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May 12, 2021

Nazih Elkallasi, Chairman  
Town of Wareham Zoning Board of Appeals  
Memorial Town Hall  
54 Marion Road  
Wareham, MA 02571

Re: Settler's Glen  
Comprehensive Permit  
Response to Peer Review  
**G.A.F. Job No. 18-9247**

Dear Chairman Elkallasi,

G.A.F. Engineering Inc. has prepared revised plans and provides the following responses to the peer review letter prepared by Charles L. Rowley, P.E., P.L.S. dated May 10, 2021.

This letter has been formatted for clarity by listing the initial comment in standard type followed by our responses in italics.

### **Plans**

1. The plans have been revised to show a stormwater system that has been divided into two general segments; roof runoff and site and roadway runoff. Both segments have incorporated subsurface infiltration systems for the disposal of surface runoff. This infiltration system eliminates the need for the previously shown deep retention basin.

*No response required.*

2. Roadway runoff also incorporates deep sump catch basins and a water quality system that is intended to trap solids prior to infiltrating runoff into the ground.

*No response required.*

3. Roof runoff is piped from gutters and downspouts directly to subsurface chambers for infiltration. Roof runoff is not required to have pre-treatment as per the Massachusetts Stormwater Regulations.

*No response required.*

4. The site plan shows a proposed mail box area within the cul-de-sac that would allow for the USPS to deposit mail for all units in one area. The actual design of the unit or size of the area required is not shown.

*Details for cluster mailboxes will be coordinated with the local Postmaster.*

5. A snow disposal area is shown on the plan to the southeast of the cul-de-sac.

*No response required.*

6. The previously shown road layout plan for Halyard Road has been eliminated.

*No response required.*

#### **Plan Details**

1. It is recommended that the either tees or pipe elbows with the bottom set at least 12" below the flow line of the outlet pipe be substituted for "Eliminator" type of sediment traps shown for catch basins.  
The project being in a groundwater protection district as defined in the Zoning By-Law, the change would help in controlling accidental oil or gas spills that could threaten ground water quality in the area.

*We have specified ADS Envirohoods for installation as sediment traps in the catch basins and removed the Eliminators. The model listed on the plans will provide a barrier 20" below the flow line to trap oil or gas.*

2. The Water Quality System (WQS-1) shown on the profile plan should be similarly labeled instead of DMH-2 on sheet 8 of 11 of the plan set.

*We have revised the label as requested.*

3. The slope or invert of the 18" pipe that extends from WQS-1 to the subsurface infiltration area should be checked. The pipe slope and ending invert elevation cannot both be correct as shown.

*We have raised the invert into the galleys based on a pipe slope of 0.5%.*

4. The driveway detail at roadway on Sheet 10 of 11 suggests a 2% pitch on the driveway to what is assumed to be the back edge of a sidewalk from the back edge of the Cape Cod Berm. There is now no property line to use as reference. The berms should end at the beginning of each driveway and pick up again on the other side to eliminate an unnecessary vertical bump in the driveway profile. The 2% slope shown may not be true for each driveway would be based on the floor grade of each garage, where proposed contours cross and the elevation of the gutter line in front of it.

*The cape cod berm is important to ensure that drainage is directed into the catch basins and serves as an edge to protect lawn areas from plowing. It should be fully installed initially and should not create a significant bump in the driveways; however, they can be cut out if desired at the time of driveway paving as long as gutter line is maintained.*

5. It is recommended that the high point in the road profile be moved to Station 0+15 which is at SMH-1. This would provide for a 2.5% grade from the gutter line at Red Brook Road and would reduce the steep transition at the entrance. Maintain the high point elevation at 45.38.

*We have adjusted the high point in the road as requested.*

### **Stormwater Calculations**

1. The stormwater calculations have been done for the 2-year storm through the 100-year storm for each of the surface areas that contribute runoff to the site.

*No response required.*

2. The calculations suggest that up to and including the 100-year storm event that runoff is contained on the site in conformance with performance standards of the Massachusetts Stormwater Regulations.

*No response required.*

### **Operation and Maintenance Plan**

Two separate documents are presented within the Stormwater Report prepared by GAF Engineering.

1. Long Term Operation and Maintenance Plan
2. Long Term Operation and Maintenance Plan



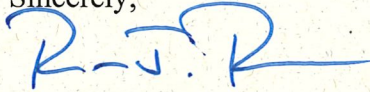
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It is recommended that both of these plans be referred to by reference in their entirety in any Special Permit decision that the Board of Appeals may render.

*We concur. No further response required.*

Please contact me directly if you have any questions.

Sincerely,



Robert J. Rogers  
Project Manager

RJR/lmf