

# Horsley Witten Group

*Sustainable Environmental Solutions*

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May 1, 2023

Ms. Linda Hansen  
Conservation Administrator  
Town of Wayland  
41 Cochituate Road  
Wayland, MA 01778

Re: Stormwater Peer Review  
Herb Chambers 533 Boston Post Road, LLC  
533 Boston Post Road, Wayland, MA  
DEP File No.322-1006

Dear Ms. Hansen and Commission Members:

The Horsley Witten Group, Inc. (HW) is pleased to provide the Wayland Conservation Commission with this letter summarizing our stormwater peer review of the Stormwater Management Report submitted with the Notice of Intent for the proposed project at 533 Boston Post Road (Site). Crocker Design Group, LLC (CDG) has prepared the Stormwater Management Report on behalf of Herb Chambers 533 Boston Post Road, LLC (Applicant). The proposed project will increase the impervious area by approximately 12,968 square feet (sf). To manage stormwater and improve water quality the Applicant is proposing to install deep sump catch basins, five water quality units, two subsurface detention chamber systems, one subsurface infiltration system, and one rain garden. A bordering vegetated wetland (BVW) is located to the south of the parcel and the proposed work is within the 30-foot and 100-foot buffer zones.

As part of this stormwater peer review, HW has received the following documents:

- Letter to Wayland Conservation Commission, prepared by Crocker Design Group, dated March 31, 2023 (2 pages);
- Notice of Intent, Herb Chambers 533 Boston Post Road LLC, 533 Boston Post Road, Wayland, Massachusetts, prepared by Crocker Design Group, dated January 26, 2023 (47 pages);
- Wetland Resource Area Delineation Letter, prepared by DGT Associates, Framingham, MA, dated August 8, 2022 (7 pages);
- Stormwater Management Report, Herb Chambers Bentley - Maserati - Lamborghini - Rolls Royce - Alfa Romeo of Wayland, 533 Boston Post Road, Wayland, Massachusetts, prepared by Crocker Design Group, revised March 31, 2023 (330 pages); and
- Proposed Site Development Plans for Wayland – Bentley, Lamborghini, Rolls Royce, Maserati, Alfa Romeo, 533 Boston Post Road, Wayland, Massachusetts, prepared by Crocker Design Group, revised March 31, 2023, and includes:
  - Cover Sheet C-0
  - General Plan Notes Sheet (1 of 2) C-1.1

○ General Plan Notes Sheet (2 of 2)	C-1.2
○ Demolition Plan	C-2
○ Soil Erosion and Sediment Control Plan	C-3.1
○ Soil Erosion and Sediment Control Details	C-3.2
○ Layout and Material Plan	C-4
○ Grading and Drainage Plan	C-5
○ Utility Plan	C-6
○ Lighting Plan	C-7
○ Test Pit Plan	C-8
○ Detail Sheet (1 of 3)	C-9.1
○ Detail Sheet (2 of 3)	C-9.2
○ Detail Sheet (3 of 3)	C-9.3
○ Existing Conditions Plan	EC
○ Planting Plan	L-1
○ Planting Details	L-4

### **Stormwater Review**

HW reviewed the proposed stormwater management design per the requirements of the Massachusetts Stormwater Management Handbook (MSH) dated February 2008 and the Stormwater and Land Disturbance Bylaw Regulations for the Town of Wayland (Stormwater Bylaw) adopted in 2019.

The proposed project is required to comply with the most recent version of the MSH, therefore, we used the MSH as the basis for organizing our comments. However, in instances where the additional criteria listed under the Town of Wayland Stormwater Bylaw require further recommendations, we referenced these as well.

1. *Standard 1: No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.*
  - a. The existing and proposed stormwater management for the Site discharges into an existing BVW located along the southerly lot line. The Applicant proposes a riprap overflow around wetland flag (WF) WF4 and WF5 to avoid erosion and sedimentation transport into the wetlands. It appears that the proposed grading between WF4 and WF7 crosses the property boundary. HW recommends that the Applicant revise the proposed grading or provide the appropriate signatures to allow the grading on the adjacent property.
  - b. The Applicant provided the sizing calculations for a Preformed Scour Hole or plunge pool in Section 4.4 - Rip Rap Splash Pad of the Stormwater Report. HW was not able to confirm the 25-year flow rate listed in the Scour Hole Calculation table. Furthermore, there appear to be two separate 15-inch pipes discharging to the plunge pool compared to one 18-inch pipe as shown in the table. HW recommends that the Applicant revise the calculations provided to be consistent with the design plans.
  - c. As recommended by the Applicant the riprap / level spreader / plunge pool should be inspected after the first large storm event to inspect for erosion and to verify the stone size is adequate. HW recommends that the Conservation Commission consider

requiring this inspection as a Special Condition and to provide documentation to the Commission confirming the outfall is operating properly.

- d. The Applicant is piping the existing and proposed roof runoff directly to the wetland at Outfall #2. Roof runoff is considered clean, so the Applicant is not required to provide pretreatment. The Applicant provided a Storm Sewer Profile for the various closed pipe networks. It does not appear that the Applicant has added the roof drainpipe to the drain network after outlet control structure (OCS) #3, at drain manhole (DMH) #8. HW recommends that the Applicant revisit the closed drainage network and include the runoff from the roof as part of the proposed flow. Furthermore, HW recommends that the Applicant clarify the total proposed velocity including the roof runoff discharging at Outfall #1 and Outfall #2 into the plunge pool to confirm there will be no erosion in the wetlands.
2. *Standard 2: Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates.*

The Applicant described the Existing (Pre-Development) and the Proposed (Post-Development) catchment areas, surface conditions, and discharge values provided in the Stormwater Report for the Site. Furthermore, the Applicant utilized the HydroCAD software program which incorporates the TR55/TR-20 methodology for hydrologic analysis.

- a. The Applicant utilized an exfiltration rate under proposed conditions of 1.02 inches per hour (iph). The borings conducted by Northeast Geotech and included in the Stormwater Report indicate that the soils are primarily loamy sand consistent with Hydrologic Soil Group (HSG) "B". The exfiltration rate of 1.02 iph is considered reasonable for the design. No further action required.
- b. The Applicant has proposed a rain garden to capture the runoff from watershed P1-D. PI-D includes approximately 1,500 sf of impervious cover from the rear driveway. The Applicant has not included the rain garden in its HydroCAD model which may be considered conservative. However, the Applicant does not document that the rain garden is properly sized to manage the impervious cover directed towards it. HW recommends that the Applicant provide the sizing calculations for the rain garden. HW further recommends that the Applicant confirm that no runoff from the adjacent property to the west flows onto the site and into this rain garden.
- c. HW recommends that the Applicant provide a list of the plant species, sizes, and number of plants proposed for the rain garden.
- d. It appears that the Applicant has modelled an 18-inch pipe as the primary outflow from Pond UG-3. The plan set has labeled this pipe as a 15-inch. HW recommends that the Applicant revise the plans or the calculations for consistency.
- e. A majority of the existing paved surface and building located within the Town of Wayland will be captured and treated by a series of deep sump catch basins followed by proprietary water quality units before conveyance to a sub-surface detention or infiltration practice. The pavement area along the north and east side of the building is proposed to be collected via deep sump catch basins followed by proprietary water quality units and subsequently detained in two subsurface chamber systems. UG#1, UG#2, and UG#3 all discharge to the resource area via a level spreader. A small area of

the proposed driveway at the southwest corner will be directed in a rain raingarden. The proposed infiltration practice and rain garden are considered Low Impact Development practices and will manage stormwater at the source of impervious cover for a portion of the property. No further action required.

- f. There appear to be minor inconsistencies with the time of concentrations noted in the report as compared to the HydroCAD calculations. The discrepancy should not affect the calculations. No further action required.
  - g. It appears there will be approximately 290 sf of proposed impervious cover within the 30-foot buffer zone, not including the riprap plunge pool. The Applicant will be removing approximately 2,330 sf of impervious material from within the 30-foot buffer. HW defers to the Conservation Commission the allowance of the proposed 290 sf of impervious area. HW notes that there are 8 parking spaces within this area.
  - h. The proposed erosion controls around the proposed plunge pool are on the adjacent property. As noted above HW recommends that the Applicant provide the appropriate documentation from the abutting property owner allowing the proposed work.
  - i. It appears that the HydroCAD model for the ½-inch and 1-inch storms are incorrectly modeled. The water quality storm events should not be modeled with a weighted curve number. The ½-inch storm requires a depth of ½-inch and the 1-inch storm a depth of 1-inch. HW recommends that the Applicant revisit these storm events to confirm the runoff depths are accurately modeled.
3. *Standard 3 requires that the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type.*
- a. The Applicant has included a Boring/Test Pit Plan indicating that 16 test borings were conducted throughout the Site. Borings B-11 and B-12, and test pits 21-01D and 21-02D were conducted in the general location of the proposed infiltration system, UG#3. Based on the Boring/Test Pit Plan the average Estimated Seasonal High Groundwater (ESHGW) is at elevation 119.3. However, it is common practice to use the highest recorded reading for design purposes within the footprint of the system (elevation 119.8 at Boring B-11). The proposed subsurface infiltration chambers have a bottom of stone elevation of 120.50 (Sheet C-5). As such, the required 2 feet of separation to the ESHGW table is not maintained. The detail sheet has conflicting information with a bottom of stone elevation at 121.00. Additionally, boring B-12 indicates an organic loam layer at a 5-foot depth. HW recommends that the bottom of the system be raised to provide the required 2 feet of separation and that the organic layer be completely removed prior to the installation of the infiltration practice and that clean fill material be placed below the system with an infiltration rate of at least 1.02 iph.
  - b. Per MSH, Volume 3, a mounding analysis is required when the vertical separation from the bottom of the exfiltration system to the seasonal high groundwater table is less than four feet and the recharge system is proposed to attenuate the peak discharge from a 10-year or higher 24-hour storm. HW recommends that the Applicant provide the required mounding analysis.
  - c. The Applicant has proposed two subsurface detention basins and one subsurface infiltration system. The detention basins appear to be placed approximately 1.5 feet

above groundwater therefore cannot qualify as infiltration systems. HW suggests that the Applicant allow these systems to infiltrate therefore providing the benefits of recharge without taking credit for infiltration because the systems do not meet the design criteria.

4. *Standard 4 requires that the stormwater management system be designed to remove 80% Total Suspended Solids (TSS) and be sized to capture the required water quality volume from the tributary area (Town of Wayland - 1.0-inch).*
  - a. The Applicant provided the water quality flow calculations in accordance with the Standard Method to Convert Required Water Quality Volume to a Discharge Rate for Sizing Flow Based Manufactured Proprietary Stormwater Treatment Practices. HW is satisfied that the Applicant has provided the required 1-inch of water quality volume for the proposed development. No further action required.
  - b. The Applicant provided the required TSS calculation sheets. No further action required.
5. *Standard 5 is related to projects with Land Uses having Higher Potential Pollutant Loads (LUHPPL).*
  - a. The proposed project is an expansion to a car dealership and service center. A LUHPPL includes exterior fleet storage areas, exterior vehicle service and equipment cleaning areas, and commercial vehicle washing. HW agrees with the Applicant that the property use is not considered fleet storage. However, we recommend that the property owner and on-site management provide a signed letter to the Conservation Commission documenting that it understands that activities including exterior vehicle service, equipment cleaning, and commercial vehicle washing are not allowed on this property. The Conservation Commission may choose to include receipt of this letter as a Special Condition. HW notes that the O&M Plan includes a paragraph regarding activities prohibited on site. A signed O&M Plan provided to the Town may be adequate to address this comment.
  - b. HW received a report, titled *Continuing Chapter 21E Investigation / LSP Opinion for the Commercial property, 533 Boston Post Road, Wayland, MA RTN #3-3351*, prepared by T.S. Alving and Associates, dated July 31, 1996. The report notes that levels of certain volatile organic compounds (VOCs) were identified in the groundwater adjacent to the south side of the building. HW recommends that the Applicant confirm that the proposed infiltration system can be installed as designed with the potential of contaminated soil or groundwater in the area. HW further recommends that the soil is characterized at the bottom of bed excavation to ensure the underlying soils meet the leachability criteria.
6. *Standard 6 is related to projects with stormwater discharging into a critical area, a Zone II or an Interim Wellhead Protection Area of a public water supply.*
  - a. There are no critical areas associated with this project. However, the proposed plunge pool discharges into an area designated by NHESP as Priority Habitat of Rare Species. A portion of the project site is located adjacent to the Great Meadows National Wildlife Refuge and is mapped within Estimated Habitat of Rare Wildlife (EH 1038) and Priority Habitat of Rare Species (PH 1436). The Massachusetts Natural Heritage and Endangered Species Program (NHESP) is the regulatory authority with respect to rare species habitat, and the Applicant is required to file a copy of the NOI with NHESP if work is to occur within rare species habitat. The Applicant provided a copy of the

Massachusetts Division of Fisheries and Wildlife response letter dated January 16, 2019, which states that the proposed project will not adversely affect the actual Resource Area.

7. *Standard 7 is related to projects considered Redevelopment.*
  - a. The existing site includes 76,513 sf of impervious cover. The proposed site includes 89,481 sf. The project qualifies as a mix of new development and redevelopment. The Applicant intends to design the stormwater system to meet the requirements for new development and in doing so will improve the existing stormwater management. HW recommends that the Applicant adequately address the other comments in this letter to confirm compliance with Standard 7.
8. *Standard 8 requires a plan be developed and implemented to control construction related impacts including erosion, sedimentation, or other pollutant sources.*
  - a. The Applicant provided a Soil Erosion & Sediment Control Plan (Sheet C-3.1) and erosion control details (Sheet C-3.2). HW recommends that dewatering locations be shown on Sheet C-3.1 to ensure they are not located within the 100-foot buffer zone.
  - b. Notes should be added indicating “no concrete washout is permitted on-site” or provide detail and location for a contained concrete washout area.
  - c. The Limit of Work (LOW) line is not clear at the northeast corner of the property. Additionally, the LOW line runs through an 18-inch diameter tree. The LOW should be adjusted to encompass the projection of the tree canopy for erosion control.
  - d. The proposed project requires land disturbance of greater than 1 acre. Therefore, a Stormwater Pollution Prevention Plan (SWPPP) per the EPA NPDES Construction General Permit will be required. HW recommends that the Applicant provide a copy of the SWPPP to the Town a minimum of 14 days prior to land disturbance.
9. *Standard 9 requires a Long-Term Operation and Maintenance (O & M) Plan is developed and implemented to ensure that the stormwater management system functions as designed.*
  - a. The Applicant provided an Operations and Maintenance Plan (O&M Plan) within the Stormwater Report. HW reminds the Applicant that this document should be a separately bound document that is signed by the Property Owner and provided to the on-site management.
  - b. HW recommends that the Applicant include maintenance of the rain garden in the O&M Plan.
  - c. The Town of Wayland requires applicants to incorporate source controls of contaminants to minimize stormwater pollution. The Applicant must be fully aware that the site operations for a car dealership are critical. In the event of a spill on this property the necessary procedures must be in place to avoid any contaminants from getting into the resource area.
  - d. HW recommends that the Applicant include a simple sketch that clearly labels all stormwater practices included in the O&M Plan.
  - e. HW recommends that the Applicant designate snow storage areas suitable for the parking lot on the O&M sketch.

10. *Standard 10 requires an Illicit Discharge Compliance Statement be provided.*

- a. The Applicant has provided an unsigned Illicit Discharge Compliance Statement in accordance with Standard 10. HW recommends that the Conservation Commission require receipt of a signed statement from the property owner prior to land disturbance.

11. *Additional Comments:*

- a. The Applicant has provided a Planting Plan, Sheet L-1. The Applicant intends to remove one 26-inch tree, an 18-inch tree, and an 8-inch tree. The Applicant has proposed to plant 3 deciduous trees, 59 junipers, and 379 shrub plantings. The planting plan meets the Wayland Conservation Commission Replacement Planting Guidelines.
- b. The Existing Conditions Plan illustrates the Limit of the Town of Wayland Floodplain District at elevation 124 as well as the 100-year flood plain designated by the Federal Emergency Management Agency (FEMA) at elevation 121.

### **Conclusions**

HW recommends that the Conservation Commission require the Applicant to provide a written response to address these comments as part of the permitting review process. The Applicant is advised that provision of these comments does not relieve him/her of the responsibility to comply with all Town of Wayland Codes and By-Laws, Commonwealth of Massachusetts laws, and federal regulations as applicable to this project. Please contact Janet Bernardo at 857-263-8193 or at [jbernardo@horsleywitten.com](mailto:jbernardo@horsleywitten.com) if you have any questions regarding this letter.

Sincerely,

HORSLEY WITTEN GROUP, INC.



Janet Carter Bernardo, P.E.  
Associate Principal