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December 20, 2017

Mr. Andrew Port, Director
Office of Planning and Development
60 Pleasant Street
P.O. Box 550
Newburyport MA 01950

Re: Definitive Plan Review- Evergreen Commons, 18 Boyd Drive Newburyport, MA

Dear Mr. Port:

I have reviewed the Open Space Residential Definitive of Land & W.R.P.D. Special Permit for Evergreen Commons Dated June 2, 2007 and last revised 11/16/17 and find that it substantially complies with the design requirements of the Special Permit Decision filed with the City Clerk on March 15, 2017.

Plan Review

The plan complies with the engineering portion of the Site Design Elements as listed in the Special Permit except as noted below.

Site Design Elements

Best Management Practices

Best Management Practices have been used in the design of the project and the most current BMPs are used to treat roadway runoff

Underground Infrastructure

Underground Infrastructure has been designed to minimize the likelihood of soil and ground water contamination. Sewers are proposed with welded joints rather than push on joints and while SDR 35 PVC pipe is used for sewers no deeper than 12 feet sewers below 12 feet are required to be SDR 26.

Distance Between Stormwater Discharges and Wetland Resources

Stormwater Discharges and houses are all greater than 100 feet from wetlands and the ILSF was reconfigured not to encroach on any building lot.

Roadway Width

The roadways width are as approved by the special permit. The road from Brown Avenue to the loop road is proposed to be 22 feet wide and the remainder of the roadways will be 24 feet wide. A "no parking" sign detail needs to be added and the location of the signs marked on the plans

Street Trees

Street trees are located on the landscape plans

Upgrades to Boyd Drive

The required upgrades to Boyd Drive should be repeated in the final decision

Water and Sewer Upgrades

The water main is looped. Plans for the proposed sewer pump station replacement were not provided. There is a note on the plan that states "pump chamber design coordinated and approved by Newburyport DPS".

Subsurface Utilities

All utilities are proposed to be buried

Architectural Design & Structural Elements

Foundations

All basement floors are proposed to be two feet above the water table

Elevations

None of the first-floor elevations on adjacent lots are greater than three feet

Garages

All garages on the plan are set back from the front of the buildings.

Other Considerations

I recommend that the construction of the project be inspected by a representative of the City at a minimum on a daily basis to ensure the work conforms to the plans. It may at times be necessary to have a representative on site full time when construction of the infrastructure is at its peak.

The history of the site suggests that unsuitable materials were used as fill and some of the test pits showed foreign soils on site. When unsuitable soils are encountered during construction whether in excavation for utilities or foundations, they should be removed from the site and replaced with clean gravel. The City should be notified of the nature and extent of the unsuitable material and its ultimate disposal.

There are areas in the isolated land subject to flooding where the loam is two feet deep and compacted. Test pits should be dug in the proposed ILSF area to determine soil consistency and excess loam removed and replaced with sand or gravel. Areas of compacted soil should be scarified and graded to ensure adequate infiltration rates. When the work in the ILSF is finished double ring infiltrometer testing should be performed throughout the area to ensure adequate infiltration rates to allow for proper draining of the ILSF and the results submitted to the City.

Very truly yours



Philip Christiansen P.E.