



May 15, 2019
19544

Maureen O'Meara, Town Planner
Town of Cape Elizabeth
320 Ocean House Road
P.O. Box 6260
Cape Elizabeth, Maine 04107

**Subject: Ocean House Common, 326 Ocean House Road
Site Plan and Resource Protection Permit Review**

Dear Maureen:

We have received and reviewed a submission package dated May 3, 2019 for the subject project. The package included the following items:

- a May 3, 2019 response letter from Robert Metcalf of Mitchell & Associates;
- a May 3, 2019 stormwater related response letter from Stephen Bradstreet of Ransom Consulting, Inc.;
- a revised May 6, 2019 Stormwater Management Report with supporting calculations from Stephen Bradstreet of Ransom Consulting, Inc.;
- a May 6, 2019 U.S. Army Corps of Engineers Maine General permit for the project;
- a March 29, 2019 architectural related letter from Matt Provencal of Mark Mueller Architects;
- eight, 11-inch by 17-inch architectural building floor plans, elevations, and perspective view exhibits labeled A-1, A-2, A-3, A-4, A-5, A-6, A-7, and A-7.1 all dated May 3, 2019 as prepared by Mark Mueller Architects;
- a seventeen (17) drawing plan set dated May 3, 2019 as prepared by Mitchell & Associates;
- and, included with the 17 drawings, a March 26, 2019 Boundary & Topographic Survey as prepared by Owen Haskell, Inc.

The responses and revisions have addressed many of our previous comments. Based on our review of the submitted material and the project's conformance to the technical requirements of Section 19-9 Site Plan, Section 19-8-3 and Resource Protection Permit; we offer the following comments:

1. The applicant is requesting a review of a multi-use Village Green-style development on a 4.1-acre entirely wooded parcel within the Town Center. The first phase of the project will consist of a dental office space and two, 2-bedroom residential units in a 3,572 square foot (SF) building footprint with utility and stormwater infrastructure improvements. Proposed parking spaces

totaling 20 spaces will be provided along a new access drive looping through the site to connect from Ocean House Drive to the rear parking lot on the adjacent Town Hall property to allow for the development to link traffic flow to Shore Road. A 20,000 SF public common area will be established adjacent to Ocean House Road to create a Village Green.

Subsequent phases may include three more buildings with uses that may include a restaurant, retail businesses, and additional residential spaces. Utility extensions from the Phase 1 utility infrastructure will be constructed to meet the needs of the future tenants as the buildings are constructed.

2. The designer should review the roadway profile depicted on the Road Profile drawing (L7). The designer should review the following items:
 - The match points and their corresponding station locations should be indicated for the pavement connections to Ocean House Road and the Town Hall parking lot;
 - and a vertical curve should be added at the end of the roadway connection to the Town Hall parking lot so that there is not an abrupt transition from the proposed 5.5% grade to the much flatter parking lot grade.

3. There have been several changes to the details shown on the Site Details drawings (L8 and L9) that have addressed our earlier comments. Items that require further clarifications include the following:
 - On the Concrete Walk detail on Drawing L8, the underlying gravel and structural fill material under the concrete should be specified.
 - On the Double Dumpster Enclosure on Concrete Pad – Chain Link with Screening Slats detail on Drawing L9, the title of the detail should remove the words “Chain Link with Screening Slats” to reflect the wooden enclosure described in the detail. Also, the compacted aggregate subbase gravel under the pad should be specified.
 - On the Concrete Pad detail, the compacted processed gravel under the pad should be specified.

Stormwater Comments:

4. The submission package included a revised Stormwater Management Plan narrative exhibit which details the proposed improvements and the inclusion of stormwater quality treatment measures before stormwater is discharged to the Town's enclosed drainage system at the intersection of Jordan Way and Ocean House Road. The proposed stormwater water quality treatment methods include building drip edges, wooded buffers, two underdrained filter swales, and two Focal Points systems which treat runoff prior to discharge into a central area on the site would then be collected in an enclosed drainage system and be discharged to the Town's public stormwater system in Ocean House Road.

No on-site stormwater detention is proposed for the release of the site's stormwater for the first phase of the project which has been estimated by the project engineer to generate an additional

peak runoff flow rate of 3.05 cubic feet per second (cfs) into the municipal stormwater system during the 25-year storm event.

5. The full buildout of the site would contribute an estimated 4.62 cfs peak rate of runoff to the municipal stormwater system without on-site detention during the 25-year storm event. It is our understanding that Sebago Technics will evaluate the Town Center drainage system to determine the current system's capacity to accept the full buildout flow from the site and/or identify any deficiencies in the system that would require improvements to accommodate the additional flow. Should the Town Center drainage system not be able to accept the flow or the costs of such improvements necessary be considered beyond the Town's funding capabilities then an on-site detention system could be constructed as was originally envisioned. The determination of the Town Center system's ability to absorb the additional stormwater and/or the improvements required to increase the system's capacity to accept the flow is anticipated to be completed by September of 2019.
6. In response to earlier review comments, the stormwater underdrained infiltration swales proposed to be installed on the south side of the Town's parking lot behind Town Hall have been shifted onto the development project and the applicant has provided a draft drainage easement that would allow the Town to maintain these elements after construction. The designer should review the Grassed Underdrain Strip & Sediment Forebay detail on Drawing L11 to ensure that the components are in keeping with the Maine Department of Environmental Protection (DEP) standard for a Vegetated Underdrain Filter as those standards will be applied when the project applies for a DEP Stormwater Law permit in the future phase of the project. The sediment forebay should also be designed to eventually drain and not create a nuisance ponding condition.
7. The project engineer has implemented a Level Lip Spreader behind the Phase 1 building at the point where flow from Subcatchment 3 enters into Subcatchment 4. This measure allows runoff to redistribute into sheet flow and further take advantage of the wooded buffer areas to slow and absorb runoff prior to discharge off-site. The designer should review the Level Lip Spreader detail on Drawing L11 to ensure that the components are also in keeping with the DEP standards. The length of this feature should be added onto the plans.

The designer should also consider whether the native soil characteristics will allow the eventual infiltration of any water collected in the trough section of the Level Spreader so that nuisance pooling of water is avoided. Should the native soils not be considered conducive to infiltration, the designer may want consider adding an underdrain section to alleviate the potential pooling of stormwater within the spreader.

8. The Stormwater Management Report indicates slight increases in the estimated post-development peak rates of runoff from Subcatchments 3 and 4 in comparison to estimated pre-development peak rates.

For Subcatchment 3, there appears to be a 4,000+/- square foot area around the dumpster pad and drive that has been included within the Subcatchment 3 area. This area has been graded to divert surface water to the Level Lip Spreader behind the Phase 1 building so this area is actually part of Subcatchment 4 which is likely exaggerating the slight increase in Subcatchment 3's peak flow. We are also confused as to why the Subcatchment 3 peak flow rates as reported in the

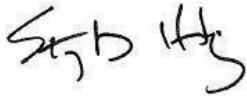
revised Stormwater Management Report do not change for the 2-year and 25-year storm events between the Phases 1 and 2 when a new building would be added to the site plans in the 2nd phase.

For Subcatchment 4, we believe that the reported minor post-development peak flow rate increase is also inflated as a conservative stormwater modeling strategy was implemented which does not take into account the attenuation effects of the building stone drip edge treatment and associated potential infiltration capacity of the native soils nor the attenuation effect of the level lip spreader within Subcatchment 4 which could be analyzed as a separate catchment within Subcatchment 4 and be assigned a reach flow within the site's buffer area that could be based on the redistribution to a sheet flow condition downgradient of the level lip spreader. This step would more closely replicate the sheet flow redistribution of the runoff after passing through the spreader which would increase the absorptive nature of the on-site wooded buffer. While we do not believe with the minimal increases indicated that it is necessary at this time to include these effects in the analysis, we do believe that in doing so, the reported post-development peak rates of runoff would diminish. This additional analysis may become a necessary step in the future when the project is analyzed by the DEP for the Stormwater Law permit under the full buildout scenario.

9. We also noted other stormwater related issues within the plans and the stormwater report that the designers should address. These stormwater related items include:
 - Page 2 of the May 3, 2019 stormwater related response letter from Stephen Bradstreet contains a table that indicates that 5.55 cfs of peak flow will be generated from the full buildout scenario to the Town's stormwater system. Other places with the revised Stormwater Management Report and it appears within the calculations indicate that the estimated flow is actually 4.62 cfs. For consistency, the designer should confirm the proper estimated flow rate.
 - On Drawing L4, it does not appear that the invert elevation has been provided for Focal Point #1. It also appears that information (i.e., size, slope, and length) is missing for connecting pipe between Focal Point #2 and the overflow catch basin.
 - On Drawing L4, the underdrain drip strip along the side and back of the proposed building is called out. The drip strip area on the front of the building appears to be shown, but not labeled. The limits of these areas should also be clearly indicated.
 - On Drawing L4, the designer should consider included a structure at the connection point of the Vegetated Underdrain Filter Swale outlet pipe to the pipe that is to be installed between Focal Point #1 and the overflow catch basin. At a minimum, cleanout risers and a wye fitting should be provided. Corresponding details and notes regarding this connection point should also be added to the plan.
 - On Drawing L5, two water services are shown to be located within the drip strip area on the front of the building. As the frost susceptibility of a pipe in the drip strip area is increased, these water services should either be relocated to avoid the drip strip area or insulated to protect against frost. If the option of insulation is proposed, then a note and/or detail should be added to the plan.

We trust that these comments will assist the Board during their deliberations on this project. Should there be any questions or comments regarding our review, please do not hesitate to contact us.

Sincerely,
SEBAGO TECHNICS, INC.

A handwritten signature in black ink, appearing to read "SDH" followed by a stylized flourish.

Stephen D. Harding, P.E.
Town Engineer

SDH:sdh

cc: Bob Metcalf, Mitchell & Associates
Steve Bradstreet, Ransom Environmental
Bob Malley, Public Works Director