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January 10, 2022

Town of Wareham Planning Board

Memorial Town Hall

54 Marion Road

Wareham, MA 02571 Re: Warren QOZB, LLC Site Plan

59 Main Street Peer Review

Attention: Richard Swenson, Chairman

Dear Chairman Swenson:

I have reviewed the plan submittal for the above referenced project dated January 4, 2022 by GAF Engineering and have the following comments.

Plans

Sheet 2 of 11

1. Four soil tests were done on the site in November, 2021 which show varying conditions for soils. These conditions indicate that some adjustment may be needed for the disposal of surface runoff. Further information is below.

Sheet 3 of 11

1. There is an existing catch basin on the northerly side of Main Street near Cedar Street that is situated on the property. There is no indication as to whether there is an outlet that should be explored.
2. The sheet indicates that there are three separate lots within the property limits. Will these lots be combined to form one lot?
3. The entire property is partially within the 100-foot buffer zone to Wareham River, is wholly within a flood zone and wholly within the Riverfront Area as noted on the plans. Therefore, the project will require approval from the Wareham Conservation Commission before construction could commence.

Sheet 4 of 11

1. The most westerly entrance to the site is shown as only 20 feet in width. This will be a “choke point” for vehicles trying to enter or leave the property. The entrance should be made 24 feet wide as is the most easterly entrance.
2. The location of the existing utility pole opposite Cedar Street has a guy wire as noted on Sheet 3 of the plan set. The guy wire is not shown on this sheet and would be within a proposed parking space. How will the utility pole be supported if the guy is removed?

Sheet 5 of 11

1. The plan does not show the invert elevations of the existing sewer main in Main Street. Slope and inverts of proposed sewer lines for the restaurant and other smaller building should be shown.

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Sheet 6 of 11

1. The grading plan suggests that filling will be required immediately adjacent to the proposed restaurant on the northwesterly side. To avoid the fill in a flood zone that may be subject to currents of the Wareham River on an ebb tide would it make sense to consider a retaining wall around the lower level rather than the sloped grade? Is the fill required over the proposed infiltration system to give it proper cover?
2. The flow diffuser units shown on the plan have only 12 inches of cover at the lowest point. To avoid the potential for erosion of the fill covering the flow diffusers, I recommend a short retaining wall to elevation 5 or above between the diffusers and the river.
3. At the northwest corner of the building the entrance grade is 8.2. The opposite side of the sidewalk at top of curb is 7.5. This is a difference of 8 inches over a short distance. Is there a step at the entrance? How does this work with a patio grade of 8.0?
4. A grade of 14.5 is shown at the southwest corner of the restaurant at the proposed ramp. What is the ramp slope and is there a railing between levels?
5. The grading of the cement patio area on the southeast side of the building drops toward the proposed dumpster area and toward the river. Is there any provision for protecting the dumpster area from surface runoff? Could the dumpsters be located further away from the river? How will the dumpsters be unloaded? The one nearest the building is close to being in line with a stairwell on that side of the building. Are the dumpsters loaded or offloaded by truck? If so, the cement pad needs to be designed for H-20 loading to avoid cracking of the concrete.

Sheet 8 of 11

1. The plan should include erosion control on the river side of the project area. None is shown.

Sheet 9 of 11

1. The gravel base shown on the pavement cross section will need to be fine graded and compacted to a point 8 inches below finish grade prior to placing the 4 inches of dense grade base material. This should be made as a prominent note for construction on the plans.

Sheet 10 of 11

1. Show the ADS pipe in the Peastone Trench Section with drain holes down. Will the peastone be of uniform size or from 1/8” to 1/4” in size?
2. How are the drainage emitters connected to the infiltration chambers? Show in detail.

Sheet 11 of 11

1. For the doghouse sewer manhole the new inlet pipe should follow a flow line into a new channel and not just drop onto a flat surface. The channel should be in the direction of flow in the existing pipe.

Stormwater

1. The soil tests show that there is a variation on the soil materials on the site. Prior to constructing any of the infiltration systems shown on the plan additional exploratory testing should be done to determine if unsuitable soil is present and to what extent.

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Page three

1. Unsuitable soil should be removed and should be replaced with permeable materials compatible with the medium to coarse sand found in test holes 2 and 3. In all cases the stone under chambers should be in contact with the latter materials or the replacement material as necessary.
2. A minimum distance of 2 feet should be maintained between the bottom of stone and the high water elevation.

This completes the review of the information received to date. Please feel free to contact me if you have any questions.

Very truly yours,

Charles L. Rowley

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Cc Board Members

Ken Buckland, Town Planner

Aaron Shaheen, Asst. Town Planner

William F. Madden, PE, GAF Engineering

Jim Munise,BOS Liaison