

May 20, 2020

Todd M. Penney, P.E., Town Engineer/Wetlands Agent
Office of the Town Engineer
Town of Coventry
1712 Main Street
Coventry, CT 06238

Re: 20-07W – 1600 Boston Turnpike

Dear Mr. Penney:

We are in receipt of your comments dated May 8, 2020 and revised to May 19, 2020, regarding the project noted above. Our responses are indicated below in ***bold italic*** text and are as follows:

Sheet EX-1

1. There were infiltrators that were installed in support of the previous land use development in the southeast corner of the driveway and gravel parking to collect runoff from those areas prior to discharge into Boston Turnpike. The proposed site plan depicts is attached separately for your use.

Response: Acknowledged. The previously installed infiltrators have been depicted on the existing conditions plan.

2. Depict the existing septic system infrastructure that serves the existing structure.

Response: Acknowledged. The existing septic system has been depicted on the existing conditions plan.

3. Add spot grades along the stone wall, especially at the low point near the “stone wall” label in between the 615 contours and at the high point at the break of the stone wall.

Response: Acknowledged. Spot grades have been added along the stone wall on the existing conditions plan.

Sheet GN-1

1. I would request the Town receive a copy of the As-Built drawings of the site development plan for its future records.

Response: Acknowledged. Please refer to note #6 on revised sheet GN-1 requiring the contractor to provide as-built record drawings to the town.

Sheet DM-1

1. It appears as if the Drainage AutoCAD layers are turned on which is causing conflict with the Demo layers.

Response: Acknowledged. The conflicts have been resolved. Please refer to revised sheet DM-1.

2. Show the demo of the existing septic system infrastructure.

Response: Acknowledged. Please refer to revised sheet DM-1 for demolition of the existing septic system infrastructure.

Sheet SP-1

1. It is my understanding that the CT Building Code and/or statutes do not allow shared ADA aisles for accessible spaces. Please confirm to the review and adjust accordingly if necessary.

Response: Acknowledged. Per the 2018 Connecticut State Building Code ICC/ANSI A117.1 section 502.4.1, "Access aisles (cross hatch) shall adjoin an accessible route. Two parking spaces shall be permitted to share a common access aisle. If a car and a van space share a common access aisle, that aisle shall be 96 inches minimum in width. Access aisles shall not overlap with the vehicular way. Parking spaces may have access aisles placed on either side of the car or van parking space. Van parking spaces that are angled shall have access aisles located on the passenger side of the parking space" which permits the sharing of ADA aisles.

Sheet GD-1

1. I have concern on the depth of the stormwater detention basin in relationship to the wetlands complex to its west. Review/explain how you will keep groundwater out of the stone of the detention basin area. I do not see an underdrain on the plan sheet although one is depicted on the general construction detail. Will the that large gravel area "drain" water from the wetland complex?

Response: Acknowledged. The stormwater detention basin will be wrapped in impermeable fabric, BTL liners BTL-40 reinforced polyethylene 40 mil liner which will keep groundwater out of the stone of the detention basin. An underdrain is not

provided. The gravel area will not “drain” water from the wetland complex due to the impermeable liner. Please refer to revised sheets GD-1 and DN-3.

2. Confirm to the reviewer that the ADS Geosynthetic 601T is used only for soil separation and not to prevent groundwater infiltration.

Response: Acknowledged. Please refer to revised callout on sheet GD-1 and detail on DN-3. The system will be wrapped in an impermeable fabric, BTL liners BTL-40 reinforced polyethylene 40 mil liner, to prevent groundwater infiltration.

3. Which row in the detention basin system is the isolator row. How does the isolator row perform stormwater quality mitigation?

Response: The isolator row is the eastern most row in the detention basin system. An additional callout has been added to sheet GD-1. Please refer to the Isolator Row O&M Manual within Appendix F of the Stormwater Management Report for a description of the stormwater quality mitigation. The isolator row functions by allowing the sediment to settle within the isolator row protecting the storage areas of the adjacent stone and chambers from sediment accumulation. The isolator row has a removal efficiency of 80% total suspended solids.

4. Can you confirm that the top of the system will be at 609.50'? Can you provide a cross-section through the center of the system that depicts the wetland complex to its west and carry the section to about 25 feet east to be able to see the graphic of the wetlands to the system? What information of groundwater (mottling) do you have from the proposed deep hole tests in this area that you could plot on the cross section?

Response: Acknowledged. The top of chamber elevation is 610.75 and has been added to sheet GD-1. Please refer to sheet DN-4 for a cross section of the system including the wetland complex. Please refer to sheet SS-3 for test pit logs.

5. The driveway grade is 7.7% (nearly 9% at Boston Turnpike WB approach gutter). That is relatively steep for a retail driveway with a high use. It appears the grade is driven by the raising the site by 1.5 feet or more. Can you provide an explanation as to why this fill grading approach is being proposed?

Response: Acknowledged. The reason for the slope of the driveway is to allow for the installation of the septic leaching chambers beneath the parking area while maintaining the required vertical separation from the restrictive layer and groundwater and the required horizontal separation from the property line, building, well, stormwater system, etc.

6. The Rain Garden is proposed with a 2' to 3' cut. How suitable are the subsoils in promoting infiltration for the rain garden? I believe we may want to direct the rain garden overflow to the Low Point pointed out in the earlier comment for EX-1.

Response: Acknowledged. The rain garden was designed using half of the field measured permeability. The field measured permeability was 6 inches per hour so a value of 3 inches per hour was used. The rain garden overflow has been directed to the low point pointed out in the earlier comment.

7. The plans do not show how the rain garden will be fed from the proposed building.

Response: Acknowledged. Please refer to sheet GD-1 for the added roof leaders from the building.

8. Does the Designer have any concerns with the graded swale in the northeast corner of the site concentrating overland flow into the adjacent property and causing a nuisance to that property?

Response: There are no concerns with the graded swale in the northeast corner of the site concentrating flow. The proposed grades are very gradual and are very similar to the existing grades in that area. The drainage area to the northeast corner is smaller in the proposed condition than it was in the existing condition.

Sheet SU-1

1. I do not have the updated Site Utility plan that depicts the proposed septic system.

Response: Acknowledged. The Site Utility plan has been provided. Please refer to sheet SU-1 and septic system details on sheets SS-1 to SS-4.

2. The plan should have the test pit data information.

Response: Acknowledged. Please refer to sheet SS-3.

3. Does the site lighting get depicted on the Site Utility plan? It is not shown.

Response: Acknowledged. The site lighting plan is separate from the site utility plan. Please refer to lighting plan by others included in the planset.

Sheet EC-1

1. Is the proposed stockpile appropriately sized for the proposed development?

Response: The contractor will work in phases as necessary to store stockpiled materials within the proposed stockpile area.

Sheet EC-2

1. The proposed construction schedule should be more defined in months (April 2020 to November 2020) as opposed to seasons. Update the months accordingly to the projected land development permitting process.

Response: Acknowledged The proposed construction schedule has been revised to be defined in months. Please refer to sheet EC-2.

Sheet LL-1

1. The site plan set does not have the updates depicted at the April 22, 2020 meeting.

Response: Acknowledged. Please refer to the revised sheet LL-1 which depicts the updates from the meeting.

2. The 2 to 1 fill slope on the east side of the easterly parking bay does not seem to be appropriate for mowing. Maybe plantings and mulch would be more appropriate given the residential use to the east (even though it is zoned commercial).

Response: Acknowledged. The landscape plan has been revised to include plantings and mulch along the slope. Please refer to sheet LL-1.

3. Are there any benefits to establishing a riparian zone/no mow area parallel to the stone wall, even as narrow as 10 feet, to promote stormwater quality of overland flow.

Response: Acknowledged. Please refer to the revised sheet LL-1 which depicts additional plantings along the wetland.

4. I am recommending the placement of vertical landscaping on the west edge of the front parking bay to discourage the stockpiling of snow in this area which could migrate to the wetland complex without treatment.

Response: Acknowledged. Please refer to the revised sheet LL-1 which depicts additional plantings along the west edge of the front parking bay to discourage the stockpiling of snow.

Stormwater Management Report

1. The Profession Engineer of Record needs to stamp and sign the SWMR.

Response: Acknowledged. The Stormwater Management Report has been stamped and signed.

2. Generally, I found the SWMR meeting the engineering standards with the analysis of pre and post development, but with the following comments:

- a) Confirm the existing watershed area delineated for EDA-20 contributes to the Design Point.

Response: Acknowledged. The delineated area for EDA-20 contributes to Design Point 2, Coventry Brook.

- b) Confirm that the post development watershed for Rain Garden Area is routed through the wetland before it gets to the Design Point 1. How does the overflow from the rain garden influence the wetland hydrology.

Response: Acknowledged. PDA-11 which is the drainage area containing the rain garden, discharges near the low point along the stone wall mentioned in the comment above which then flows to the wetland prior to reaching design point 1. The hydrology within the wetland will remain as it exists today. The existing and proposed drainage areas to the wetland are very similar and the overflow from the rain garden mimics the existing grading.

3. Operations & Maintenance Plan, page 2, add “Wetlands”.

Response: Acknowledged. Wetlands permitting has been added to page 2 of the Operations & Maintenance Plan.

4. Consider adding specific language with litter/refuse control plan within the wetlands. I have included the language added with the SWMR for Cumberland Farms.

Response: Acknowledged. A wetland section including litter/refuse control has been included in the Operations and Maintenance Plan of the Stormwater Management Report.

Wetland Evaluation and Impact Assessment

1. Pages 4/5: Please confirm that what I read that Section 3.1 & 3.2 contradict each other for Principal/Secondary Wetlands Functions for:

- Sediment-Toxicant Retention
- Nutrient Removal
- Wildlife Habitat

Response: The table is incorrect in that it listed Wildlife Habitat as a principal function. This should be a secondary function as noted in Section 3.2. Principal functions are Sediment-Toxicant Retention and Nutrient Removal.

2. Page 6: Confirm that the report is indicating infiltration is being designed into the underground detention system, which I believe is inconsistent with the presentation given in April.

Response: The report incorrectly states that an infiltration system is included in the stormwater treatment train.

3. Page 7: Can a summary be submitted by the Wetlands Scientist indicating how the current plan set addresses each of the 4 mitigation measures for the vernal pool noted in the wetlands.

Response: The plan set addressed these mitigation measures as follows:

1. ***BL Engineering hydrologic analysis indicates that there will be no changes to the vernal pool hydroperiod (depth and duration of standing water) within the vernal pool. The peak flows have been matched for all storm events and mimic the existing conditions.***
 2. ***Noise impacts will be mitigated through the installation of a double-row of evergreen trees, white pine and “green giant” arborvitae. The plantings will be located between the pool and the development to reduce noise and visual impacts.***
 3. ***Directional lighting is to be used so that light is not directed west towards to the west towards the wetland. The light at the rear door to the building will be provided with a cutoff hood as it is necessary for safety and security. Please refer to the lighting plan.***
 4. ***To minimize impacts to migrating amphibians during construction, BL has committed to the recommended measure as follows: If construction is proposed during the breeding and juvenile dispersal period (ca. March– June), I would recommend that barrier fencing, such as geotextile silt fencing (or comparable), be placed along the westerly limits of the proposed development (parallel to the stone wall, wrapping northeast and terminating north of the rain garden) in order to prevent migrating amphibians from entering the construction zone. If possible, avoid construction during the initial stages of the breeding period (roughly February 25-March 25, depending upon annual and seasonal variability). Construction is proposed to occur August 2020 to November 2020. This note has been added to note #117 on sheet GN-1.***
4. Figure 2: locate the egg masses noted Davidson on the plan.

Response: See attached map markup showing the approximate location of the egg masses.

5. Provide input on what benefits, if any, would an invasive species eradication would have on the wetland complex.

Response: Invasive species were not dominant within the wetland or wetland buffer area but were present within the shrub layer. Species observed include multiflora rose (Rosa multiflora), Japanese barberry (Berberis thunbergii) and bush honeysuckle (Lonicera morrowii).

Given the density of invasive plant species, I do not see a significant ecological benefit from control or removal. However, if the commission believes such work would be worthwhile, these shrubs could easily be removed physically, by digging them up or removing them using a weed-wrench. Such work could be incorporated into the landscaping plan and conducting during installation of the rain garden and buffer plantings.

We trust this answers your questions and addresses your concerns. If you require additional information, feel free to contact me at 860-249-2200.

Sincerely,

A handwritten signature in blue ink that reads 'Matthew J. Bruton'.

Matthew Bruton, P.E.
Project Manager
BL Companies, Inc.