Public Works Meeting Notes
September 8, 2020

Members Present: Doug Vierzba, Dale Melberg, Mic Tchida, Tom Swenson
Others Present: Ted Strand, Mike Lyonais, Dave Nevin, Phil Martin, John Graupman, and Gordy Wagner (zoom), Dave Reese from Widseth, Dave Schrupp, Marcia Volz, Patty Norgaard, Bill Reed, John Andrews

1. **Call to Order at 4 pm.**

2. **Approve August 3rd, 2020 Meeting Minutes**. ***Motion by Tchida, second by Swenson, all in favor to approve the notes, with the following changes on page 2 and 3. Page 2 reads "Dave Reese that…, should be Dave Reese stated that". Page 3, 9th line reads "processed" and should read "process".***

3. **Bill Reed-Discuss Sewer Easement at Reed's Market.** Bill Reed discussed his request to have the East West dedicated drainage and utility easement on land he owns north of Reed's Market in Town Square be reduced in width. Tom Swenson asked that if the width is reduced by the city, that should a need arise in the future regarding said easement, that Bill Reed will work with the City to accommodate. The need for sidewalks in the Town Square area was discussed and Bill Reed indicated he will work with the City on same. Dave Reese was asked to review the request and come back to the Commission with a response/recommendation. Bill Reed also asked about adding fill to a property he owns by the Cedar Chest. Bill is to contact Jon Kolstad.

4. **Bio-solids Project-John Graupman (Bolton and Menk) discussion.** John presented the attached letter summarizing the need for the Bio-Solids project at the WWTF. Ted is currently working on a Pilot project to prove the concept of reducing the amount of Bio-solids in the event the MPCA implements changes to disposal making it more difficult and costly to dispose. He indicated that parts just arrived for him to work on the project. Given the 1.0 Million estimated project cost, Commission and Council members present were leery about the project given all the other City projects on the list as well as the fact that the MPCA has not made a decision at this point regarding changing disposal methods/locations. It was felt that it might be good to complete the engineering tasks to get the project shovel ready.

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VIA EMAIL

September 1, 2020

Ted Strand
City of Crosslake
37028 County Rd. 66
Crosslake, MN 56442-2528
publicwk@crosslake.net

RE: Biosolids Update
City of Crosslake, Minnesota
Project No. M25.119925

Dear Ted:

This letter is a summary of the biosolids planning considerations and impacts to the City of Crosslake regarding its biosolids treatment and disposal options and potential improvements.

The City of Crosslake currently utilizes a heated biosolids digestion process in its underground tanks. These tanks provide both treatment and storage of liquid biosolids (typically two percent solids). The City is currently disposing of solids by hauling the biosolids multiple times per year to a facility in Pine River that utilizes a reed bed treatment process. The current arrangement has worked well but is facing growing obstacles. The storage volume requires more frequent hauling and creates problems with winter storage limitations as the Pine River Facility is also not able to process in the winter. Second and more importantly, the reeds used in the natural treatment process have recently been classified as noxious weeds. This results in much more expensive disposal since the reeds can only be landfilled and have transportation limitations. The process is not officially banned but is essentially being regulated into obsolescence with the noxious weed classification of the reeds (see attached Department of Ag memo.)

The city does not have a long-term contract with Pine River; therefore, as the Pine River Facility nears reaching its design life in conjunction with the reed treatment process limitations, it is prudent to plan for future disposal options.

Note the other community within a reasonable drive distance, Brainerd, is limited on biosolids capacity and is beginning the same process of reviewing biosolids improvements; therefore, they are not a candidate for regional treatment at this time, and their future ability is unknown.

Biosolids processing and disposal is often based on the concept of handling a liquid product or dewatering to a cake product (15-20 percent solids) with a consistency similar to topsoil. Liquid biosolids are directly land applied for final disposal, while dewatered solids can be either land applied or disposed of in a landfill. We have performed a preliminary review of alternatives for both liquid and dewatered solids with City staff including:

- Additional liquid storage tanks with land application;
- Construct drying beds for dewatered cake;
- Construct biosolids dewatering tower for dewatered cake.

Option 1 – Additional Storage Tanks

Liquid storage and land application of solids is a common method of handling biosolids, particularly in the agricultural areas of the state. Land application sites need to be permitted which pass a public notice period. Sites must meet a set of criteria for soil type, ground slope, setbacks, etc. to ensure no runoff and nuisance issues. Permitting sites has become a growing issue for communities based both on limited land meeting the criteria and public resistance to municipal biosolids application.

Recommended storage volume is 365 days to allow fall application. Spring application is increasingly difficult due to road restrictions adding hauling costs, soil compaction concerns and changing farming practices limiting available time. It is also preferable to have sites near the wastewater treatment plant (WWTP) to limit hauling time and costs.

The City of Crosslake is located in an area with limited agricultural land, which makes land application a challenge both logistically and with public perception. For this reason, many communities in similar geographic regions have been moving away from liquid biosolids disposal.

Option 2 – Construct Drying Beds

Drying beds have a sand base that allow the clear liquid in biosolids to drain to a pump station while capturing the solids, allowing them to air dry naturally. These are of a similar style to reed beds but do not utilize reeds, and also require removal of biosolids multiple times a year. Drying beds are limited in operation during winter months, requiring the beds to be sized large enough to treat all the solids in the summer months. The large area needed for this is a challenge for the city. The WWTP does not currently have adequate space for construction of this alternative.

Once dewatered, the hauling volume is decreased by 90 percent, saving substantial costs. Final disposal can be either land application or landfill cover. Landfill cover is an effective option as it is not tied to seasonal farming practices but can be performed year round.

Drying beds would increase staff time to operate the beds, while decreasing hauling time and cost associated with handling liquid solids; however, given the lack of available land, this is not considered a viable alternative.

Option 3 – Construct Biosolids Dewatering Tower

This alternative would utilize a filter bag hung in a tower, allowing biosolids to dewater similar to the drying beds, but constructed within a small building to allow winter operation. The technology is essentially a hybrid of the natural drying beds and more complicated mechanical dewatering methods used by larger municipalities.

The final product (again with 90 percent volume reduction) would be targeted as landfill cover, although land application is an option.

This option will fit within the existing WWTP land area. The process can be pilot tested with smaller sample bags provided by the vendor at no cost. Staff is in the process of pilot testing this to confirm viability of the City's biosolids with this process.

Pending positive pilot testing, this option is the most viable and requires the least infrastructure improvements.

While all alternatives could be viable, the current preferred alternative is the biosolids dewatering tower. This is anticipated to be one of the lower cost alternatives, requires the least property area, and provides a high degree of operational flexibility.

The components of the final project are anticipated to include:

- Dewatering tower;
- Drain lift station;
- Feed pump station;
- Polymer feed system;
- Chemical building;
- Site layout and drainage;
- Road access for trucks;
- Electrical and SCADA upgrades.

City staff is being proactive in positioning the City to achieve independence and control of its biosolids processing and disposal prior to it becoming an emergency. We would recommend continuing with planning and design to get "shovel ready". Construction is projected for 2021, but can be delayed short-term as long as Pine River has capacity.

A full schedule is as follows:

- City Approval — September/October 2020
- Piloting — In-Process
- Design Improvements — November 2020-January 2021
- Bid Improvements — February-March 2021
- Construction (tentative) — May-December 2021

We appreciate this opportunity to assist the City of Crosslake with the identified WWTP improvements. If you or the Council should have any questions, please feel free to contact us at (507) 380-0433.

Sincerely,

Bolton & Menk, Inc.

John Graupman, P.E.
Principal Environmental Engineer

JG:bja

cc: Phil Martin – Bolton & Menk, Inc.

Enclosure:

- MN Dept. of Ag Permit Conditions/Best Management Practices for Land Application of Biosolids with Non-Native Phragmites

5. **Discuss increase of Sewer Usage Charges ($50/month currently).** Ted presented a document showing recent adjustments to the sewer rate. After discussion by the Commission, a ***Motion was made by Swenson, second by Vierzba to increase the rate to $52/month beginning in January 2021. All in favor.***

6. **Review Language in Current Assessment Policy Related to Roads and need to make Ordinance Amendment (see page 6).** The discussion at hand related to Overlays of roads in the city and whether or not to assess. The current policy states that overlays are assessed as an improvement (bottom of Page 6 states this, attached copy). Most of recent years road work involved total reconstruction and the topic of overlays has not surfaced. The Road Plan for 2021 involves overlays as a way to extend the life of those roads that have acceptable base material as a method to reduce the overall annual cost of road maintenance. Overlays have not been discussed or used in past years road work in the city until now***. Motion by Vierzba to recommend that we do assess for Overlays and that we obtain Benefit Appraisals for same for each project. Second by Melberg, all in favor.***

given improvement, such aid will be used first to reduce the "city cost" of the improvement. If the financial assistance is greater than the "city cost," the remainder of the aid will be placed in the capital improvement fund to be applied towards other city projects.

(7) *Assessable property.* Property owned by the city including municipal building sites, parks and playgrounds, but not including public streets, alleys, and right-of-way, shall be regarded as being assessable on the same basis as if such property was privately owned. Private right-of-way shall be assessable. Federal, state, and county owned properties are not considered assessable.

(Ord. No. 358, 8-12-2019)

Editor's note— Ord. No. 358, adopted Aug. 12, 2019, amended § 42-93 in its entirety to read as herein set out. Former § 42-93 pertained to schedule of public meetings for certification of assessments, and derived from Ord. No. 94, § 2(10.4), adopted Feb. 9, 1998.

Sec. 42-94. - Policies of reassessment.

The city shall design public improvements to last for a definite period. The life expectancy or service life shall be as stated in the policy statement of this section, or if different, shall be as stated in the resolution ordering improvement and preparation of plans.

Policy Statement

The following are the "life expectancies" or "service lives" of public improvements except as may be otherwise stated in the resolution ordering improvement and preparation of plans.

(1) Sidewalks—20 years.

(2) Street improvements, including surfacing and curb and gutter—20 years.

(3) Ornamental street lighting—20 years.

(4) Sanitary sewers—30 years.

(5) Storm sewers—30 years.

(Ord. No. 358, 8-12-2019)

Editor's note— Ord. No. 358, adopted Aug. 12, 2019, amended § 42-94 in its entirety to read as herein set out. Former § 42-94 pertained to costs to be assessed, and derived from Ord. No. 94, § 2(10.5), adopted Feb. 9, 1998; ; Ord. No. 114, § 2(10.5), adopted Oct. 13, 1999; and Ord. No. 259, § 1(10.5), adopted July 14, 2008.

Sec. 42-95. - Assessment computations.

The following is the typical city assessment for various specified improvements:

(a) *Street, bridge, trail, and curb and gutter improvements.*

(1) *New construction.* New streets are assessed 100 percent to the abutting benefited properties.

(2) *Currently maintained bituminous roads.* Street reconstructions and overlays are assessed based on the benefit as determined by the city council based on the city's appraiser determination.

7. **Update from Phil Martin on Storm Sewer Project.** Phil Martin presented the attached document at the meeting. He indicated the final plans would be completed by the end of October 2020. The plans indicate 4 locations for drainage ponds: North of the Ambulance facility by the Public Safety Facility, Old Log Church, Simonson's Lumber and Moonlite Square. He indicated the county has stated that their 1978 vintage storm sewer piping has reached end of life and will need to be replaced; how the costs for same will be covered is under discussion. Tom Swenson asked if we can extend the grant for the project and what was the county's schedule for #66 reconstruction (2024 in past discussions for mill and overlay by the county). He also asked if we can use the grant monies for land acquisition. Mike Lyonais will continue to work with Melissa Barrick regarding an extension of the Grant. Right now the grant must be used by December 2022. Mike reiterated the need to have a real project/contract in place to obtain the grant monies. We do not have this at this time.

City of Crosslake

From: Phil Martin <Phillip.Martin@bolton-menk.com>
Sent: Thursday, September 3, 2020 10:27 AM
To: Char Nelson
Cc: Ted Strand; Mike Lyonais (mlyonais@crosslake.net)
Subject: PW Meeting - Update
Attachments: BMP & Storm Sewer Reconfiguration 6-29-2020.pdf

Hi Char

My update for the PW Meeting is as follows:

We have continued on the design of the sanitary sewer and storm water quality on CSAH 66. For your review I have attached the developed storm water quality concepts that we need to further discuss with the City, Log Church, and Simonson Lumber. We don't anticipate much discussion with Moonlite Square and we are only intending to upgrade within the County right-of-way.

In addition, we recently met with Rob Hall from Crow Wing County to discuss impacts to the existing storm sewer pipe. We understand that the pipe was installed in 1978.

Within the project scope, there is 1,929 lin ft of existing storm pipe. Because of the depth of the sanitary sewer, proximity of the storm pipe to the proposed sanitary sewer pipe alignment, and storm pipe changes related to the stormwater quality basins, we anticipate impacts to all but 283 lin ft of storm pipe.

Based on discussions with the County, they are considering the pipe impact and if they want to consider replacing the remaining pipe as well. We anticipate further discussions regarding replacement scope and cost participation associated with their direction.

We are proceeding toward completing the plans and intent to have a 90% plan completed in mid-October for County review.

Thanks

Phil Martin P.E.
Principal Engineer
Bolton & Menk, Inc.
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Baxter, MN 56425-8676
Phone: 218-825-0684 ext. 2864
Mobile: 218-821-7265
Bolton-Menk.com

Cross Lake Water Quality Improvements
Crosslkae, MN

Figure 1 -City Hall Storm Sewer Configuration
June 2020

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City

Cross Lake Water Quality Improvements
Crosslkae, MN

Figure 2 - Old Log Church Storm Sewer Configuration
June 2020

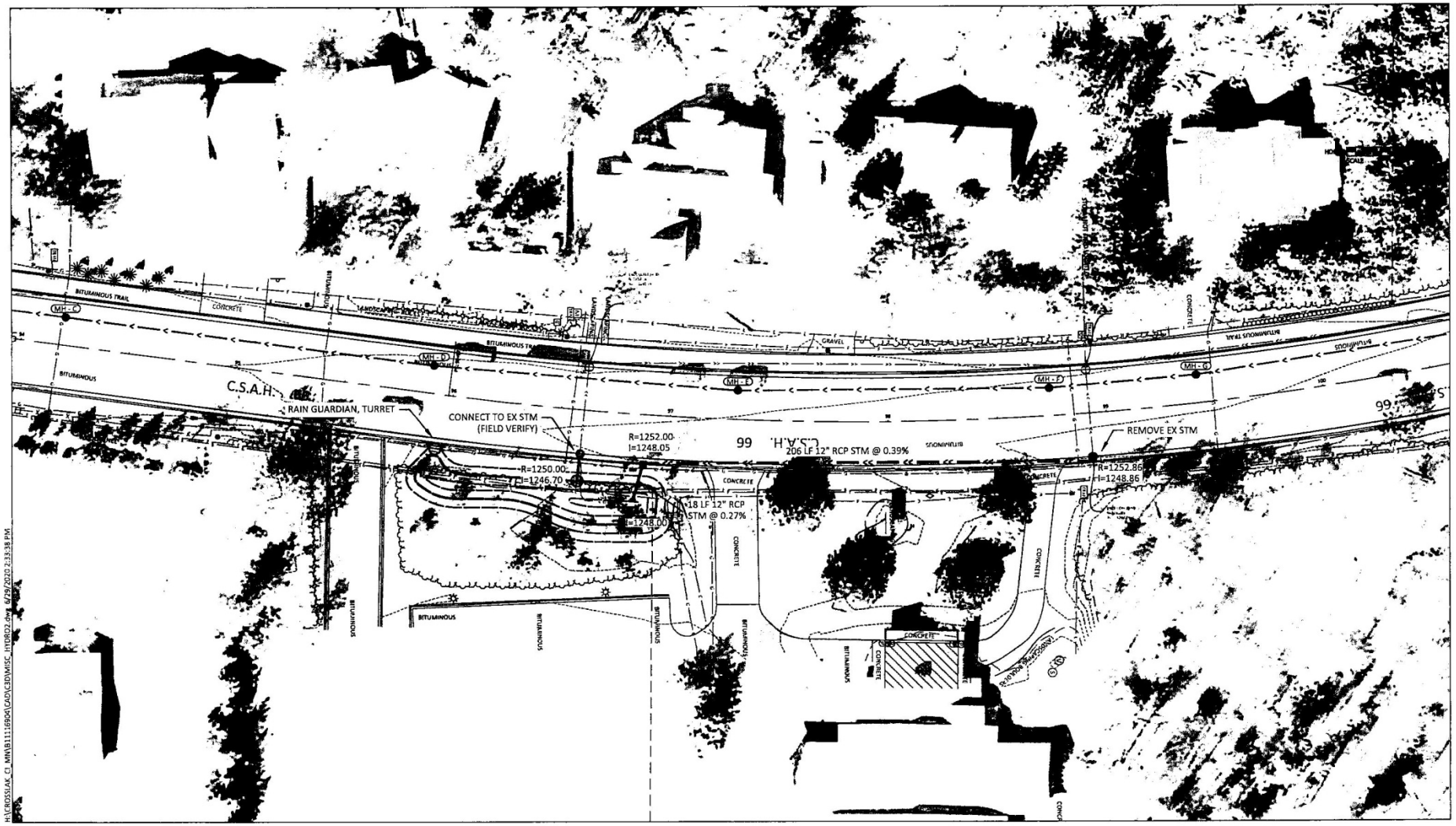

Figure 3 - Simonson Lumber Storm Sewer Configuration
June 2020

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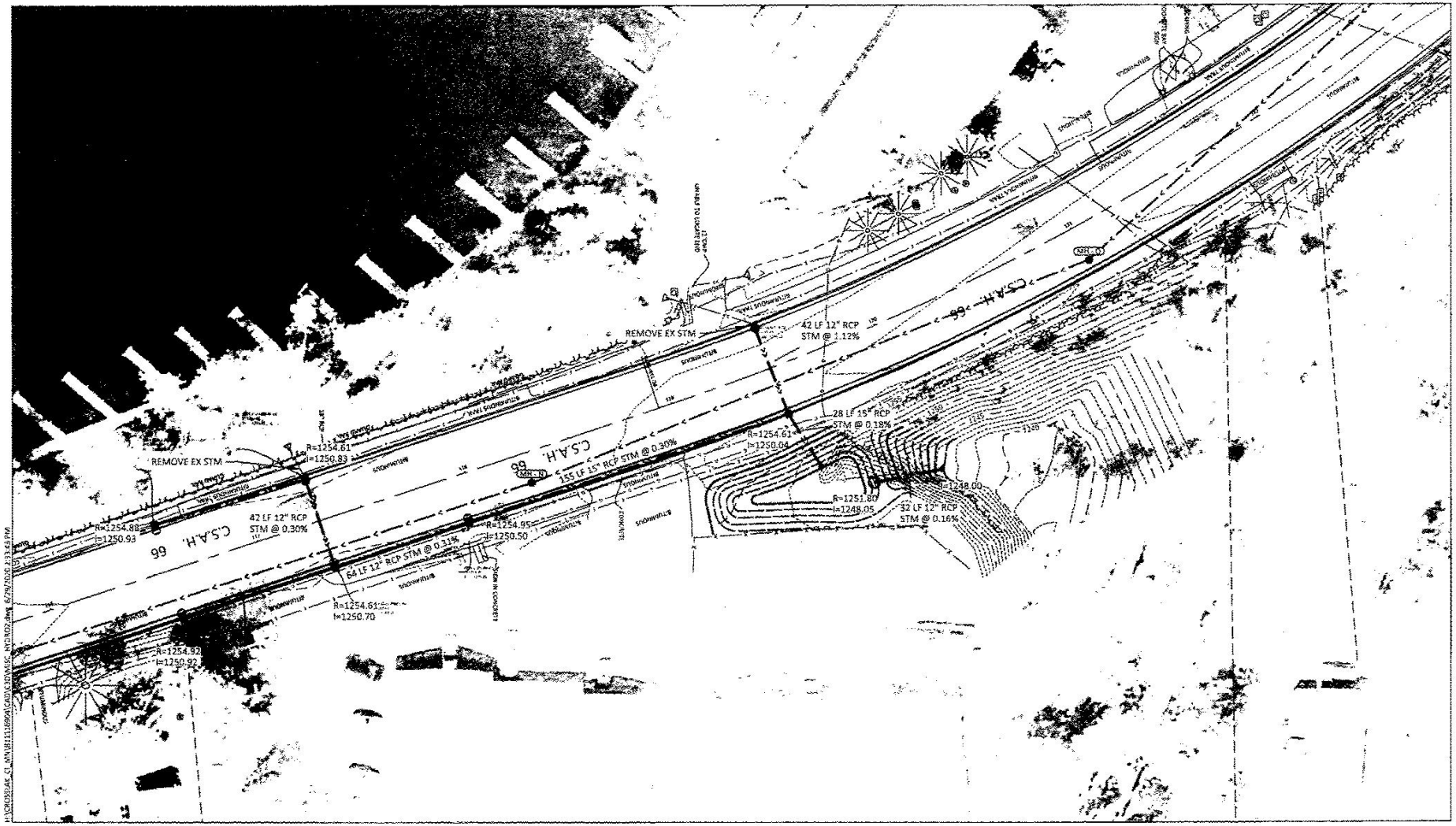

Dimension

Cross Lake Water Quality Improvements
Crosslkae, MN

Figure 4 - Moonlite Square BMP Configuration
June 2020

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MOONLITE SQUARE

8. **Other Business as may arise.** None
9. **Adjourn.** Meeting adjourned at 5:15.
   Notes by Dave Schrupp