead-end roads in Rye, including nearby Odiorne Drive and Appledore Avenue. The proposed driveway is twenty feet wide which provides adequate access.

In addition, all three of the proposed buildings are being constructed with sprinkler systems, which reduces the need for ladder trucks to access the site during a fire.

The six residential units will be responsible for their own waste disposal, as most other residences in town, and it is anticipated that they will use the Rye transfer station. Access for trash removal will be no different than access on the nearby public roadways. Private trash pickup services are available in Rye with various vehicle sizes, including trucks capable of turning in the driveway.

5. Second Driveway

Chief Walsh has now offered a comment that a second access to Ocean Boulevard will be helpful in a storm event or tidal surge. His earlier department review did not include comment on this issue. The only prior comments received by the Police Chief were from the Chief's initial comments from his January 2019 review, as stated below.

"Driveway, owners responsible for any agreements maintenance, ect., example a basketball hoop, town not responsible for any civil disagreements. Owner occupied, no renting rooms or condo units, no renting beach parking, 2. Vehicles per unit only."

As noted in the initial comments from the Police Chief, the primary concerns focused on outdoor recreation, beach parking, rentals, and beach businesses. The current comment indicates that he feels the second driveway would "help" in extreme weather events.

As design professionals, Altus is very concerned with vehicular safety and the consequences of providing a second access onto a heavily traveled State highway with fast moving traffic and limited sight lines due to parking on the shoulder of the roadway. Installing a driveway access on Ocean Boulevard will create a dangerous traffic movement. In the case of the infrequent storm or flood event, residents will have advanced notice of weather conditions and can plan ahead. Typical storm flooding recedes with the tide cycle, which allows access to Wallis Road. Residents can also access Ocean Boulevard by the grassed area and walkways.

If and when the Town corrects the existing deficiencies on Wallis Road and raises it above the 100-year flood plain, the driveway will be able to be adjusted to the grades of the new roadway. Until that happens, we believe the risks of day-to-day usage of an egress onto Ocean Boulevard presents a safety hazard that outweighs the impact of a temporary storm or flood event at the Wallis Road entrance.

COMPREHENSIVE ENVIRONMENTAL, INC. REVIEW – EMILY DIFRANCO NOVEMBER 4, 2019

It is noted that Ms. DiFranco's initial review dated April 25, 2019 title was "Peer Review Services for Driftwood Townhouses – Floodplain Methodology." The new review title is "Driftwood Townhouse – 1215 Ocean Boulevard Parsons Creek Environmental Impact Review"

1. Environmental advantages comment
   No Comment
2. Recent changes and additional environmental advantages comments
   No Comment
3. Relocation of septic tanks and leachfield and additional comments
   As noted by Ms. DiFranco, the AOS system is an advance treatment system and offers a significant improvement in effluent quality. The site currently has an approved daily design flow of 4,125 GPD. By right, the property can continue to operate with this design flow in perpetuity. Mr. Samonas has elected to reduce the flow 230-percent. This reduction allows Mr. Samonas to meet the current lot loading criteria set forth by DES which allows him to change the form of ownership. The regulations do not include any provisions for requiring additional separation from the seasonal high-water table for anticipated climate change conditions. There are competing design constraints on this property just like every other property that is developed. Should the Board request that we provide a greater separation for future conditions, it will come at a compromise to increasing the fill in the 100-year flood plain. As designed, two of the three septic systems provide for more than the 4-foot minimum separation to the current seasonal high-water table, the third meets the Town minimum 4-foot separation. As noted by Ms. DiFranco, ASO systems require only 1 to 3 -feet of vertical separation thus, the site as designed meets water quality standards should sea levels rise by up to three feet.

   Both Altus and Mr. Samonas acknowledge the additional monitoring and inspection requirements set forth by the Board of Adjustment. Those requirements will be in the homeowner's association recording documents.

   If requested by the Board, Gary Spaulding from Advance On-Site Solutions can provide additional documentation on the effectiveness of the treatment by their systems.

4. Reduction in impervious cover and permeable paver comments
   As noted in the attached Drainage Memorandum, the proposed development is reducing the impervious cover on site by over 14,000 square feet. The site is also being converted from transient rental properties, office space, and a restaurant to six residential units. The contaminant load for six residential units is far less than the current day use. All proposed drives on site are to be constructed with permeable pavers, per UNH Stormwater Center design principles and approved by NHDES Alteration of Terrain Bureau. Therefore, the only impervious cover on site, besides small exterior pads, are the building rooftops, which typically have a

very low contaminant load. Sanding of the permeable pavers is not allowed per the NHDES Stormwater Maintenance and Inspection Manual for the site.

NHDES and customary engineering practices recognize that the first flush of a storm event is critical to providing treatment of contaminants, as the first flush collects the majority of contaminants from the surfaces. The site was designed to treat the stormwater runoff and improve stormwater quality by providing permeable surfaces, grassed swales, and enhancing the tidal buffer. Typically, even for large storm events that may surcharge the system, the first flush is still able to be treated prior to surcharge. As the storm event intensifies, treatment is no longer the primary focus of the stormwater system compared to peak flow management and the proposed site reduces the peak flow for all storm events by over 30 percent compared to existing conditions. Infiltration is not required by DES standards, as the reduction in impervious surfaces meet the groundwater recharge requirements. The buffers are vegetated buffers to improve habitat and to increase attenuation. As noted in the review letter provided by Sebago Technics, the Town's consulting engineer, dated November 7, 2019, the design is meeting the criteria of the Rye Land Development Regulations. Although, we can provide a stone drip edge, it will serve no practical benefit as the driveway is a permeable surface.

The contaminants that are expected to be seen on this low volume permeable driveway are very low compared to existing conditions. Each two-bedroom home is expected to generate less than 6 vehicle trips per day, which will be a reduction in approximately 70 percent of vehicle trips from the site compared to current use. The vehicles are expected to be stored inside the garages. The contaminants from the impervious surfaces on this site is slight. Also, there will no longer be external waste storage on site, as there are currently two dumpsters used for the existing restaurant and rental cabins. All waste storage will be internal to each unit.

As noted above in our response of Attorney Donovan's concerns regarding the flooding of the driveway during periodic events, we are confident that the flooding issue is at our connection point to the Town roadway.

SEBAGO TECHNICS REVIEW DATED NOVEMBER 7, 2019

1. Explanation of the proposed project and reduction in site intensity
   No comment
2. Summary of the State Permits
   No comment
3. Benefits and drawbacks
   No comment
4. Periodic flooding of the driveway and turnaround
   Commented by Altus above
5. Suggested drainage design improvements

Altus concurs with Sebago's comment regarding the potential for runoff crossing the walkways for buildings 1 and 3. Altus will amend the design to address stormwater crossing the two walks.

6. Drainage Analysis comments

   No comment

7. Drainage Executive Summary

   Altus concurs with Sebago's analysis. In the interest of addressing the Planning Board Chairman's request to provide the analysis for the 100-year storm event, Altus has completed an updated analysis of the development. The Findings are summarized in a separate drainage memorandum. In all storm events analyzed (2, 10, 25, 50, and 100-year storms), the peak rates of runoff decrease from the pre-development conditions by 34 percent or greater.

POLICE CHIEF UPDATED REVIEW EMAIL DATED NOVEMBER 4, 2019

"I still feel a second exit onto Ocean Blvd would help when Rye has high tides, rain and snowstorms and the end of Wallis Rd floods. Gives the home owners away out".

The only prior comments received from the Police Chief are from the initial comments from his January 2019 review, which were as follows:

> *"Driveway, owners responsible for any agreements maintenance, ect., example a basketball hoop, town not responsible for any civil disagreements. Owner occupied, no renting rooms or condo units, no renting beach parking, 2. Vehicles per unit only."*

Chief Walsh's emailed response is addressed in Comment 5 by Attorney Donovan and our associated response above.

In summary, it is Altus opinion that the project as designed meets and exceeds the intent of the Rye Land Use Regulations. The only question that remains is whether or not a second access onto Ocean Boulevard is warranted.

Wde/4869- response memo - consultants reviews 11-12-19