50 South Main Street, Room 204, West Hartford, CT 06107 P: (860) 561-7540 F: (860) 561-7551 www.westhartfordct.gov

## **MEMORANDUM**

TO: Todd Dumais, Town Planner

FROM: Julie A. Viera, P.E., Civil Engineer II

RE: IWW #1196 and IWW #1197

1800 Asylum Avenue West Hartford, CT

DATE: August 11, 2023

September 8, 2023 November 3, 2023 November 30, 2023

The Engineering Division reviewed the revised submittal of the Application, Wetland Report, Stormwater Report, and Site Plans entitled "Land Development Plans Issued for Permitting West Hartford IWWA Map Amendment & Regulated Activities Submitted 06/30/2023 Oakwood Park 1800 Asylum Avenue West Hartford, Connecticut" received November 17, 2023 in regard to previous outstanding comments, and offer the following comments:

#### Sheet No C2.012

52. Add spot elevations along gutter across the driveway.

#### Remains Not Addressed

#### **Addressed**

#### Sheet No C2.014

64. Please provide information and details on the trail crossing the water course.

#### Not Addressed

Response: The proposed crossing will be a 15' span precast box culvert which will be embedded 1-2' below the bottom of the existing streambed. A detail has been add to sheet C3.513.

What is the elevation of the crown of the box culvert and the finished grade of the trail?



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Per virtual meeting dated November 28, 2023, it was stated that the culvert was designed for 25-yr storm. What is the drainage area going to this culvert? One-foot of freeboard should be provided, the analysis provided shows the 25-yr storm overtops the culvert. Are measures proposed to mitigate erosion?

C: Greg Sommer, P.E., Town Engineer

## Town of West Hartford - Department of Community Development

**Engineering Division** 

50 South Main Street, Room 204, West Hartford, CT 06107 P: (860) 561-7540 F: (860) 561-7551 www.westhartfordct.gov

## **MEMORANDUM**

TO: Todd Dumais, Town Planner

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RE: IWW #1196 and IWW #1197

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DATE: August 11, 2023

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The Engineering Division reviewed the revised submittal of the Application, Wetland Report, Stormwater Report, and Site Plans entitled "Land Development Plans Issued for Permitting West Hartford IWWA Map Amendment & Regulated Activities Submitted 06/30/2023 Oakwood Park 1800 Asylum Avenue West Hartford, Connecticut" received November 17, 2023 in regard to previous outstanding comments and offer the following comments:

#### Continuation of comments.

#### Sheet No C3.010

71. What is the purpose of discharging some storm drainage systems into depressed areas? Will the water infiltrate? Please provide the infiltration rate. What is the purpose of the storm drainage manhole in the depressed area?

Not Addressed – the depressed areas are still on the plans.

Response: The proposed depressed areas are included to provide some stormwater features to promote groundwater infiltration if at all possible. The infiltration will be minimal based on the existing soil types and high groundwater. Since minimal to no infiltration is anticipated, proposed depressed areas were not included as part of the stormwater management system that is attenuating peak flows. The manhole is an outlet control structure to capture the flow to this area.

Please callout and detail what type of inlet is proposed for the manhole.



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From the latest plan set, the inlet in the depressed area is the catch basin top. Revise the storm calculations to reflect that the tailwater elevation for the discharge pipe is the top of frame of the catch basin.

#### Sheet No C3.511

72. Please include details for detention system, hydrodynamic separators, outlet control structures, etc.

#### Not Addressed

Response: Details have been added to the drainage details sheets.

Are the inlet and outlet structures the only access to the detention system for cleaning and inspection? The Subsurface Detention System (SSDS) Outlet Control Structure detail on sheet 3.512 shows that the detention system will not drain between storms. Please revise. Is the SSDS detail shown on 3.512 the same structure that would be used for the inlet, minus the wall? It is referenced that way on StormCAD.

Explained at virtual meeting on November 28, 2023. Please clarify on detail what wall is the weir wall and what walls are support walls. Show a pipe stub inlet and pipe stub outlet.

#### **Stormwater Management**

83. There should be separate pre and post development calculations: one for 1700 and one for 1800 Asylum.

As 1700 and 1800 are two separate properties, they should be analyzed as two separate properties. There should be pre and post development calculations for each property. The stormwater calculations do not show this. Why is the road included? Does it flow overland to either property? Review and revise.

Response: The stormwater management report has been revised to split the HydroCAD model by parcel while utilizing the same discharge points. 1700 Asylum and 1800 Asylum are separate properties but the discharge from each parcel converges in the streams and roadways. The existing conditions were modeled to reflect existing drainage patterns which includes stormwater from each of the parcels flowing overland to the road which then drains to Trout Brook on both the 1800 and 1700 parcel.



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Remains not addressed. There is still overland flow from 1700 that is included in the calculations for 1800.

Remains not addressed. There is still overland flow from 1700 that is included in the calculations for 1800.

C: Greg Sommer, P.E., Town Engineer

50 South Main Street, Room 204, West Hartford, CT 06107 P: (860) 561-7540 F: (860) 561-7551 www.westhartfordct.gov

## **MEMORANDUM**

TO: Todd Dumais, Town Planner

FROM: Julie A. Viera, P.E., Civil Engineer II

RE: IWW #1196 and IWW #1197

1800 Asylum Avenue West Hartford, CT

DATE: August 11, 2023

September 8, 2023 November 3, 2023 December 6, 2023

The Engineering Division did a review in regards to previous outstanding comments to the revised submittal of the Application, Wetland Report, Stormwater Report, and Site Plans entitled "Land Development Plans Issued for Permitting West Hartford IWWA Map Amendment & Regulated Activities Oakwood Park 1800 Asylum Avenue West Hartford, Connecticut submitted 06/30/2023" received November 17, 2023 and offer the following comments.

#### Comments 1-9 Addressed

Additional Comments (August 11, 2023)

## Sheet No. C1.012

- 2. 1.9 (Asphalt Trail) is called out for the stone dust path. Review and revise.
- 3. 2.8 (2' wide detectable strip) is called out to be installed on the stone dust path. Is that correct?
- 4. Will access to the wetland decks be moved?

Did not review Site Plans as there is no callouts or dimensions. There also was substantial design change from last submission.

#### Addressed

50 South Main Street, Room 204, West Hartford, CT 06107 P: (860) 561-7540 F: (860) 561-7551 www.westhartfordct.gov

#### Additional comments (September 8, 2023)

4. Please include details of all the outlet control structures.

Response: An outlet control structure detail has been added to the drainage details sheet.

There is just one generic one on sheet 3.512 and as shown the underground detention systems do not drain completely. Please include a detail for the outlet control structure for the rain garden.

The outlet control detail for the above ground detention shows a 4" underdrain and the calculations have a 3" orifice. Please review. Show where the 10' x 8' weir is located on the plan. Is erosion and sedimentation control proposed in this area?

Will outlet control structure details be provided for all detention systems?

7. In regard to detention system 102, the outlet pipe in detention calculations does not correspond with the plans. Review and revise. Also, the tailwater elevation is proposed at 93, even though the 10-year storm pipe calculations show a HGL greater than 93. Review and revise.

It doesn't match StormCAD. Review and revise.

8. In regard to detention system 104, the outlet pipe in the detention calculations does not correspond with the plans. Review and revise.

Why does the model include two pipe runs at the discharge outlet?

9. In regard to detention system 106, the proposed tailwater elevation is 89.8 and the HGL in the outlet pipe is 91.53. Review and revise.

In regards to comments 7-9 and all detention systems. All of the outlet pipes have been removed from StormCAD. Please add them back in.

#### Addressed

13. On Profile Report sheet STRC-823 out to STRC 926, should the 926 be 826?



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Response: Due to layout revisions. Several structures have been relocated or renamed. Calculations have been revised accordingly.

There are two profiles runs: STRC-823 to STRC-826 and STRC-823 to STRC-926. Please review and revise.

#### Addressed

14. For STRC-812, where does the rim elevation come from?

Response: The rim elevations on the SSDS outlet and inlet nodes do not signify anything as these points are not structures. These nodes are included in the structure chart as to provide the structure name and invert. A note has been added to the plans clarifying such.

Is that correct? I thought the detail on sheet C3.512 for Subsurface Detention System Outlet Control Structure was, at a minimum, the outlet control structure and possibly the inlet structure as well, just needing modification? Please clarify.

See response for #72.

16. Existing pipe run x12 to x13 has a negative pipe run. Why isn't this being fixed?

Response: This existing pipe is proposed to be utilized as is in order to prevent any additional wetland impacts associated with this pipe replacement.

If the existing pipe has a negative slope and it is not proposed to be changed, then don't change the inverts on it in StormCAD. Suggest consider fixing it as approximately only half of the pipe run is in the wetlands, the pipe is existing and would be replaced in kind with, I assume, the same downstream invert and adjusting the upstream invert.

#### Addressed

## Town of West Hartford - Department of Community Development

**Engineering Division** 

50 South Main Street, Room 204, West Hartford, CT 06107 P: (860) 561-7540 F: (860) 561-7551 www.westhartfordct.gov

## **MEMORANDUM**

TO: Todd Dumais, Town Planner

FROM: Julie A. Viera, P.E., Civil Engineer II

RE: IWW #1196 and IWW #1197

1800 Asylum Avenue West Hartford, CT

DATE: November 3, 2023

December6, 2023

The Engineering Division did a preliminary review of the submittal of the Application, Wetland Report, Stormwater Report, and Site Plans entitled "Land Development Plans Issued for Permitting West Hartford IWWA Map Amendment & Regulated Activities Oakwood Park 1800 Asylum Avenue West Hartford, Connecticut submitted 06/30/2023" received November 17, 2023 and offer the following comments.

1. On the 2023 10 18 Land stewardship and Management Plan, under background and under 1700 Asylum, the amenity of the extension of the Trout Brook Trail should be under 1800 Asylum Avenue.

#### **Addressed**

2. In the stormwater management report, fix the header on some of the appendix sheets. They reference a project in Weston.

#### **Addressed**

The Earthwork Analysis does not have the latest layout.

#### **Addressed**

4. Provide calculations for the culvert crossing for the Trout Brook Trail.

#### **Addressed**

5. What is the 10-year flood elevation at each of the pipe discharges into Trout Brook?

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Is the summary of tailwater elevations for both 1700 and 1800? For 1800 Asylum, where did the 91.7 come from?

#### **Sheet No. C2.011 and C2.014**

6. Add spots on the driveways for the townhouse. Are the driveways curbed? Some are graded as curbed and some are graded as if they are not curbed. The driveways are drawn as curbed with the double line.

Grass swale should have a minimum slope of 2%. Review and revise.

#### Sheet No. C2.011 - 2.014

7. In general, the grades between the buildings appears very flat. Please included additional spot elevations.

#### Addressed

8. Please show where the roof leaders are connected.

#### **Addressed**

9. Is there a drainage area map that goes along with the StormCAD calculations?

Sub-catchment Drainage Area Sheet PD-2 was not included, just the pre and post drainage area maps.

#### Sheet No. C3.411

10. Review and revise the charts. There are incorrect top of frames and inverts, missing information and pipe and structures that are no longer being used that are still included.

#### **Not Addressed**

#### **Sheet No. C2.6.10**

11.I realize the two ponds are not included in the compensatory storage as the flood plain is not being encroached upon. Please review the 93 contour on the west side of the south pond. It appears to go under the proposed wall.

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On the south pond, the 93 contour is shown as if it goes under the proposed wall.

#### **Sheet No. C6.014**

12. Suggest not planting a tree (AF) over detention system #104.

Not Addressed - Tree is still there.

13. Does the rain garden seed mix get mowed?

#### **Addressed**

#### **Storm Drainage Calculations**

14. Review and revise the StormCAD calculations. Some of the HDS structures have sumps and others do not. The HDS detail shows a 2-foot sump. Some of the yard drains have a 4-foot sump and some have a 2-foot sump. The yard drain detail shows 2-foot sump.

Not Addressed – Are sumps proposed on the manholes? Not all catch basins have a 4-foot sump, correct?

15. Review and revise StormCAD in relation to the charts on C3.411. There is conflicting information.

#### Not Addressed

#### Additional comments

- 1. Was the existing discharge pipe from the pond analyzed?
- 2. From the virtual meeting on November 28, 2023, waiting on clarification on river stations for Hec Ras analysis versus FEMA river stations.

C: Greg Sommer, P.E., Town Engineer

#### **SLR International Corporation**

195 Church Street, 7th Floor, New Haven, Connecticut, 06510



December 5, 2023

Attention: Mr. Todd Dumais, Town Planner Town of West Hartford 50 South Main Street, Room 214 West Hartford, CT 06107

SLR Project No.: 141.11197.00054

RE: Wetland Scientist and Soil Scientist Review
Proposed Wetland Map Amendments and Redevelopment Projects for
1700 and 1800 Asylum Avenue, West Hartford, Connecticut

#### Dear Mr. Dumais:

At the request of the West Hartford Town Plan and the Zoning/Inland Wetlands and Watercourse Agency (IWWA) (the "Town"), SLR International Corporation (SLR) continues to review the regulated activity permit applications submitted by WEHA Development Group East, LLC and WEHA Development Group, LLC for 1700 and 1800 Asylum Avenue, respectively, in West Hartford, Connecticut. SLR is providing a technical peer review of the permit applications for each site. SLR's review focuses on an assessment of the potential adverse impacts to wetlands and watercourses, and consistency of the applications with the town requirements. Wetland map amendment applications also reviewed by SLR were approved at the September 6, 2023, public hearing.

SLR previously submitted letters entitled *Wetland Scientist and Soil Scientist Review, Proposed Wetland Map Amendments and Redevelopment Projects for 1700 and 1800 Asylum Avenue, West Hartford, Connecticut* dated June 8, 2023, from Megan B. Raymond, MS, PWS, CFM, and Marlee Antill, MS, WPIT; *Wetland Scientist and Soil Scientist Review, Proposed Wetland Map Amendments and Redevelopment Projects for 1700 and 1800 Asylum Avenue, West Hartford, Connecticut* dated August 7, 2023, from Megan B. Raymond, MS, PWS, CFM; *Wetland Map Amendment for 1700 and 1800 Asylum Avenue, West Hartford, Connecticut* dated September 6, 2023, from Megan B. Raymond, MS, PWS, CFM; *Wetland Scientist and Soil Scientist Review, Proposed Wetland Map Amendments and Redevelopment Projects for 1700 and 1800 Asylum Avenue, West Hartford, Connecticut* dated September 19, 2023 from Megan B. Raymond, MS, PWS, CFM; and *Wetland Scientist and Soil Scientist Review, Proposed Wetland Map Amendments and Redevelopment Projects for 1700 and 1800 Asylum Avenue, West Hartford, Connecticut* dated November 9, 2023 from Megan B. Raymond, MS, PWS, CFM. SLR's review letter combines each parcel into a full project review and provides one set of comments in this letter.

#### SLR has reviewed the following materials:

Applicant Documents (Unless otherwise mentioned, parallel documents for each listed below were reviewed for the "Residential Development at 1700 Asylum Avenue" project and "Oakwood Park – Mixed Use Development at 1800 Asylum Avenue" project)

• Full Site Plan Set entitled "Land Development Plans Issued for Permitting: West Hartford IWWA Map Amendment & Regulated Activities," prepared by BL Companies, dated June 30, 2023, revised August 21, 2023, October 13, 2023, and October 20, 2023, with the following attached sections (drawn at various scales):

- "Wetland Map Amendment" (Omitted from October 13, 2023, and November 17, 2023 revisions)
- "ALTA NSPS Land Title Survey"
- "Existing Conditions Survey"
- "Demolition Plan"
- o "Site Plan"
- o "Grading Plan"
- "FEMA Floodplain Computations"
- "FEMA Floodplain Cross Sections"

- "Drainage Plan"
- "Test Pit Plan"
- "Sediment and Erosion Control Plan" (including Phases 1 and 2)

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- o "Landscape Plan"
- "Wetland Mitigation Plan"
- "Lighting Plan"
- "Truck Turning Plan" (Only applicable to 1800 Asylum Avenue)
- o "Phasing Plan"
- Wetland Assessment Report for Oakwood Park, 1700 and 1800 Asylum Avenue, prepared by All-Points Technology Corporation, P.C. (APT), dated June 30, 2023
- Wetland and Watercourse Delineation Report for Oakwood Park, 1700 and 1800 Asylum Avenue, prepared by APT, dated June 29, 2023
- Stormwater Management Report, prepared by BL Companies, dated June 30, 2023, last revised November 17, 2023
- Oakwood Park Neighborhood Outreach Activities Update, prepared by West Hartford 1, LLC, dated June 30, 2023
- Town of West Hartford Permit Application for Inland Wetlands & Watercourses Activity: Regulated Activity, [including Connecticut Department of Energy and Environmental Protection (CT DEEP)] Statewide Inland Wetlands & Watercourses Activity Reporting Form) – IWW #1203 and IWW #1205, received June 30, 2023
- Town of West Hartford Permit Application for Inland Wetlands & Watercourses Activity: Map Amendment – IWW #1202 and IWW #1204, received June 30, 2023
- Narrative Per Section 7.5.f of the Inland Wetlands and Watercourse Regulations of the Town of West Hartford for Regulated Activities Permit Application, prepared by Alter Pearson, LLC, dated June 30, 2023
- Response letter to comments provided by Todd Dumais, West Hartford Town Planner pertaining to 1700 Asylum Avenue – IWW #1194 & IWW #1195 and 1800 Asylum Avenue – IWW #1196 & IWW #1197, prepared by Matthew Bruton of BL Companies and dated June 30, 2023
- Response letter to comments provided by Todd Dumais, West Hartford Town Planner, pertaining to the Wetland Scientist and Soil Scientist Review of 1700 Asylum Avenue & 1800 Asylum Avenue, prepared by Matthew Bruton of BL Companies and dated August 21, 2023
- Federal Emergency Management Agency (FEMA) Floodplain Computations (Sheets C2.620 & C2.610) prepared by BL Companies and dated June 30, 2023

- Site Analysis Plan Earthwork (Sheet No. SA-1) prepared by BL Companies, dated June 30, 2023, and last revised November 17, 2023
- CT DEEP Statewide Inland Wetlands & Watercourses Activity Reporting Form, dated August 22, 2023
- Path Details and Recreation Program, prepared by Stantec Consulting Services Inc. and dated August 15, 2023
- Bridge Plan and Section, prepared by Stantec Consulting Services Inc. and dated August 18, 2023 (Only applicable to 1800 Asylum Avenue)
- Comparison Plans (Sheet No. EXH-4.1 and EXH-4.2) prepared by BL Companies and dated June 30, 2023, and last revised November 17, 2023
- Wetland Assessment Report for Oakwood Park, 1700 and 1800 Asylum Avenue, prepared by APT, dated October 20, 2023
- Oakwood Park Neighborhood Outreach Activities Update, prepared by West Hartford 1, LLC, dated October 20, 2023
- CT DEEP Statewide Inland Wetlands & Watercourses Activity Reporting Forms, revised and received October 23, 2023
- Response letter to comments provided by Jason McCabe, P.E., West Hartford Engineering Division pertaining to 1700 Asylum Avenue – IWW #1194 & IWW #1195, prepared by Matthew Bruton of BL Companies and dated October 20, 2023
- Response letter to comments provided by Julie Viera, P.E., West Hartford Engineering Division pertaining to 1800 Asylum Avenue – IWW #1196 & IWW #1197, prepared by Matthew Bruton of BL Companies and dated October 20, 2023
- Response letter to comments provided by Todd Dumais, West Hartford Town Planner pertaining to 1700 Asylum Avenue – IWW #1203 and 1800 Asylum Avenue – IWW #1205, prepared by Matthew Bruton of BL Companies and dated October 20, 2023
- Response letter to comments provided by Todd Dumais, West Hartford Town Planner pertaining to Wetland Scientist and Soil Scientist Review, Proposed Wetland Map Amendments and Redevelopment Projects for 1700 and 1800 Asylum Avenue, West Hartford, Connecticut, prepared by Matthew Bruton of BL Companies and dated October 20, 2023
- Oakwood Park Wetland Land Stewardship and Management Plan, prepared by Eben Baker of Stantec Consulting Services Inc., dated October 18, 2023
- Section 177-8 Special Flood Area Applications of WEHA Development Group East, LLC, dated November 17, 2023
- CT DEEP Statewide Inland Wetlands & Watercourses Activity Reporting Forms, revised and received November 20, 2023
- Culvert Cross Section Exhibit (Sheet No. EXH-8), prepared by BL Companies and dated November 20, 2023
- Wetlands Impact Exhibit (Sheet No. EXH-6), prepared by BL Companies and dated November 17, 2023



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- Tree Removal Exhibit (Sheet No. EXH-7), prepared by BL companies and dated October 17, 2023
- Ideanomics Tree Inventory Assessment, prepared by SavATree Consulting Group and received November 20, 2023
- Wetland Assessment Report for Oakwood Park, 1700 & 1800 Asylum Avenue, prepared by APT and dated November 20, 2023
- Response letter to comments provided by Jason McCabe, P.E., West Hartford Engineering Division pertaining to 1700 Asylum Avenue – IWW #1194 & IWW #1195, prepared by Matthew Bruton of BL Companies and dated November 17, 2023
- Response letter to comments provided by Julie Viera, P.E., West Hartford Engineering Division pertaining to 1800 Asylum Avenue – IWW #1196 & IWW #1197, prepared by Matthew Bruton of BL Companies and dated November 17, 2023
- Response letter to comments provided by Todd Dumais, West Hartford Town Planner pertaining to 1700 Asylum Avenue – IWW #1203 and 1800 Asylum Avenue – IWW #1205, prepared by Matthew Bruton of BL Companies and dated October 17, 2023
- Response letter to comments provided by Todd Dumais, West Hartford Town Planner pertaining to Wetland Scientist and Soil Scientist Review, Proposed Wetland Map Amendments and Redevelopment Projects for 1700 and 1800 Asylum Avenue, West Hartford, Connecticut, prepared by Matthew Bruton of BL Companies and dated November 17, 202

In addition, Megan Raymond attended the hearing on November 29, 2023, and listened to the testimony of the applicant, the public, the intervenor and the IWWA.

## **Project Review**

The proposed work involves the redevelopment of the former University of Connecticut (UCONN) West Hartford Campus, an approximately 60-acre parcel bisected by Trout Brook Drive. The land consists of a 36-acre western parcel at 1800 Asylum Avenue, and a 24-acre eastern section at 1700 Asylum Avenue. The area is predominantly residential, with municipal baseball fields abutting to the southeast. Two perennial streams – East Branch Trout Brook and St. Joseph's Brook – flow through the sites and confluence in the southwest portion of 1700 Asylum Avenue.

The applications seek to authorize the demolition of existing structures and parking lots, and construct a four-building, multi-story residential development and surrounding parking on 1700 Asylum Avenue; and a mixed commercial/residential redevelopment at 1800 Asylum Avenue, consisting of a grocery store, three mixed-use commercial/residential buildings, a spa, medical office building, and a parking garage. The work constitutes a complete redevelopment of each parcel. Grading, stormwater infrastructure, connection to municipal sewer, parking lots and structures are proposed within wetlands, the 150-foot upland review area (URA), and upland portions of the site. As presented in the application materials, the project will disturb approximately 0.20 acres of wetlands directly, and approximately 21.15 acres of the 150-acre URA in total across the two parcels. Wetland mitigation is proposed to compensate for direct wetland impacts and work in the upland review area (URA). The mitigation packages for each site include wetland creation, wetland restoration, buffer enhancement, and riparian enhancement through invasive species removal. The direct permanent and temporary disturbance to wetlands and the URA have been tabulated for each proposed plan iteration for comparison purposes (**Table 1** and **Table 2**).



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Currently, wetland resources occupy 22 percent of the total site, about 12 acres, 30.2 acres of the sites are within the 150-foot URA. Wetlands and watercourses on the properties are palustrine systems and are comprised of two perennial stream reaches, two freshwater ponds, lawn wetlands, and forested wetlands. Special flood hazards areas exist on the sites: a 100-year floodplain, regulatory floodway, and 500-year floodplain are mapped per the FEMA panel 09003C0361F (September 26, 2008) for Trout Brook on 1800 Asylum Avenue, and St. Joseph's Brook on 1700 Asylum Avenue. The site is not mapped as critical habitat or for occurrences of state listed flora and fauna per CT DEEP Natural Diversity Database (NDDB).

Table 1 1700 Asylum Avenue<sup>1</sup>

	Temporary Wetland Impact	Permanent Wetland Impact	URA Disturbance	URA Impervious Existing	URA Impervious Proposed	URA Impervious % Increase
April 2023 Submittal	4,869 SF	871 SF	8 ac	3.85 ac	4.81 ac	25%
July 2023 Submittal	1,526 SF	372 SF	7.9 ac	3.85 ac	4.65 ac	21%
October 2023 Submittal	639 SF	116 SF	6.8 ac	3.85 ac	3.99 ac	3.7%
November 2023 Submittal	639 SF	116 SF	6.8 ac	3.85 ac	4.05 ac	5.1%

SF = square feet

ac = acres

Table 2 1800 Asylum Avenue

	Temporary Wetland Impact	Permanent Wetland Impact	URA Disturbance	URA Impervious Existing	URA Impervious Proposed	URA Impervious % Increase
April 2023 Submittal	20,134 SF	13,620 SF	14.97 ac	3.38 ac	9.87 ac	192%
July 2023 Submittal	16,695 SF	19,486 SF	15.5 ac	3.38 ac	9.75 ac	188%
October 2023 Submittal	8,252 SF	8,372 SF	14.35 ac	3.38 ac	7.86 ac	132.5%
November 2023 Submittal	5,030 SF	3,631 SF	14.17 ac	3.38 ac	8.39 ac	148.3%

SF = square feet

ac = acres

<sup>&</sup>lt;sup>1</sup> Table 1 and Table 2 data are derived from the All-Points Technology (APT) Wetland Impact Assessment reports.



SLR has reviewed site drawings and provided comments on five occasions over the course of the review by town staff. SLR's comments focused on the increase in impervious area in the URA, the limit of disturbance adjacent to the wetland line, minimal low-impact design components, increase in disturbance up to and within the wetland boundary, a reliance on wetlands for the site's recreational program, and inconsistency or lack of detail on the plan sets. Collectively, these elements did not allow for a complete understanding of the proposed work's potential impacts on the physical characteristics of the wetland and watercourse systems. The applicant's latest submission has provided clarity to many of these outstanding items.

In this review letter, outstanding issues relate to smaller technical details such as limit of disturbance lines and mitigation numbers, amongst others, and larger issues specific to the capacity of the site's wetlands and watercourses to sustain upland densification without impairment. Given that low-impact design elements were not viable on this property given the site's soil conditions, the application of wider natural wetland buffers is a feasible and prudent design consideration that warrants evaluation.

## **Wetland Impact Assessment Comments**

C1. The proposed work depicts a limit of disturbance coincident with the wetland boundary along the entirety of the sites. Improvements have been made throughout the design process, though most of the site plan changes pertain to a reduction in permanent and temporary direct wetland impacts. Work in the upland review area (URA) has remained constant. As described in every SLR review letter to date, wetland buffers provide a valuable interface to attenuate flow, absorb nutrients, provide screening and wind breaks as well as habitat opportunities. Though much of the existing buffer to wetlands is lawn area, much of the proposed design eliminates this pervious area and includes narrow planted strips between the new built environment and wetland resources. The conversion to impervious buffer composition is notable on 1800 Asylum Avenue, where presently the collective 150 URA to all wetlands is 23 percent impervious area and under proposed conditions will increase to 59 percent. This increase in impervious area will be managed by subsurface stormwater infrastructure and limited low-impact design elements. The applicant has noted through the review process that the on-site soils are unsuitable for infiltration due to the low permeability and high groundwater table.

Buffer enhancements are proposed on both sites as part of the mitigation package, though this area accounts for less than 10 percent of the URA on 1800 Asylum Avenue and 19 percent on 1700 Asylum Avenue. In contrast, impervious area in the URA is proposed to increase by 148.5 percent on 1800 Asylum Avenue, and 5.1percent on 1700 Asylum Avenue.

Will the applicant also please verify the total existing and proposed impervious surface on each site? It is not clear what is presented in the Stormwater Management Report.

C2. SLR has noted design measures that would minimize the potential for further stream impairment, taken from the 2004 Stormwater Protection Manual. None of the measures for overdetention have been included in the design. Presently, the project is not designed consistent with the stream channel protection standards. To SLR, it does not appear that sufficient detail has been provided to verify that that no impairment to stream morphology will result from the project.

#### **Proposed Mitigation**

C3. The mitigation plan includes four actions at each site: wetland creation, wetland restoration, riparian enhancement, and buffer enhancement. The tabulation of each of



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these instruments has varied between the state reporting form, the APT report, the plan set and the Stantec Stewardship report. SLR believes that the mitigation areas as follows (**Table 3**):

The riparian enhancement work is specific to invasive species removal and replanting within the wetland boundary at St. Joseph's Brook and Trout Brook. The work area reflected in the mitigation table includes the entire wetland area, though the proposed plantable area is 20 percent of this total.

**Table 3: Proposed Mitigation Instruments** 

Resource Area	Buffer Enhancement (SF)	Wetland Creation (SF)	Riparian Enhancement (SF)*	Wetland Restoration (SF)*
	1700 A	sylum Avenue		
Wetland 6	75,620	-	-	-
St. Joseph's Brook	-	6,390	59,100	-
Total	75,620	6,390	59,100	-
* Please note planting is pr	roposed in 20% of this area	a (11,820 SF)		
	1800 A	sylum Avenue		
Wetland 1	8,745	8,130	-	149,540
Wetland 2	-	-	-	-
Wetland 1/2	3,853	-	-	-
Wetland 4	37,092	-	-	125,860
Trout Brook	5,000	-	82,770	-
Wetland 5	6,391	3,390	-	-
Total	61,081	11,520	82,770	275,400
* Please note planting is pr	roposed is 20% of this area	a (16,554 SF)		

Please verify that the numbers represent the total mitigation package.

- C4. SLR noted several comments on the mitigation notes in the last review letter, many were addressed but the following remain:
  - The threshold for wetland creation success has been increased to 75 percent or greater, hydrophytic vegetation from 50 percent on 1700 Asylum Avenue but not 1800 Asylum Avenue. Please make these areas consistent and 75 percent or greater.
  - Cut stump method was verified in the response letter but the potential for foliar spray was verbalized at the public hearing. Please clarify.
  - The Stantec report notes a monitoring period of ten years, in contrast to the 5 years identified in the APT report. Please clarify.
  - Please verify that the herbaceous seeding will take place using a seed splitter, as described, and scarification is not proposed.



Scientist and Soil Scientist Review

SLR Project No.: 141.11197.00054

Adaptive management of the mitigation areas will likely be required throughout the work

effort. Coordinating these activities with town staff is recommended to ensure that weekly or monthly progress memos are submitted during the herbicide treatment and planting periods.

#### **Additional Comments**

- C5. Permanent protection through a conservation instrument would benefit the long-term stewardship of these properties. A mitigation stewardship plan is included in the submittal but protection in perpetuity requires exploration. The BL Companies response letter noted a revised stewardship plan, but SLR notes a date of October 18, 2023. Is there a revised stewardship plan? Please identify the meadow maintenance protocol within the long-term management plan (LTMP).
- C6. Please augment the floodplain cross-sections on 1800 Asylum Avenue to include the proposed trail and box culvert to demonstrate that no fill is proposed within the floodway. Please label the floodplain and floodway elevations on the cross-section and label existing and proposed conditions.
- C7 Please update the earthwork plan to omit identified earthwork in Wetland 4.
- C8. Sheet C5.222 depicts S&E controls outside the limit of disturbance (LOD) on 1700 Asylum Avenue. Evaluating the overall project, the identified LOD does not reflect the full scope of proposed activities. This point was raised during the hearing with the LOD not reflecting the proposed mitigation. Perhaps two LOD lines are necessary to discern between the built environment work and the restoration efforts. The LOD requires updating between Wetland 1 and Wetland 2, as it is currently depicted, a complete hydrologic connection would not be viable.
- C9. The freshwater ponds (Wetland 3) require remediation and restoration. The scope of this effort is not clear presently. SLR recommends that no activities are approved in the pond, including the aeration systems, until more is understood about the existing and proposed conditions. Please also note that though these ponds have been used for stormwater management, it is SLR's opinion that historical aerials demonstrate that the ponds were excavated within riparian emergent wet meadow and not created within uplands.
- C10 The IWWA regulations under Section 10.3 "Considerations for a Decision" provides latitude for a "no-work" perimeter setback around Inland Wetlands and Watercourses boundary under the "site specific" method. Given the poor soil permeability, high groundwater at this site and floodway and floodplain, a no-work perimeter requires consideration to protect wetlands and watercourses in the long-term.
- C11. Please update the regulated activities figures within the APT report with the current layout on each site.



December 5, 2023

8

December 5, 2023 SLR Project No.: 141.11197.00054

The above comments reflect a detailed, iterative review of the proposed activities at 1700 and 1800 Asylum Avenue. In the November submission, the applicant has provided a revised design that reduces direct wetland impacts and work in the URA on both sites but increases impervious area within the URA. The design has improved over the course of the reviews, but consideration of feasible and prudent alternatives that minimizes the densification of the URA is recommended.

Thank you for the opportunity to assist you. Should you have any questions about this review, please contact Megan B. Raymond at 203.344.7889 or the email address below.

Regards,

**SLR International Corporation** 

Megan B. Raymond, MS, PWS, CFM

Principal Scientist, Wetlands & Waterways Lead

mraymond@slrconsulting.com

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December 4, 2023

Alter & Pearson, LLC Robin Messier Pearson 701 Hebron Avenue P.O. Box 1530 Glastonbury, CT 06033

Subject: 1700 Asylum Avenue - IWW #1203

1800 Asylum Avenue -& IWW #1205

#### Dear Attorney Pearson:

The Planning Division received the above-referenced revised applications and supporting materials, submitted by Weha Development Group, LLC and Weha Development Group East LLC on November 21<sup>st</sup> and reviewed all materials for conformance with the Inland Wetlands and Watercourses Regulations and the applicable provisions of the West Hartford Zoning Ordinances for impacts to Special Flood Hazard Areas and the following comments are offered for response and associated plan revisions.

- 1. The inland wetlands and watercourse applications (applications) shall address the review comments provided by the Engineering Division in the following memos:
  - a. Memo Re: 1700 Asylum Avenue; dated December 4, 2023 from Jason D. McCabe, Civil Engineer II
  - b. Note Review memo for 1800 Asylum Avenue is anticipated to be transmitted on December 5<sup>th</sup> and will be forwarded under a separate cover.
- The revised materials are still under technical review by SLR International Corporation (SLR), the Town's Wetland Soil Scientist consultant and an additional review memo is anticipated to be transmitted on December 5<sup>th</sup> and will be forwarded under a separate cover.
- 3. As noted in the prior staff comments, the proposed applications contemplate work within Special Flood Hazard Areas. Work within these areas is also subject to compliance with Section 177-8 Special Flood Hazard Area of the Zoning Ordinances which requires separate application for review (not subject to IWWA). "Staff notes that supplemental information was submitted in response to prior staff comments and is under review for compliance with Section 177-8. A separate review comment / memo will be issued once that review is completed.
- 4. In response to prior staff comments for request for information on any environmental remediation efforts (completed, underway or to be completed), including references to the existing wetlands permits which authorized certain building demolition and limited remediation, BL Companies indicated: additional testing for the presence of PCBs in soil and hardscape surrounding the buildings and additional testing of pond sediments is required and will be completed during the spring and summer of 2023. In a follow-up staff comments, asking for this testing information, BL Companies noted: "the results of the

samples taken onsite to CTDEEP for review. CTDEEP confirmed receipt and has acknowledged the results are under review but has provided no guidance to date. BL Companies expects response back from CTDEEP this month on guidance related to further testing or potential remediation." Most recently, BL Companies noted: CTDEEP responded to BL Companies initial sediment sampling results on 11/1/2023. CTDEEP provided an ecological risk numerical criteria for evaluation of PCB impacted sediments for remedial planning purposes. BL Companies is preparing to complete additional sediment sampling in the ponds and drainage swale areas at 1800 Asylum Street to address data gaps prior to development of a remedial action plan. Remedial strategies for addressing PCB-impacted sediment will likely include, but may not be limited to, the dredging and removal of impacted sediments. Applicant will need to return to the local agency for approval when additional sediment data is received and CTDEEP approves of remediation plans.

Please <u>submit</u> any correspondence / guidance received from DEEP, particularly, any relevant issues that could impact the proposed wetlands permits (construction sequencing, impacts to regulated recourses, etc.). The environmental remediation efforts should be coordinated and better incorporated into the wetlands plan sets. Staff acknowledges that the last response comments at least provides acknowledgement from the Applicant that this work will be subject to further wetlands permitting and/or modifications in the future but the current application should be supplemented with appropriate documentation of what is known to date regarding remediation and possible future wetlands permitting.

- 5. Staff acknowledges the Applicant's updated and enhanced the Alternatives Analysis Section in the Wetlands Assessments Report and its listing of continued exploration of alternatives. However, consistent with prior comments, the Applicant should expect this area of the report / application(s) to be critically reviewed by the Wetlands Agency in accordance with the requirements of Section 7 and Section 10 of the IWW regulations, particularly in instances were direct wetlands impacts are still proposed and an additional explorations and analysis of alternatives is highly encouraged.
- 6. Please verify the trees to be preserved and trees to be removed in the plan sets and recheck the planting schedules and symbologies (both the Landscape plan and wetlands mitigation sets, as identified during the public hearing). There still remain a number of conflicts between the various sheets in the plan documents.
- 7. Staff acknowledges that the Applicant eliminated and reduced many direct wetlands impacts to wetlands resources throughout both 1700 and 1800 Asylum Avenue, in response to prior staff comments, however, based on the most recent BL Companies responses and plan revisions, further elimination and / or reduction to the following areas should be explored:
  - a. The site "internal roadway" alignment for 1800 Asylum Avenue is still shifted westward towards Lincoln Avenue. In the prior iterations of the applications and project design the intersection was aligned as a "four-way" intersection directly across from Fox Meadow Lane. In its current design configuration, direct wetlands impacts to the southernmost extents of Wetlands 1 are still proposed. These impacts are both temporary and permanent and derive from the internal roadway configuration, its associated grading, impacts to the Asylum Avenue r.o.w. and proposed sidewalks.
  - b. The concrete box culvert "beneath the trail" at the southwestern corner of 1800 Asylum Avenue. While staff supports the extension of the trail and acknowledges the need for a crossing, the selection of the box culvert result in a direct impact, that may be partially

- or fully avoidable with a different type of stream crossing structure such as a traditional span bridge. This area of impact should be more carefully explored.
- c. The 6' wide mowed pathways identified in Wetlands 4.
- 8. As discussed during the public hearing, consideration of a change in the surface type and alteration of alignment to the internal trail most proximate to the Champion White Oak on 1700 Asylum Avenue should be explored to further reduce potential impacts to the root system of the tree.
- 9. Please provide a detailed section for each of the proposed trail-related pavement types, including boardwalk path sections, listed in pavement type legend on each plan set.
- 10. Please coordinate the monitoring timeframes associated with the wetlands mitigation plantings (and all plantings) to ensure consistency between the Land Stewardship and Management Plan, the Wetlands Assessment Report and the Wetlands Mitigation Plan Notes Details in each plan set.
- 11. While the proposed Land Stewardship and Management Plan provides standards and actions to maintain the identified goals within the mitigation areas, it does not provide for permanent protections. A conservation easement is should be considered in connection with the Land Stewardship Plan to ensure permanent protections given the density of the proposed development around the wetlands and watercourse resources.

In addition to the comments noted above, the prior Planning Staff comments #8 and #9 from the November 14, 2023 staff review memo remain for consideration.

If you have any questions on the above noted items please contact me at 860.561.7556.

Best Regards,

**Todd Dumais** 

Town Planner and Designated Wetlands Agent

C: Rick Ledwith, Town Manager
Gina Varano, Deputy Corporation Counsel
Duane Martin, Community Development Director

 $File: u/SDD/A sylum Avenue 1700-800\_IWW\_12003, 1205\_Planning Comments\_Dec 23$ 



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## **MEMORANDUM**

TO: Todd Dumais, Town Planner

FROM: Jason D. McCabe, P.E., Civil Engineer II

RE: 1700 Asylum Ave.

West Hartford, CT

IWW #1203

DATE: December 4, 2023

The Engineering Division (ED) has completed review of documents submitted by WEHA Development Group East, LLC as a response to ED Review Comments provided November 3, 2023, in connection with Permit Application IWW #1203 to perform certain regulated activities within inland wetlands and watercourses and/or associated upland review area for the redevelopment of 1700 Asylum Avenue, former location of the UCONN West Hartford Campus, specifically:

- Land Development Plans Issued for Permitting, Residential Development, 1700
  Asylum Ave., West Hartford, Connecticut, prepared for WEHA Development Group
  East LLC, West Hartford, Connecticut, prepared by BL Companies, Hartford,
  Connecticut, dated June 30, 2023, last revised November 17, 2023
- Stormwater Management Report, Residential Development, 1700 Asylum Avenue, West Hartford, Connecticut, prepared for WEHA Development Group East, LLC, dated June 30, 2023, last revised November 17, 2023
- Response to Comments letter to Mr. Jason D. McCabe, P.E., Civil Engineer II, Town of West Hartford, dated November 17, 2023

After review of these documents the ED offers the following disposition of comments made in Memorandum dated November 3, 2023, and additional comments based on further review of the submittal documents. Comments previously identified as "Comment addressed." are now noted as "N/A."

#### WETLAND MAP AMENDMENT (SHEET G1.020)

1. N/A.

#### ALTA/NSPS LAND TITLE SURVEY

- 2. N/A.
- 3. N/A.



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## **EXISTING CONDITIONS SURVEY**

4.	N/A.
5.	N/A.
6.	N/A.
7.	N/A.
8.	N/A.
9.	N/A.
<u>SI</u>	<u>TE PLANS (SHEETS 1.020 – 1.421)</u>
10	. N/A.
11	Comment (issued September 12, 2023) addressed. The ED will consider this comment addressed; however, given the impervious area under the proposal represents an increase over the existing conditions (3.5%±) and weighing this in combination with applicant responses to comments related to how the application proposes to provide water quality enhancements, the ED would encourage the applicant to continue vetting better alternatives to disconnect impervious area from the closed drainage systems.
12	. N/A.
13	. N/A.
14	. N/A.
15	.N/A.
16	.N/A.
17	.N/A.
18	.N/A.
19	.N/A.
20	. N/A.
21	.N/A.



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# 22. N/A. 23. N/A. 24. N/A. 25. N/A. 26. N/A. 27. Comment addressed. 28. N/A. 29. N/A.

32. Comment addressed.

## DRAINAGE PLANS (SHEETS C3.020 - 3.522)

GRADING PLANS (SHEETS 2.020 – 2.023)

See Additional Comments section of this Memorandum for further review of the Drainage Plans.

33. N/A.

30. N/A.

31. N/A.

34. N/A.

35. N/A.

36. N/A.

37. Comment remains not addressed. The ED previously noted the proposed curb cuts and riprap energy dissipation pads collect approximately 0.13 acres of the proposed 12.75 acres of impervious area (building roofs, asphalt parking, concrete walk), which represents 1.0%. Upon review of the grading plan, even within the proposed limit of disturbance shown, there appears to be room to allow for some level of additional sheet flow off the parking lot. Providing water quality treatment using a curbless parking lot and vegetated filter strip is preferrable over relying on hydrodynamic separators which require maintenance. If design guidance in the CT Stormwater Quality Manual for vegetated filter strips cannot be achieved, then some combination of



38. N/A.

# **Town of West Hartford – Department of Community Development** Engineering Division

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vegetated filter strips and hydrodynamic separators would be acceptable. The applicant is encouraged to review this alternative further.

39. N/A.
STORMWATER MANAGEMENT REPORT
See Additional Comments section of this Memorandum for further review of Stormwater Management Report.
40. N/A.
41. N/A.
42. N/A.
43. N/A.
44. N/A.
45. N/A.
46. N/A.
47. N/A.
48. N/A.
49. N/A.
50. N/A.



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# ADDITIONAL COMMENTS (September 11, 2023)

#### ALTA/NSPS LAND TITLE SURVEY (SHEET AL-1)

1. N/A.

#### EXISTING CONDITIONS SURVEY (SHEETS EX-1 - EX-4)

2. N/A.

### DEMOLITION PLANS (SHEETS C0.021 - C0.023)

- 3. N/A.
- 4. N/A.

#### SITE PLANS (SHEETS C1.021 - C1.421)

- 5. N/A.
- 6. N/A.
- 7. N/A.
- 8. N/A.
- 9. N/A.
- 10. N/A.
- 11. N/A.

#### GRADING PLANS (SHEETS C2.020 – C2.023)

- 12. N/A.
- 13. N/A.
- 14. Applicant response acknowledged. Comment addressed.
- 15. N/A.
- 16. Comment not addressed. Previous discussions with staff regarding this rain garden were productive in identifying actual benefits of this rain garden area given it appeared its proposed location will collect clean runoff from the northern and eastern wetland areas. During those discussions with staff and in response to other comments made in the November 3, 2023, Memorandum



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from the ED, the applicant identified other benefits such as evapotranspiration and nutrient uptake and assimilation. If the top of grate elevation of the yard drain is set at the bottom of the graded rain garden will these benefits be realized? Will the rain garden drain too fast? This comment also applies to proposed rain garden areas associated with Comments #17, #18, #32, #33, and #40 in this section. During a meeting conducted on November 28, 2023, the applicant indicated the grate elevation and associated grading could be modified to address this. Add spot grade indicating where and at what elevation the rain garden area will overtop. Maintain minimum 1-foot freeboard from overtopping elevation to building finish floor elevation.

- 17. Comment addressed. See Comment #16 above.
- 18. Comment addressed. See Comment #16 above.

#### FEMA FLOODPLAIN COMPUTATIONS (SHEET C2.620)

- 19. Comment (issued September 12, 2023) addressed.
  - i. Comment addressed.
  - ii. Comment addressed.
  - iii. Comment addressed.

20. N/A.

21. N/A.

22. N/A.

23. N/A.

24. N/A.

25. N/A.

26. N/A.

27. N/A.

28. Comment addressed.

29. N/A.

30. N/A.



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- 31. N/A.
- 32. Comment addressed. See Comment #16 above.
- 33. Comment addressed. See Comment #16 above.
- 34. N/A.
- 35. Comment partially addressed. In a meeting on November 28, 2023, this comment was discussed. The ED requested additional detail, including additional cross sections, to understand where the outlet controls are, horizontally and vertically, and how the discharges are routed through them. Any annotations referencing circular components should be revised/removed if no circular components are proposed.
- 36. Comment addressed.
- 37. Applicant response acknowledged. Comment addressed.

#### STORMWATER MANAGEMENT REPORT

- 38. N/A.
- 39. N/A.
- 40. Comment addressed. See Comment #16 above.
- 41. N/A.
- 42. N/A.
- 43. N/A.



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# ADDITIONAL COMMENTS (November 3, 2023)

- 1. Comment not addressed. The ED is not requesting that the applicant "truncate watersheds at the property line" and it is not requesting, nor is it required, that the applicant model the stream channels. However, the current methodology to model the two separate properties (1700 and 1800 Asylum Avenue) as one contiguous property is not acceptable. Both properties will be required to mitigate peak flows on their own. Given the proposed modelling does not account for upstream hydrologic contributions to Trout Brook and St. Joseph Brook, the design points should be modified such that Trout Brook and St. Joseph Brook are completely excluded from the analysis. This may mean non-discrete design points for areas of the site which directly discharge overland to Trout Brook Drive, Lawler Road, Trout Brook, and St. Joseph Brook, among others.
- 2. Comment addressed.
- 3. Comment addressed.
- 4. Comment addressed. Applicant indicates no work beyond proposed widening and that survey will verify.
- 5. Comment addressed.
- 6. Comment partially addressed. Review <u>all</u> plan sheets and consider turning off survey point numbers for existing trees. If existing tree point numbers are referenced somewhere else within the application documents, then leave these on in the appropriate plan subset or subsets, as appropriate.
- 7. Comment addressed.
- 8. Comment not addressed. Despite the applicant response that this structure sump elevation was revised in the StormCAD model, STRC-408 (CB-408) appears to still have a 2' sump in StormCAD output tables and HGL profiles with a reported structure bottom elevation of 83.24 compared to a pipe invert (OUT) elevation of 85.24.
- 9. Comment addressed.
- 10. Comment addressed.
- 11. Comment addressed.
- 12. Comment addressed.



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- 13. Comment addressed.
- 14. Comment addressed.
- 15. Comment not addressed. This comment was mostly related to the proposed drainage connections to the existing drainage system on Trout Brook Drive. Because this system is directly connected to the existing box culvert under Trout Brook Drive the StormCAD model should use the same methodology as used for the drainage systems discharging to St. Joseph Brook. The HGL profiles suggest starting HGL is lower than the FEMA 100-yr base flood elevations.
- 16. Comment addressed.



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# ADDITIONAL COMMENTS (December 1, 2023)

- 1. Provide a vertical exaggeration for the FEMA Floodplain Cross Sections (Sheet C2.622) and use a thinner line weight for the proposed grade.
- 2. For the check valves, what is the contribution to system head loss, if any? Was this accounted for in the drainage computations.
- 3. Please clarify what the difference is between check valves being installed with flange at "downstream" and "upstream" end of structure.
- 4. Revisit STRC-204 as a hydrodynamic separator instead of CB-209, CB-211, and STRC-101.
- 5. Verify STRC-109 top of frame elevation; appears too low.
- 6. Verify pipe diameter for pipe P-114. There is a discrepancy between the plans and StormCAD model output tables.
- 7. Verify 100-yr tailwater elevations for the structures identified in Appendix E. For the structures associated with 1700 Asylum Avenue these values appear too low and do not match the established FEMA base flood elevations on the Flood Insurance Rate Map (FIRM).
- 8. Are the 10-yr tailwater elevations for the structures identified in Appendix E free discharge elevations?
- 9. For SSDS #202, the tailwater imposed on the discharge end does not match the 100-yr tailwater elevation given for STRC-302 in Appendix E nor is it the FEMA base flood elevation at that location. Verify.
- 10. The HydroCAD model uses the 100-yr FEMA base flood elevation at the discharge locations for the starting tailwater for all storm events, and the Peak Flow table in Section 2.1 of the drainage report is based on this. At lower starting tailwater elevations would the same conclusion regarding pre- and post-construction peak flow rates be valid?
- 11. The previous Stormwater Management Report included two sets of HGL profiles and output data tables representing different tailwater conditions. The current submission only includes one set. Please confirm.
- 12. For the HEC-RAS Analysis, do the river stations given match the FEMA river stations in the current FEMA Flood Insurance Study?



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Please provide written responses to these comments with the next submission, including any updated or new documents that may be required for this office to complete review.

Cc: Greg Sommer, P.E., Town Engineer