



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

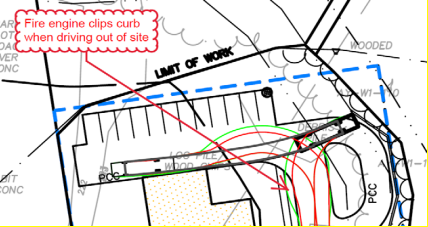
PROJECT NAME Ayer Commons 40B Peer Review

DATE 10/14/2022

UPDATED: 11/10/2022

PROJECT NO. 22114.0106

Peer Review Comment Form

NO.	SHEET NO.	SECTION	GREEN'S COMMENT	Applicant's RESPONSE	CONFIRMED BY	DATE
TRAFFIC STUDY						
8	9, 19	4.1 Level of Service; 2.4 Existing Traffic Conditions	Recommended that the Applicant conduct post-occupancy monitoring and conduct a traffic signal warrant analysis for the intersection of Fitchburg Road at Groton School Road, as the project is anticipated to increase delays on the southbound approach at this intersection by approximately 33% in each of the morning and evening peak hours relative to No-Build conditions.	As stated in the traffic study report, a site visit was conducted to observe traffic operations at the intersection of Fitchburg Road and Groton School Road during the weekday afternoon peak hour. Based on our observation, we noted that the Synchro results were very conservative and the queuing and delays were not as long. Furthermore, Fitchburg Road is a MassDOT roadway and our understanding is that a roadway improvement project is being considered including improvements to the subject intersection. However, our understanding from Ayer DPW is this project is dormant, and is not being considered as part of this development proposal.		
8a			Please provide details of the observed queue lengths to determine if or if not further coordination with MassDOT is necessary to alleviate congestion on the Groton School Road approach, independent of the Fitchburg Road project.			
SITE PLANS						
9	n/a		The applicant is seeking many waivers. We defer to the board for approval on waiver requests.	-		
10a			One of the truck movements shows the fire apparatus driving over the curb when accessing and leaving the northeast site corner. Please evaluate curbing at this location. 			
11	Existing Conditions	Ayer Stormwater Regulations 2.9.C.4.c.	All existing utilities shall be shown on the plans. The plans are missing existing water and gas. Please revise plans.	Water line has been provided shown on the opposite side of Fitchburg Road on sheet C-104 Utility Plan. No gas is proposed for this site.		
11a			Existing water has been added to the proposed C-104 Utility Plan but has not been added to the Existing Conditions Plan. Please add to the existing conditions plan.			
15	C-102 Layout and Materials Plan		The proposed roof area for the Community Building adjacent to the proposed playground is missing. Please add.	Roof area has been shown with a dashed line and called out on C-102 Layout and Materials Plan.		
15a			Please add the square footage for the Community Building roof area like the other structures.			
20	C-102 Layout and Materials Plan/Landscape/Site Prep		At the northwest portion of the site, the plans show the neighboring property's parking lot within the project's property line. The Civil layout plan shows the proposed pavement touching the neighboring parking lot. But the landscape plans show the area as grass. The site prep plan doesn't indicate any removal of pavement. Update plans to provide consistent intention for proposed work. It appears there is no barrier between the sites at this location. Has there been any coordination with the neighboring property owner?	This area will be up to the current land owner to deliver a clean site to the team.		
20A			It sounds like the Applicant hasn't coordinated with the neighboring property and is assuming the current land over will handle removing the encroaching parking lot. We suggest indicating on the plans that this will be removed by the current land owner prior to the project. Based on the landscaping plan, it appears the encroaching parking lot will be removed and turned to grass within the property line but this is outside the project and erosion control limits shown on the civil plan. This will require removal of pavement within the buffer zone. Has the current land owner coordinated this work with the Conservation Commission? We defer to the board if this coordination needs to be figured out at this time or if it should be a condition of approval.			



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21	C-102 Layout and Materials Plan/Grading Plans	ADA/MAAB	The plans have a note indicating that all accessible parking, walkways, and building entrances will meet MAAB and ADA compliance. The grading is very schematic and can not confirm MAAB and ADA compliance is met. We recommend providing detailed grading confirming ADA/MAAB standards can be met.	Additional spot shots have been added to C-103 Grading and Drainage Plan to confirm ADA/MAAB compliance. As is typical of projects of this nature, other clarifying details will be provided on the Construction Documents set.		
21A		ADA/MAAB	Based on the grading provided we cannot confirm ADA/MAAB compliance. But, based on the grading provided it appears the standards can be met once detail grading is provided in Construction Documents. We recommend a detailed grading plan meeting ADA/MAAB compliance be provided as a condition of approval.			
22	C-102 Layout and Materials Plan	Ayer Town Bylaw 9.1.5.A	The applicant is showing that parallel parking spaces are 8 feet wide. Per the zoning bylaw off street parking spaces shall be 9 feet wide and if they are less they need to have signage indicating they are designed for small car or motorcycle use. Revise parking to be in accordance with the bylaw.	Dimensions are shown on C-102 Layout and Materials Plan that show 9' by 18' spaces are provided.		
22A			Sheet C-102 of the 2022-11-03 plans still identify 8-foot-wide parallel parking spaces.			
23	C-102 Layout and Materials Plan	Ayer Town Bylaw 9.1.5.C.1	The applicant is currently showing 5' between the lot line and the parking on the east side of the property. No parking space shall be within 10 feet of a lot line. This is also noted in the landscape setback requirement in the zoning table. Revise parking to meet zoning bylaws.	To be waived per waiver list		
25	C-102 Layout and Materials Plan		The Applicant has requested a waiver to the Town for providing less parking than what zoning regulations require. (Per the Town Zoning Bylaws, for the 30 one-bedroom units and 76 two/three-bedroom units plus five percent contingency, 207 parking spaces are required. The proposed amount of parking spaces on-site is based on industry standard, using the Institute of Transportation Engineers' Parking Generation Manual.) We defer to the board if this is acceptable.	To be waived per waiver list		
26	C-102 Layout and Materials Plan Zoning Table		The project is within three zoning districts (General Business, Light Industrial, and Residence A-2). The front and east side of the project is in General Business and the west side is in Light Industrial. The back of the property is in Residence A-2. The project does not meet the side and front setback requirement of General Business and Light Industrial. But they do meet Residence A-2 for front and side setback requirements. We defer to the board if this is acceptable.	To be waived per waiver list		
28	C-103 Grading and Drainage Plan		Provide pipe sizes and materials for all drainage.	Pipe sizes and materials are all now labeled and shown on C-103 Grading and Drainage Plan		
28A	C-103 Grading and Drainage Plan		Not all pipe sizes and materials are shown for proposed drainage utilities. Please add to the plans.			
33	C-103 Grading and Drainage Plan		FEMA flood line should be drawn using the actual elevation found on the FEMA flood maps. The FEMA flood line should be drawn as a contour line. The flood zones in GIS are approximate and should not be drawn from GIS data. If the FEMA map notes there is a flood zone but there is no elevation, the engineer should calculate the 100 year flood elevation and submit supporting calculations.	The FEMA line doesn't have any elevations associated with this. The flood study referenced in the comment would require significant, county-wide analysis to determine a flood elevation. The site is designed to use Best Management Practices, and, thru consultation with Town staff prior to submission, is largely trying to stay as far away as possible from the wetland areas and setbacks.		
33A			We agree a flood study is a significant amount of work to perform. We had made the comment because the northwestern portion of the site is filling within the wetland buffer zone to almost the wetland boundary line. This may result in filling in the floodplain if a flood study was performed which would require compensatory flood storage. We feel this is beyond the scope of the ZBA review and we defer to the Conservation Commission for final decision.			
36	C-104 Utility Plan		Has the sewer peak flows been coordinated with the DPW to confirm they have capacity to handle the additional flows?	Sewer flows are being coordinated with the town DPW.		
36A			Since this is on-going coordination with the DPW, we recommend the flows must be approved by DPW as a condition of approval.			



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39	C-104 Utility Plan		How will the water connect to the main in the street? Will it be a tapping sleeve and valve or a cut in tee? This should be noted or detailed on the plan. Has this been coordinated with the water department?	Existing water main is now shown of the other side of Fitchburg Road. Note and detail have been added to C-104 Utility Plan. Town departments have been copied on this submission, including DPW. Coordination will be on-going, especially during the Construction Documents plan phase and construction itself.		
39A			Since this is on-going coordination with the DPW, we recommend the water connection must be approved by the DPW as a condition of approval.			
40	C-104 Utility Plan		Fire hydrants have been added to the latest plan. Have these locations been coordinated with the fire and water departments?	To be coordinated with departments.		
40A			Since this is on-going coordination with the Fire and Water Department, we recommend the hydrant locations must be approved by the Water and Fire Departments as a condition of approval.			
50	L-100 LANDSCAPE SITE PLAN (Received 10/12)		Update L-200 and L-300 to changes shown in L-100.	L-200 and L-300 reflect the most up to date design and L-100 will be updated to reflect these changes in our construction documents.		
50A			All landscaping plans should be updated and coordinated with the civil plans. L-200 and L-300 were not resubmitted for review. We defer to the board if updating the plans for construction documents is acceptable.			
51	L-100 LANDSCAPE SITE PLAN (Received 10/12)		A few of the proposed light fixtures conflict with proposed trees. Coordinate lighting plans with planting plans to reduce future blocking of light and need for pruning of tree branches.	L-200 and L-300 reflect the most up to date design and L-100 will be updated to reflect these changes in our construction documents.		
51A			See comment 50A			
52	L200 MATERIALS AND LAYOUT PLAN	ADA/MAAB	No handicap parking spaces are shown on the plans. The Applicant shall show the number and locations of handicap parking spaces.	Recommendation will be incorporated on the final plans submitted prior to construction and coordinated with Civil		
52A			See comment 50A			
56	L300 PLANTING PLAN L200 MATERIALS AND LAYOUT PLAN		Coordinate limit of work at the rear of the site, and stormwater management with the civil plans.	Recommendation will be incorporated on the final plans submitted prior to construction and coordinated with Civil		
56A			See comment 50A			
57	L300 PLANTING PLAN	Zoning By Law 3.5.4.A.2.a	To mitigate removal of trees, Swamp White Oak whips are proposed for the area in the wetland buffer zone and stormwater basin. Add additional species. Additional tree and shrub species diversity will benefit ecology.	Recommendation will be incorporated on the final plans submitted prior to construction.		
57A			We defer to the board if this can be added on the final plans instead of during the Peer Review.			
58	L300 PLANTING PLAN		Designate a mowed access route, free of trees, for maintenance access to the stormwater basin	Recommendation will be incorporated on the final plans submitted prior to construction.		



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58A	L300 PLANTING PLAN		Please confirm stormwater basin does not exist and remove from L plans.			
59	L300 PLANTING PLAN		Overhead utility wires run along Fitchburg Road. Adjust locations of honey locust trees so they are 10-15' behind wires to reduce future maintenance pruning, and/or consider using an upright cultivar such as Streetkeeper Honey locust.	Recommendation will be incorporated on the final plans submitted prior to construction.		
59A	L300 PLANTING PLAN		We defer to the board if planting conflicts can be resolved on the final plans instead of during the Peer Review.			
60	L300 PLANTING PLAN		GT to the east of driveway entrance conflicts with utility pole guy	Recommendation will be incorporated on the final plans submitted prior to construction.		
60A			See comment 59A.			
61	L300 PLANTING PLAN	Zoning By Law 3.5.4.A.2.e	At the east property line, screen proposed residences from adjacent properties, and proposed parking and trash areas from adjacent properties. Consider installing a 6' wood board fence along the east property line from the front building corner to the back corner of the parking lot.	Recommendation will be incorporated on the final plans submitted prior to construction.		
61A			We defer to the board if this update can be made for final plans instead of during this review.			
62	L300 PLANTING PLAN	Zoning By Law 3.5.4.A.2.e	At the west property line, screen proposed residences from adjacent properties, and proposed parking and trash areas from adjacent properties. Consider installing a 6' wood board fence along the west property line from the front building corner to the front corner of the parking lot. Recommend evergreen tree screen at the west property line opposite the parking lot.	Recommendation will be incorporated on the final plans submitted prior to construction.		
62A			We defer to the board if this update can be made for final plans instead of during this review.			
63	L300 PLANTING PLAN		Most of the area shown for wet seed mix is upland that slopes toward the wetland. Recommend a native upland seed mix for areas that will not have continuously moist soil or be seasonally flooded.	Recommendation will be incorporated on the final plans submitted prior to construction.		
63A	L300 PLANTING PLAN		We defer to the board if this update can be made for final plans instead of during this review.			
64	L300 PLANTING PLAN		Recommend adding native evergreen trees to the planting design for seasonal interest, reduced maintenance and screening.	Recommendation will be incorporated on the final plans submitted prior to construction.		
64A			We defer to the board if this update can be made for final plans instead of during this review.			
65	Landscape Cover Sheet	Section 6.2 Schedule of Dimensional Requirements	The building height for Building E is 56'-4" and Building D is 42'-6.5". This is beyond the maximum allowable heights which are RA-2 35 ft, Light Industry 40 ft, and General Business 35 ft. This is a waiver the applicant is seeking. We defer to the board if the building can exceed the allowable heights in the zoning bylaw.	Correct		
STORMWATER REPORT						
69	SWR Page 12		Snow storage locations should be shown on the plans. Will there be loss of parking due to snow storage? Will snow be hauled off site?	Snow storage areas have been provided and shown on C-102 Layout and Materials Plan.		



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69A			Snow storage is located upgradient to the wetland and within the buffer zone. We recommend provide storage outside the wetland buffer and not upland to the wetland. We recommend locate storage so there is no loss of parking since the Applicant does not meet minimum number of parking spaces for the site. We defer to the Conservation Commission for approval of any snow storage within the wetland buffer.			
72	HydroCAD calc		It is recommended to use a minimum Tc of 6 minutes.	Hydrocad analysis has been updated to have a minimum Tc of 6 minutes.		
72A	HydroCAD calc		Existing HydroCAD Subcatchment S1 has a Tc of 4.9 minutes.			
79		Ayer Stormwater Regulations 2.8.B.2	The stormwater system proposes recharge to groundwater. Per the SW regulations a percolation test shall be performed.	A geotechnical study has been performed Northeast Geotechnical, Inc, including a soils textural class analysis. The geotechnical report can be found in the Stormwater report. Percolation rates (and preferably soils textual analysis can be performed as confirmatory prior to building permit.		
79A			Using soil textural class and RAWLS rate is typically acceptable approach for determining infiltration rate. The Applicant is willing to confirm the rates with a percolation test to confirm prior to the building permit. If the board allows this it is recommended that this be made a condition of approval. We defer to the board if this is acceptable.			
80		Ayer Stormwater Regulations 2.8.B.9	The applicant has not used the EPA tool for Pollutant removal. The applicant has provided calculations for TSS removal but not for other pollutant such as nitrogen, phosphorus, and zinc that the EPA tool calculates. Pollutant removal shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool or other BMP performance evaluation tool provided by EPA Region 1.	Since the site retains greater than 1 inch multiplied by the total post-construction impervious surface, the applicant confirms with the Ayer stormwater standards (See note 84)		
80A			We agree the Applicant's system does meet the 1" requirement but did not use the tool that was stated to use in the Ayer Stormwater Regulations. We defer to the board if this is acceptable.			
81		Ayer Stormwater Regulations 2.8.B.10	Stormwater system shall have 1 foot minimum of freeboard for storms up to the 100-year storm event. All stormwater systems have less than 1 foot of freeboard to top of stone elevation.	Systems have a freeboard of greater than 1'. The freeboard is taken from the highest elevation of the 100 year storm compared to the lowest catch basin rim elevation.		
81A		Ayer Stormwater Regulations 2.8.B.10	Infiltration system 2 has a peak elevation of 219.92' for the 100-year storm, while WQU-6 has a rim elevation of 220.8, which is less than 1' of freeboard.			
83		Ayer Stormwater Regulations 2.8.B.15	There is a drainage swale behind the phase two building. Please confirm swales shall accommodate the 25 year storm and velocities below 4 feet per second.	The drainage swale directs a minimal amount of water and is only used to direct water away from the building and to the infiltration system.		
83A		Ayer Stormwater Regulations 2.8.B.15	It appears that there would be minimal flows at this location. We defer to the board if this calculation can be waived due to the small drainage area it will receive.			
OFF-SITE IMPROVEMENTS						
91	C-102 Layout and Materials Plan	MAAB/ADA	Provide dimension of proposed sidewalk along Route 2A. It appears the existing utility poles are within the sidewalk. Confirm that the sidewalk has at least a 3' clear path by utility poles.	Notes and dimensions have been added on C-102 Layout and Materials Plan.		
91A			Dimensions do not indicate 3' clear path by utilities. Please revise plans.			
92	C-104 Utility Plan		Consider adding two gate valves to the main (one on each side of the connection) to limit shut downs to the complex.	Gate valves added to limit shut downs as shown on C-103 Grading and Drainage Plan.		



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92A			The recommendation was for adding gate valves to the main on Fitchburg Road where the cut in tee will be. This would minimize shutdowns to the complex for future Town water work. We defer to the Water department.			
LIGHTING COMMENTS						
94	Photometric (Reflex Lighting)		Mounting height for bollards is shown as 0. To get an accurate reading, the mounting height should be 2.5' (30") as indicated in the cut sheets. This is also why the BUG rating isn't being shown for the bollards.	Mounting height now show - see new Photometric Plan		
94A	Photometric (Reflex Lighting)		The luminaire schedule (at the bottom of the page) now indicates a 2.5' mounting height for the bollards and the photometric plan indicates all bollards have a 3' mounting height. In the software the two numbers should be tied together and should not be different from each other. Please explain why the two differ.			
99	Photometric (Reflex Lighting)		Will there be any exterior building mounted lighting? Include any building mounted lighting into the photometric.	Exterior building mounted lighting has not yet been coordinated; it is expected that lighting will be mounted on buildings at all entrances and exits Final exterior building lights to be included on final plan set included with building permit application		
99A	Photometric (Reflex Lighting)		To be able to asses the lighting, building mounted lighting needs to be coordinated and included in the photometric sheet.			
New Comments 11/10/22						
102	C-103 Grading and Drainage Plan		Confirm constructability of pipe orientation for OCS-2.			
103	C-103 Grading and Drainage Plan		Confirm constructability of pipe orientation for DMH-5.			
104	Photometric (Reflex Lighting)		Under the calculation summary, the "Site" is not in compliance with IES Recommended Practice guidelines for Landscape Lighting. Lighting layout to be adjusted so that it is in compliance with both lighting levels and contrast ratios.			
105	Photometric (Reflex Lighting)		From our review of the specified bollard light we would recommend an alternate bollard be considered. The specified 3' bollard has about 1/2 the output of the parking lot lights which are mounted 15' off the ground. We believe this is why under the "Site" Calculation summary the max fc level is showing as 80.1fc.			