



GREEN INTERNATIONAL AFFILIATES, INC.

100 AMES POND DRIVE, SUITE 200 TEWKSBURY, MA 01876

T: (978) 923-0400 | WWW.GREENINTL.COM

Open Comments	
Defer to the Board	
Condition of Approval	

PROJECT NAME	254-260 AYER ROAD PEER REVIEW
DATE	5/8/2023
UPDATED:	
PROJECT NO.	22015.1206

Peer Review Comment Form

NO.	SHEET NO.	SECTION	GREEN'S COMMENT	Applicant's RESPONSE	CONFIRMED BY	DATE
7	13	Trip Generation	Per MassDOT TIA Guidelines, the number of pass-by-trips must not exceed 15% of the adjacent street traffic during the peak hour per ITE's Transportation Impact Analyses for Site Development. This development is currently exceeding with an approximate 30% of adjacent street traffic during the peak hour. Please reduce pass-by-trips such that they do not exceed 15% of the adjacent roadway volume.	Pass-by trips were drawn proportionally from each movement at the signalized intersection of Ayer Road/Bruce Street/Willow Road, as opposed to drawing exclusively from Ayer Road adjacent to the site. Based on this methodology, no more than 15-percent of any movement was drawn from the intersections as pass-by. Accordingly, GPI stands behind the methodology that was utilized.		
7A	13	Trip Generation	The above comment was not addressed. ITE states that the number of pass-by-trips must not exceed 15% of the adjacent street traffic . The applicant is using number of pass-by-trips for individual movements at the intersection. Please reduce the pass-by-trips such that it does not exceed 15% of the adjacent roadway volume.			
10	34	Table 8	The Applicant should provide justification for the proposed changes to the study intersections since the operations are expected to worsen or have very minimal improvements.	The addition of a WB left-turn lane that provides refuge for vehicles entering the site far outweighs any minor increase in vehicle delay. Further, the WB left-turn maneuver is projected to operate at LOS A under all Build analysis scenarios, and function well below capacity, with negligible queuing.		
10A	34	Table 8	The applicant should provide more justification regarding the worsening delay at the signalized intersection under the Build with Mitigation scenario.			
SITE PLAN						
18	4 Site Plan		The sidewalk around the building calls for monolithic curb and sidewalk. The detail for this shows no curb reveal. Can you confirm there is no curb reveal? We recommend a curb with a reveal in locations where the sidewalk is not protected by bollards or wheel stops to prevent vehicles from driving on the sidewalk.	Clarification on limits of curb reveal and flush sidewalks have been added to the plans.		
18a	4 Site Plan/Grading/Details		It appears the gray hatched area is the only area meant to be flush on the Site Plan. But the grading plan does not indicate top and bottom of curb and the monolithic curb detail still has no reveal in the detail. Also, there is a 257.85 spot grade that is near the loading and overhead canopy area east of the building that is higher than the top of the sidewalk ramp which is at elevation of 257.75. Please revise grading and/or detail to indicate a curb reveal.			
22	5 Grading and Drainage Plan	MA Stormwater Handbook Vol 2. Chp 2.	Per the MA Stormwater Handbook, one soil sample for every 5,000 ft of basin area is recommended, with a minimum of three samples for each infiltration basin. Samples should be taken at the actual location of the proposed infiltration basin so that any localized soil conditions are detected. The test pits are shown on the grading plan where the stormwater bmps are located except for the stormwater infiltration basin. There should be a test pit for the stormwater infiltration basin.	Based on the limits of the current operational existing development, test pits could not be performed. Confirmatory test pits will be performed prior to construction.		
22a			We recommend confirmatory test pits prior to construction be made a condition of approval.			
23	5 Grading and Drainage Plan	MA Stormwater Handbook Vol 2. Chp 2.	CB-9 directly discharges to the infiltration basin. CB-9 shall provide pre-treatment before discharging to the infiltration basin.	Pre-treatment for runoff entering CB-9 is achieved through street sweeping and a deep sump catch basin with hooded outlet. This area is located in a previously developed area (redevelopment) and pretreatment is provided to the maximum extent practicable in accordance with MassDEP standard 7.		
23a	5 Grading and Drainage Plan	MA Stormwater Handbook Vol 2. Chp 2.	The project is within a Zone II critical area therefore pretreatment of 44% TSS removal should be provided prior to discharging to an infiltration basin per MA Stormwater Handbook Vol 2 Chapp 2. Infiltration basins do not receive 80% TSS removal without adequate pretreatment. The same hydrodynamic separator that the Applicant is using in other locations of the project could satisfy this requirement. We recommend that the pretreatment requirement should be met due to being within a critical area and the site is LUHPP but we defer to the Town.			
24	5 Grading and Drainage Plan		The plan shows the infiltration basin overflowing into MassDOT's closed drainage system. The manhole that the overflow ties into a manhole that has 5 pipes please confirm this is constructable. This work should be coordinated with MassDOT.	The proposed 8" overflow pipe connects to a proposed 5' diameter manhole within the roadway. The pipe inverts have been analyzed and will be constructable within the 5' structure. GPI will continue to coordinate with MassDOT regarding this drainage connection.		
24a			We recommend MassDOT approval for proposed improvements be made a condition of approval.			
26	5 Grading and Drainage Plan		There is a proposed catch basin on the northwest driveway. Please coordinate with MassDOT project in this area to revise design of driveway or relocate catch basin out of driveway.	GPI will continue to coordinate with MassDOT regarding the offsite work and the proposed onsite improvements associated with the re-development project		

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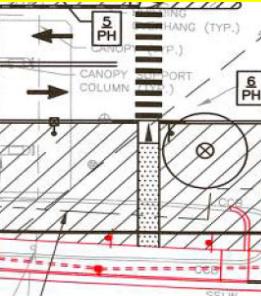
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26a			See response 24a.			
30	6 Utility Plan		The sewer disposal system at southeast side of the site is located under proposed curb and no detail has been provided. Please confirm there are no conflict with sewer disposal system and curb.	The proposed sewage disposal system is currently in the design phase and will be submitted to the Board of Health for review and approval.		
30a			We recommend the approval from the Board of Health be made a condition of approval. We defer to the board if this site item which is still being designed should be included in the Planning Board's review.			
31	6 Utility Plan		Sewer inverts should be shown for drainage crossings at northwest side of the site. Confirm sewer forcemain does not have sags and has positive pitch.	The proposed sewage disposal system is currently in the design phase and will be submitted to the Board of Health for review and approval. The site plans and inverts will be adjusted as necessary to ensure that there are no conflicts once the septic design is completed.		
31a			We recommend the approval from the Board of Health be made a condition of approval. We defer to the board if this site item which is still being designed should be included in the Planning Board's review.			
35	8 Landscape Plan	ADA	It appears there is a sidewalk from Ayer Road to the crosswalk within the site. The sidewalk is hatched as proposed landscape stone with weed barrier. Is this material ADA compliant? This sidewalk should be ADA compliant. Please revise.	The hatch pattern on the Landscaping Plan has been revised to eliminate confusion between the bituminous sidewalk and the landscape stone		
35a	8 Landscape Plan	ADA	The sidewalk is hatched so it is assumed to be proposed landscape stone with weed barrier. Is this material ADA compliant? This sidewalk should be ADA compliant with proposed grading. Please revise.			
ZONING BYLAWS						
37		§173-18.C.	The proposed work requires major topographic changes and removal of existing trees. We defer to the board if there are any issues with the tree removal proposed.	As discussed and acknowledged with the Planning Board at the 4/6/23 meeting, due to the elevation change across the site, tree removal is necessary to the extents shown on the site plans.		
37a			We defer to the Board for determination on this item since Green was not involved in these discussions.			
38		§173-18.D.	Adequate access to each structure for fire and service equipment shall be provided. Confirm this has been reviewed and coordinated with the Littleton Fire Department.	360-degree access is provided throughout the site and continued review and discussions with Town Staff are ongoing.		
38a			We defer to the Board for determination on this item since Green was not involved in these discussions.			
39		§173-32.B.13	As per Motor vehicle service station with retail store, the required parking space is 12 space for 12 fueling location and 120 spaces for the retail area (one space per 50 square feet of gross floor area). Please clarify if parking requirement has been met.	The parking was discussed with Town Staff during an initial project development phases in November 2022, and was reduced to limit impervious coverage on-site, consistent with the initial discussions with Town staff. Proposed parking is appropriate based on the site and historic gas station developments of this size.		

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39a			We defer to the Board for determination on this item since Green was not involved in these discussions.			
40		§173-32.C.3	Parking lots for eight or more cars shall be screened from any abutting residential use or public way by a four-foot width of densely planted shrubs or a fence of not less than four feet in height. Please confirm this has been met along the public way and along the abutting residential use.	Based on the discussions with the Planning Board at the 4/6/23 meeting, a 6' tall solid stockade fence has been added along the western property boundary to provide a buffer to the residential use. Additionally, a section of fencing has been added along the eastern property in the vicinity of the proposed above ground stormwater basin. Low growth plantings are proposed along the public way to ensure adequate vehicular sight distance and visibility for the general public and customers.		
40a			We defer to the Board for determination on this item since Green was not involved in these discussions.			
Aquifer and Water Resource District Special Permit						
41		§173-62.D.3	The project requires evidence of approval by the board of health for their wastewater redesign. Their narrative notes it is pending approval. We recommend that board of health approval of the wastewater system is a condition of approval.	Comment acknowledged		
STORMWATER REPORT						
49	HydroCAD		HydroCAD model for INF-1 models the isolator row with an infiltration rate. The isolator row should be treated like a forebay and not modeled in HydroCAD. The isolator row pretreats the system collecting sediment which will clog the voids and will not infiltrate like the rest of the underground chamber system. Please revise.	Based on information provided by the manufacturer, the isolator row does provide pretreatment prior to runoff entering the other chamber rows and may ultimately become partially clogged with sediment. However, because the isolator row is constructed with geotextile layers wrapped around the chamber, sediment cannot get to the voids in the stone or underlying soil. Sediment is isolated on the geotextile and contained within the open volume of the chamber arch, therefore, the infiltration capacity of underlying crushed stone and soil beneath the isolator row is maintained.		
49a		MA Stormwater Handbook Vol 3. Chp. 1.	The Applicant has confirmed that the isolator row will build up and partially clog the geotextile fabric with sediment preventing it from infiltrating like the rest of the chambers over time. Please revise calculations to make the isolator row have no infiltration rate. Confirm the isolator row is an equivalent pretreatment device to an oil and water separator since there is a potential for runoff with high concentrations of oil and grease per MA SW Handbook Vol 3 Chp 1. If the isolator row is not equivalent install a water oil separator prior to discharging to the isolator row.			
58	Geotech/Haz report		A geotechnical/hazardous material report was not submitted. Since the site is an existing gas station with underground tanks, has the site been analyzed for contaminated soils? If the soils are contaminated infiltration practices are not allowed. Please confirm.	A geotechnical/hazardous material report is in the process of being completed. Once finalized, the Applicant will work with the design engineers to determine impacts to the overall stormwater design and adjust accordingly.		
58a			If contaminated soils are found on site the applicant cannot use infiltration bmps. The Applicant will need to install liners and underdrains for all stormwater treatment practices. This will significantly change their stormwater and drainage design. We defer to the board if this is a condition of approval or if this needs to be submitted prior to approval.			
O&M Plan						
61	O&M	38-18.B.3.	The O&M plan shall be signed by the owner.	The O&M will be signed by the owner/operator prior to commencement of construction activities.		
61a			We recommend this be made a condition of approval.			