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June 16, 2022

Town of Wareham Board of Appeals

Memorial Town Hall

54 Marion Road

Wareham, MA 02571

Re: Site Plan Review for

Rojo Co. Inc. Car Wash

4 Tow Road

Attention: Nazih Elkallassi, Chairman

Dear Chairman Elkallassi:

I am in receipt of a set of site plans, stormwater calculations, traffic study and application for the above referenced project. Plans and stormwater documents are dated March 7, 2022 and March 4, 2022 respectively. The traffic study was conducted by GPI and is dated January 25, 2022. The following is a report of the documents received and reviewed under Article 15, Site Plan Review of the Zoning By-Law as well as Article 9, Parking and Article 10, Landscaping.

General

1. No evidence has been provided to show that the variances requested by an undated Bohler Engineering letter have been approved and are in effect.
2. The site plan in its current form and layout is not in compliance with the Zoning By-Law respect to Section 626, setbacks, or Section 1042, Landscape buffers.

Traffic

1. The traffic summary suggests that traffic going to the site is evenly divided going north and south along Cranberry Highway with a lesser amount coming from Seth F. Tobey Road.
2. The greater population density where much of the traffic would be generated from is from the south and east, not the north and west. Therefore, more weight should be given to traffic generated from Cranberry Highway going north from the center of town and from Seth F. Tobey Road.
3. With most traffic needing to go away from the site in a southerly and easterly direction, it is necessary to know how this traffic will stack within Tow Road. No southerly movements are allowed from the site using the access easement over the abutting lot to Cranberry Highway.
4. No reduction should be given in traffic movements assuming that vehicles refueling at the Nouria site will automatically take advantage of the car wash facility. This number is very small and should be ignored.
5. The study should be revisited to see if there are any significant impacts to the Tow Road/Cranberry Highway intersection as a result of the project.

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Stormwater Calculations

1. The stormwater calculations have been done using standard analysis but are lacking important aspects of the site investigation and design.
2. No soil investigation or ground water determination was included. It is unacceptable to rely solely upon the USDA soils maps for that purpose. Reference is made to Volume 3 of the DEP Stormwater Management Standards (Stage 2 Site Determinations for Recharge and Infiltration practices)
3. The infiltration rate of 8.27 Inches/hour has not been established by on-site investigation. If the soil testing shows anything but sand (not loamy sand or other) the rate will require adjustment along with the design of the system. High ground water elevations also may determine overall site grading.
4. Total Suspended Solids (TSS) removal does not allow portions of an infiltration system to be used as pre-treatment. Deep sump catch basins and other pre-treatment practices as defined in Volume 2 of the Stormwater Standards must be employed. An Isolator Row of subsurface storage and infiltration units does not fit the definition of pre-treatment and cannot be used in the calculation of 80% removal of TSS.
5. Roof runoff does not require pre-treatment and could be isolated from the system that collects surface runoff from paved areas if necessary. It is left to the design engineer to determine if that is an appropriate measure to employ.
6. This portion of the review is not considered complete until the appropriate site information is provided for review and comment.

Plans

Sheet C-201 (Existing Conditions)

1. The plan of existing conditions shows a 40-foot wide access and utility easement to Cranberry Highway. The applicant should demonstrate that the project will have the right to use this easement as part of the project. Currently the improved portion of the easement stops at the entrance to the Nouria service area.
2. The plan does not show the existing sewer main or the water main as they exist in Tow Road. It is unacceptable to leave that determination up to a contractor as it may influence the location of site connections.

Sheet C-301 (Site Layout)

1. The plan shows the proposed use of bituminous concrete berms throughout the site. The use of this type of curbing is unacceptable as a stable material as it is easily damaged or displaced. Vertical concrete or granite curb, extruded cement concrete reinforced curb or Cape Cod berms may be used.
2. The overall layout of the site needs to be reviewed by the Wareham Fire Department for appropriate turning movements and emergency access. The letter from the Department Inspections Division requests a vehicle movement plan.
3. It is recommended that the future access driveway opening to Lot 2 be removed from the site plan as the use of the adjacent lot has not been determined.

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1. The overall site development is subject to the receipt of variances for the building setback and landscape buffers and could be affected significantly if the variances should be challenged. The variances are not effective until the 20-day appeal period has lapsed and the variances are recorded in the Plymouth County Registry of Deeds.
2. The 4 angled parking spaces near the entrance to the facility appear to be less than the required 19 feet for length over the effective squared off area of the spaces. Vehicle overhang may protrude into the line of traffic for entering the facility.
3. The curb opening next to the proposed dumpster should be opened to at least 20 feet to allow for better turning movements of trash vehicles.
4. No signage is shown for the site. Directional signs as well as the project sign location should be shown.
5. A stop sign should be noted at the intersection of the Tow Road access.
6. The four parking spaces near the building entrance are at an angle of 60 degrees and as such require a one-way aisle width of 18 feet. The plan shows 16 feet. (See Item 5 above and Section 932.1 of theBy-Law).

Sheet C-401 (Site Grading)

1. The grading of the access road should be checked and adjusted for the removal of the curb cut to Lot 2. Runoff should be isolated from the existing catch basin on the northerly side of the existing pavement.
2. The proposed ridge at Tow Road entrance should be labeled as a rolled berm and shown in detail.
3. The use of Inlet Control Structures for use as sediment control is unacceptable. Deep sump catch basins and other approved means should be employed as noted in the DEP Stormwater Management Handbook.
4. The proposed retaining wall should be identified as to materials and how a fence will be erected on top.

Sheet C-501 (Utilities)

1. The location of existing fire hydrants should be shown on the plan.
2. The existing water main location should be identified and with proper connections and sizes. No information is noted as to whether a sprinkler system will be employed within the building.
3. The proposed sewer connection in Tow Road should be shown along with a manhole adjustment in the existing line.
4. Identify the materials used in the application of the Tire Shine and the discharge to an oil/water separator that is not connected to the recycled water.
5. The design of the water reclamation system and authorization to connect to the sanitary sewer should also be approved by the Sewer Department.

Sheet C-601

1. No construction equipment should be allowed to enter or leave the project area by means of the access easement to Cranberry Highway. Appropriate fencing should be placed across the access but beyond the entry to the Nouria service area.

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1. Appropriate returns should be added to the temporary stabilized construction entrance area. This area should be inspected and cleaned of accumulated debris daily.

Sheet C-701 (Landscaping)

1. The landscape plan is not compliant with Article 10 Landscaping of the Zoning By-Law.
2. The plan needs the stamp and signature of the landscape architect.

Sheet C-703 (Lighting Plan)

1. The lighting plan does not take into account what impact the existing lighting at the Nouria service area may already have on the entrance off Tow Road or the easement access to Cranberry Highway. This should be investigated to see if any adjustments in the number of lighting units could be reduced.
2. Lighting is proposed for 20-foot high poles. No exterior lighting is proposed for the building.
3. All lighting pedestals should be set so that there is a minimum 3-foot distance from the face of the pedestal to the edge of pavement. This detail should be noted on the plan. The proposed maximum pedestal height should also be noted.

Sheet C-901 (Detail Sheet)

1. Remove the detail for Bituminous Concrete Berm. Use either concrete or granite curb, extruded concrete or Cape Cod Berm. If the latter, show the appropriate detail.
2. Show the base material for Vertical Granite Curb to be consistent with the detail for the Typical Pavement Section. Bank run gravel is not acceptable.

Sheet C-902 (Detail Sheet)

1. Show all structures with frames embedded in a cement concrete ring 12 inches around the casting and 12 inches deep to seal the casting, riser and structure from runoff and erosion. Concrete should be brought level with the binder course of paving. All structures should be set on a base of 3/4” to 1-1/2” crushed stone, 6 inches thick, or 12 inches of gravel as defined by the Mass DOT Standard Specification.
2. Control Structures ICS-1 and ICS-2 are unacceptable and should be made to comply with stormwater requirements for sediment control.
3. Outlet Structure OCS-1 should be labeled with an appropriate diameter for a drainage manhole and should be set on a base of 6” of crushed stone or 12” of gravel defined by the Mass DOT Standard Specification.
4. The size of the dry well shown for CB-6 is not large enough to accommodate the bottom depth and 12” pipe as shown. The 2-foot separation from bottom of pit to pipe invert plus the 12” pipe brings the top of pipe at the top of the structure. It needs to be deeper and a standard 6-foot diameter leaching pit is recommended. The structure should also be of H-20 design. Note: The Site Contractor is not responsible for determining the percolation rate of the soil prior to the installation of the structure. That is the responsibility of the design engineer to determine and verify.

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A copy of this review summary is also being sent to the Planning Board for its use in reviewing the site plan as required by the Zoning By-Law.

Please feel free to contact me if you have any questions.

Very truly yours,

Charles L. Rowley

Charles L. Rowley, PE, PLS

Cc ZBA Board Members

Planning Board

Ken Buckland, Town Planner

Monique Baldwin, Asst. Planner

Robert Perry, Esq.

Bohler Engineering

Alan Slavin, BOS Liaison

Guy Campinha, Sewer Dept.

Capt. Chris Smith, Wareham Fire Dept.