April 22, 2024

RESPONSE MEMO

This memo serves as a response to the comments received on 4/4/2024 from The City of Waukesha. Sigma responses are indicated in red.

To: Brandon Schwenn, Deputy Director/City Engineer

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Cc:

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EROSION CONTROL

1. Show location of Proposed Tracking Pad and Proposed Silt Fence on the erosion control plans.

Sigma Response 1: The proposed tracking pad has been added to the western entrance of the site. Silt fence has been added around the perimeter of the site.

SANITARY SEWER COMMENTS

1. All the sanitary sewers serving the project area shall be investigated and/or televised to determine if the area active and in need of repair. Any unused sewers shall be abandoned at the connection point with the public sanitary sewers.

Sigma Response 1: Understood. Televising of the sanitary sewer is being coordinated. Abandonment of any inactive sanitary sewer is called out on sheet C002.

STORM SEWER COMMENTS

1. C300 shows a new storm sewer into the right of way. Sheet C200 does not indicate any replacement sidewalk.

Sigma Response 1: Removal of the sidewalk and curb for the storm sewer installation has been added to sheet C002. Sidewalk and curb replacements are now shown on sheets C100 and C200.

2. Be aware that the existing 12" storm sewer on the site running east-west beginning at the inlet along the east side of Maple Ave with the rim grade of 817.78 has jog in it once it leaves the city inlet. From the inlet, the 12" PVC sewer heads to the east to approximately the sidewalk where it turns south for approximately 30 feet. At this point it heads east onto the property. The record drawing showing this routing can be provided upon request.

Sigma Response 2: The existing storm sewer connecting to this inlet has been updated per the record drawings provided by the City.

3. The new sewer from Storm MH 3.0 connecting to the city existing inlet indicates a new invert of 814.11 at the inlet. Any connection to the east will need to meet the existing east invert of 814.23.

Sigma Response 3: The invert of the proposed pipe at the east side of the inlet has been revised to 814.23.

4. Any storm sewer within the right of way to be reinforced concrete pipe.

Sigma Response 4: The pipe that enters to right-of-way on the west side of the site is now called out to be reinforced concrete piping.

5. Be aware there is an existing utility pole in the right of way very close to the sewer noted in comment #3.

Sigma Response 5: Notes have been added to Sheets C002 and C300 noting to protect the existing utility pole located by this storm sewer.

6. Assuming the existing north-south 12" PVC sewer noted in comment #2 will not be utilized, add a note to the plans that this sewer is to be bulkheaded.

Sigma Response 6: A note has been added to C002 stating that the existing storm is to be bulkheaded.

7. Where is the location of the spillway for the biofiltration basin?

Sigma Response 7: The biofiltration basin has been removed from the plans. TSS removal for the site will now be provided by an UpFlo Filter located at Storm MH 5.0

8. Verify elevation along south property line is such that flow that exceeds the bioretention basin capacity does not direct water to the property to the south.

Sigma Response 8: The biofiltration basin has been removed from the plans.

9. The biofiltration basin detail indicates cleanouts. Where are these located on the Utility Plan?

Sigma Response 9: The biofiltration basin has been removed from the plans.

10. The biofiltration basin detail indicates the crest elevation and top of basin elevation to both be 818.00. How will excess water be directed where intended?

Sigma Response 10: The biofiltration basin has been removed from the plans.

11. Biofiltration basin detail indicates overflow structure diameter as 42" while notes on Sheet C501 note 36" diameter.

Sigma Response 11: The biofiltration basin has been removed from the plans.

12. For subsequent submittals, in accordance with Wisconsin Administrative Code A-E 2.02(4), the Storm Water Management Report is to be signed, sealed, and dated by the registrant or permit holder who prepared or directed and controlled preparation of the written material.

Sigma Response 12: We will provide signed and sealed documents when plans have final approval.

13. In the Design Analysis section of the report, it is noted WinSLAMM 10.3.4 was utilized. It appears that WinSLAMM 10.5.0 was used.

Sigma Response 13: The WinSLAMM version used was changed to WinSLAMM 10.5 in the Design Analysis section of the stormwater narrative.

14. For the biofiltration basin, a 48" horizontal orifice is used as the upper overflow device in the HydroCAD calculations. The plans call for a 42" diameter structure with a beehive grate that is about 24" wide. In the WinSLAMM calculations, the standpipe is noted as 4 feet diameter.

Sigma Response 14: The biofiltration basin has been removed from the plans.

15. The stormwater calculations indicate modeling the underdrain as an orifice/grate which it really is not. Reviewing the HydroCAD literature for rain gardens, they suggest:

a. Device#1=Culvert, Routing=Primary (Pipe accepting flow from the riser and underdrain)

b. Device#2=Horizontal Orifice, Routing=Device#1 (Overflow into top of riser, routed to culvert)

c. Device#3=Exfiltration, Routing=Device#1 (Media flow, routed to culvert)

Sigma Response 15: The biofiltration basin has been removed from the plans.

16. The WinSLAMM calculations note an infiltration rate of 0.5 in/hr. The plans indicate an impervious liner.

Sigma Response 16: The biofiltration basin has been removed from the plans.

17. The WinSLAMM calculations note a solids reduction due to flow through engineered soil of 80%. 80% is only appropriate for an engineered soil filtering layer that meets the requirements of Technical Standard 1004. TS 1004 requires a soil depth of at least 3 feet.

Sigma Response 17: The biofiltration basin has been removed from the plans.

18. The WinSLAMM inputs for CB 1 and CB 2 note an outlet pipe slope of 0.68 ft/ft. It appears this should be 0.0068 ft/ft

Sigma Response 18: The pipe slopes for CB 1 and CB2 have been updated to the correct values in the WinSLAMM model.

19. The existing catchbasins are noted as 48" diameter with a sump depth of 2 feet. Provide verification of the existing catchbasin sizes and sump depth.

Sigma Response 19: Existing catch basin sumps and sizes have been confirmed in the field. The northern existing catch basin is a 36" diameter structure with a 1-foot sump. The southern catch basin is a 48" diameter structure with a 1-foot sump. The WinSLAMM model has been updated to reflect this.

20. The WinSLAMM results indicate the biofilter is expected to clog in just under 6 years. Is the owner prepared to replace the media at such a short interval? Media replacement interval language will need to be added to the Stormwater Maintenance Agreement.

Sigma Response 20: The biofiltration basin has been removed from the plans.

GENERAL COMMENTS

1. A record drawing of the storm sewer facilities sealed by a professional engineer or registered land surveyor shall be submitted to the Engineering Division.

At a minimum the drawing should include:

- Rim/cover elevation
- Invert elevation
- Distances
- Slopes
- Materials
- Contractor
- Installation dates (mouth and year completed)
- Any notes related to major field changes (e.g. additional/deleted structures, etc)

- Signed and sealed by professional engineer or registered land surveyor
- AutoCAD drawing for importing into GIS

A redlined copy of the plans with the proposed information crossed out and the actual information next to it is acceptable and helps the review process.

Sigma Response 1: Understood. Record Drawings will be provided upon completion of the project.

2. Submit a Stormwater Maintenance Agreement document. A sample document can be provided upon request.

Sigma Response 2: A Stormwater Maintenance Agreement has been provided with this submittal.

3. A stormwater easement will need to be created for the Biofiltration Basin.

Sigma Response 3: The biofiltration basin has been removed from the plans.

STREET DESIGN

1. Provide a minimum of a 1 FT sidewalk easement for future maintenance.

Sigma Response 1: A proposed 1-ft sidewalk easement has been added along the western property line and is shown and labeled on sheet C100.

2. I thought I remember there was talks between Caroll and PRF regarding running the New Berlin Trail connector through this property. Would this still be part of the plan?

Sigma Response 2: Meeting between Carroll University and the City of Waukesha Park/Rec/Forestry Department is planned for a future date.

STREET DESIGN

1. City fiber is aerial on We Energies poles along Maple Ave along the property. if the poles need relocation for a project, owner/developer is responsible for all costs. Contact Jeff Hernke jhernke@waukesha-wi.gov with any questions.

Sigma Response 1: No relocations for the poles along Maple Avenue are proposed for this project.

TRAFFIC

1. Will have to receive approval from railroad to install sidewalk on their R/W.

Sigma Response 1: Understood.

2. Plan shows the wrought iron fence being installed on top of the proposed sidewalk to Grand Avenue.

Sigma Response 2: Fence is no longer being shown on top of the proposed sidewalk.

3. May want to install appropriate pavement marking and/or signage to convey the one way aisles.

Sigma Response 3: Pavement markings and signage have been added at critical locations near the one way aisles in order to properly convey traffic. Labels for this signage has been added to sheet C100.

4. Need to have a meeting with City of Waukesha Park/Rec/Forestry and City of Waukesha Engineering Department about possible expansion of the

Sigma Response 4: Meeting between Carroll University, City of Waukesha Engineering Department, and the City of Waukesha Park/Rec/Forestry Department is planned for a future date.

FIRE

1. Fire Department vehicles will not be able to navigate the Northeast corner of the parking lot.

Sigma Response 1: The site plan has been revised to allow for fire department vehicles to navigate the northeast corner of the parking lot.

GENERAL ENGINEERING

1. Depending on the final design, the below listed permits or approvals may be needed. Please submit digital copies of permits to City for filing prior to starting construction.

    a. City of Waukesha Storm Water Erosion Control Permit if disturbance over 3,000 sf

    b. Wisconsin DNR NOI, and NOI for fill site, if disturbance over 1 acre

    c. City of Waukesha – Engineering Division Construction Permit for all RW work.

    d. Approved Stormwater Maintenance Agreement.

Sigma Response 1: Understood. Permits will be applied for as the project progresses.

2. Additional required submittals, fees, financial guaranties needed prior to issuance of building permit include:

    a. Financial guaranties

    b. Applicable sewer connection charges per Chapter 29.11(c) will be owed to the City for this project.

    c. ty Storm Water Permit. This permit will need to be obtained prior to starting work, and obtaining a building permit.

Sigma Response 2: Understood. Permits, fees, and financial guarantees will be provided as the project progresses.

3. The construction drawings, and financial guarantees should be reviewed and approved prior to the construction being started and building permit issued. If the location of any work needs to be changed as a result of the approved construction drawings, the drawings should be updated to reflect the needed changes.

Sigma Response 3: Understood.

4. In accordance with Wisconsin Administrative Code A-E 2.02(4): Each sheet of plans, drawings, documents, specifications and reports for architectural, landscape architectural, professional engineering, design or land surveying practice should be signed, sealed, and dated by the registrant or permit holder who prepared, or directed and controlled preparation of, the written material.

Sigma Response 4: We will provide signed and sealed documents when plans have final approval.

5. Submit copy of geotechnical report. Confirm elevation of water table on site.

Sigma Response 5: Geotechnical report will be provided when received.

6. Add note that all work within City right of way and City easements to be in accordance with current City Standard Specifications and details.

Sigma Response 6: This note has been added to all relevant plan sheets.

7. Add note: Notify City Engineering Dept. 5 days prior to work in City right of way.

Sigma Response 7: This note has been added to all relevant plan sheets.

8. Add note to drawings: Limits of final City street pavement and curb and gutter removal and replacements to be marked by City Engineering staff in field. This includes at the storm sewer connection to the existing inlet between the two driveways.

Sigma Response 8: This note has been added to all relevant plan sheets.

9. Show accessible ADA route from ADA parking spots to building entrance.

Sigma Response 9: Accessible ADA routes are now shown on sheets C100 and C200

10. See all other comments, including stormwater requirements.

Sigma Response 10: Understood.

11. Horizontal datum should be updated to NAD 1983/2011. See Existing Condition Survey, and City design guidelines.

Sigma Response 11: NAD 1983 is the horizontal datum used, a note has been added to sheet C001 indicating this.

12. Submit all required checklists for Development Submittals. See City's Development Handbook.

Sigma Response 12: Required checklists for Development Submittals are now provided with this submittal.

13. Verify pedestrian path connection near RR R/W is approved approach for pedestrian usage with railroad and railroad safety study.

Sigma Response 13: Pedestrian path connection is now shown based on the diagram shown on the railroad corridor safety study.

PLANNING

1. Landscape plantings should extend along the Maple Ave. frontage to provide a buffer between the sidewalk and parking lot and along southern side of parking lot adjacent to the residential property.

Sigma Response 1: Landscape plantings have been added per above comments.

2. Work with the railroad in designing an acceptable pedestrian access at the north east end of the site.

Sigma Response 2: Pedestrian access is now shown at the north east end of the site.

3. Provide lighting plan details and photometric plan for the parking lot.

Sigma Response 3: lighting and photometrics will be forwarded separately.

4. Proved details of the fences.

Sigma Response 4: Details of the fences are now shown on the Landscape Plans, see sheet L201.

WATER UTILITY

1. The existing 8-inch water service serving 211 Maple Ave must be properly abandoned by the owner, by cutting and capping the service at the water main in the street. The meter must also be removed from the existing building to be demolished.

Sigma Response 1: A note has been added to sheet C002 stating that the existing 8" water service is to be cut and capped at the main. Pavement removals associated with work have also been added to sheet C002. A note has been added to sheet C002 stating that the existing water meter for the building is to be removed.