SPECIAL MEETING
PUBLIC WORKS AGENDA
CITY OF CROSSLAKE
THURSDAY, NOVEMBER 19, 2020
10:30 P.M. – CITY HALL

1. Call to Order
2. Approve October 5, 2020 Meeting Minutes (Motion)
3. Proposal from In Control for Lift Station Control Panel Replacements
4. Proposal from Bolton & Menk for Clarifier Rehabilitation
5. Proposal from Bolton & Menk for Biosolids
6. Review Draft Assessment Costs Associated with the Sewer Extension to County Road 16
7. Adjourn

2.

Public Works Meeting Notes
October 5, 2020

Members Present: Doug Vierzba, Mic Tchida, Tom Swenson, Gordy Wagner (via Zoom)
Others Present: Ted Strand, Mike Lyonais, Phil Martin from B & M, Dave Reese from Widseth, Dave Schrupp, Patty Norgaard, John Andrews, Aaron Herzog, TJ Graumann.

1. **Call to Order**. Meeting called to order at 4 pm.

2. **Approve September 8, 2020 Meeting Minutes**. ***Motion by Tchida, second by Swenson, all in favor*** *to recommend that the Council approve the notes. Vierzba commented that item 6 motion on page 5 was missing the following after the word recommendation; "to the council". Tom Swenson asked if seal coating was to be assessed. Doug Vierzba stated that it would not be assessed, only overlays. Overlays are noted to be assessed in the assessment policy.*

3. **Update on Bill Reed's Request to adjust Sewer Easements on Reed's Properties in Town Square.** Ted updated the commission on the status of Mr. Reeds request from the September meeting. For the record, Mr. Reed's request was to reduce the width of the easements on the property he owns in the Town Square development to allow for improved development of the properties. Widseth has gathered the necessary information to review, discussions have been started with the City Attorney and Mr. Reed has been updated on our progress. Additional updates expected at the November PW meeting.

4. **Update on 2021 Road Projects.** Ted started the discussion stating he felt our 2021 Road Plan was at a standstill and requested the Commission make a recommendation to the council to move forward with the initial steps of the chapter 429 process. Tom Swenson agreed that we need to move ahead with the initial steps of the 2021 road plan. Mike Lyonais agreed with his recommendation as he is in the middle of determining the best method of financing for 2021 expenditures. After detailed discussion regarding the process, the following motion was made:

   Motion made by Tom Swenson, seconded by Mic Tchida, and approved by all (relative to the below listed 2021 road projects), to recommend that the Council authorize the Initiation and Preliminary Assessment process (as described in Chapter 429) which means the City authorizes Widseth to prepare the required reports on the necessity, cost-effectiveness and feasibility of the proposed improvements and assessments to the following 2021 Road projects with an estimated total cost of $1,433,850:

   Sealcoat

   - Perkins Road - $13,000
   - Daggett Bay Road - $5,000

   1.5" Bituminous Overlay

- Whitefish Avenue - $349,000
- Hilltop Drive - $12,000
- Woodland Avenue - $15,000
- Cool Haven Lane - $43,000

Reconstruction/New

- Wild Wind Ranch Drive - $160,000
- Rushmoor Boulevard - $278,250
- Harbor Lane (N-S Segment) - $168,000
- Birch Narrows Road - $390,600
-

City staff and Widseth are authorized to engage the services of an appraisal company to complete benefit opinions for the proposed improvements for each roadway to be assessed. This is the first step necessary to prepare for the 2021 road projects in a timely manner. This process has been initiated by the City and will follow Ch. 429 rules.

(The Motion was presented and approved at the October 12th council meeting).

5. **Discuss Assessment Policy Related to Roads and Municipal Sewer System.** Ted stated the purpose of this agenda item was to remind the commission about prior discussions relating to our assessment policy. Specifically, he stated that assessing for overlays has been in the language of our assessment policy but not used in the past, but future overlays will be assessed. Seal coating will not be assessed.

6. **Discuss Moonlite Sewer Extension.** Phil Martin from Bolton and Menk updated the commission regarding the two projects (Sewer extension from the Fire Hall to #66/#16 intersection combined with the Storm Sewer redesign on the same route). He stated that Televising Videos of the existing storm sewer lines are being created to help with the discussion of cost sharing with the county and that the Final Design Plans of these projects be completed by the end of October. Dave Schrupp expressed a concern regarding the $315K grant for the Storm Sewer redesign. His concern was that the grant would expire before the project was started and what can be done to extend the grant monies. Dave asked some questions regarding the schedule as the City has the project placed in the 2022 budget. Phil stated that in order to complete the project in 2022, bids would normally have to be secured from November 2021 to January 2022 to stay on a 2022 schedule. Doug Vierzba raised his concern about the project funding. He stated that the current plan is to use the Sale Tax revenue to help pay for the project and that our attempt to obtain approval for implementing the Sale Tax program in Crosslake was not approved by the legislature in 2020 as planned. Tom Swenson felt the 2022 was basically a placeholder that kept the project in front of us but could possibly be moved out to coordinate with the County on their plan to resurface #66 in 2024. John Andrews addressed the group stating that he heard at the Crosslakers meeting that an extension of the time to use the Grant Funding provided was possible. Right now the latest it can be claimed is the end of 2022 (a two year use period). Phil had confirmed same with Melissa Barrick at the county. Extensions are usually requested during an approved/WIP project, not on projects that have not started. Phil also stated that although we need to consider this road work as one larger project because they need to be completed at one time and cannot be done separately and that it made

the most sense to do it as a joint project with the County's plans which was in 2024. Phil felt that this was the message to present to Melissa to help push out the Storm Water Project Grant funding to 2024. Doug Vierzba reiterated again that we are behind on our original plan to obtain Sales Tax funding for this project, hence the need to delay it until we have a funding source as we originally planned. Phil agreed he could put together a "Next Steps" plan (without dates at this time) to remind us all (and those that come after us in the business of the City in the next few years) the steps that are in front of us should we decide to officially authorize the project.

7. **Other Business as may arise.** Tom Swenson discussed Bio-Solids and expressed his request to place the $150K in the 2020 budget in a reserve account to be used for at least a start on the Engineering effort for the Bio-Solids changes that might be needed. Ted explained that he was planning on shifting the $150k to be used to begin replacing the 7 Lift Station Control panels currently in use. This $150K and another $50K he had in the budget for same would give him a good start to cover the total projected replacement cost for all 7 of about $350K.

   Motion by Tom Swenson, second by Mic Tchida, approved by all *to recommend that the Council shifts the $150K budgeted in 2020 for Bio-Solids to be added to the $50K budget for Lift Station Control Panel Replacements. A total of $200K to be placed in a reserve account to be used in 2021 for Lift Station Control Cabinet replacements. The projected total cost to replace all 7 lift stations is $350K.*

   Doug Vierzba inquired about the Engineering design plans regarding Bio-Solids. Ted stated they are waiting for the data from the Pilot Project to be able to review and recommend a design.

   Tom Swenson expressed his concern that we get a quote from Bolton and Menk in time to include the cost in the final 2021 budget. Ted said he would request same and email it to the commission. Tom said that we need to account for levied 2020 funds that will not be used in 2020 and hold them in a reserve account for use on such things as the Engineering work for Bio-Solids, in the event the quote comes late and could not included in the 2021 final budget.

   Tom Swenson expressed his concern that Ted might be retiring in the near future. Ted assured the commission that he has no retirement plans at this time.

8. **Adjourn. Meeting adjourned at 4:45 PM**

PROPOSAL # QM20090101-02

To: City of Crosslake, MN

Date: October 16, 2020
From: Jeff Iverson
Valid: 60 days
Page: 1 of 9

Attn: Ted Strand – Public Works Director
John Graupman – Bolton & Menk

Re: Crosslake, MN Lift Station Control Panel Replacements

In Control, Inc. is pleased to provide our proposal for materials and services as part of the project referenced above.

This proposal is based upon a site visit on 8-25-20 with John Graupman and Nate Deshayes where we inspected the following sewage lift station control panels:

- Lift Station A (East Shore)
- Lift Station B (Reeds)
- Lift Station C
- Lift Station D (Seaberg)
- Lift Station E (Channel Liquors)
- Lift Station F (Main)
- Lift Station G (Holiday)

All lift station control panels except for Lift Station F (Main) were inspected to determine the best method to incorporate remote monitoring to the SCADA system located at the WWTF. Remote monitoring for Lift Station F (Main) was provided as part of the 2017 WWTF Improvements Project. Each of the lift station control panels are nearly identical in design and have the following primary features:

- 78"H X 36"W X 12"D Stainless Steel Enclosure with inner door
- Alarm Beacon, Alarm Horn, Portable Generator Receptacle
- Utility Disconnect/Circuit Breaker and Utility Power Meter
- Fiber Optic Internet Service (installed but not used at this time)
- Main & Generator Circuit Breakers, Pump Circuit Breakers, Pump Full Voltage Non Reversing Starters
- Pump overtemp and seal fail relays
- US Filter proprietary pump controller with keypad/display
- US Filter proprietary submersible level transducer
- High and Low Level float switches

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After inspection of each lift station control panel the following items were of concern:

- The US Filter proprietary controller "brain" of each control panel that monitors wetwell level and starts/stops each pump is obsolete and no longer available. US Filter went out of business over 15 years ago and replacement parts are not available. The controller does not have communication capabilities to allow direct monitoring of the station from the WWTF SCADA system.
- The US Filter proprietary submersible level transducer is obsolete and no longer available and replacement parts are not available.
- The control panel high voltage components are combined with the low voltage control components in close proximity. Issues related to personnel safety are present.
- Undocumented panel modifications have been made over the years that were necessary to keep each lift station functioning. Troubleshooting problems without adequate documentation is difficult.

Due to the age of each lift station control panel (17 years) and the concerns identified we are recommending replacement of each lift station control panel. The new lift station control panels will be manufactured using readily available "off the shelf" components. Each of the lift station control panels will be of nearly identical design and have the following primary features:

- 66"H X 36"W X 24"D Double Sided Stainless Steel Enclosure with inner doors
  - The panel height includes an 18" Air Gap leg kit with vented skirt
  - The panel width will fit in the same location as the existing control panel reducing overall work to re-route existing utility power and fiber communications.
  - The panel will have a single lockable door on each side.
    - One side will be dedicated to low voltage control components
    - One side will be dedicated to high voltage power components
  - Alarm Beacon (it was requested to remove the alarm horn)
  - Portable Generator Receptacle
  - Utility Disconnect/Circuit Breaker and Utility Power Meter
  - Allen Bradley Programmable Logic Controller and touch screen Operator Interface Terminal
  - Internet Communications monitoring interface to WWTF SCADA system
  - Main & Generator Circuit Breakers, Pump Circuit Breakers, Pump Full Voltage Non Reversing Starters
  - Pump overtemp and seal fail relays
  - Radar Level Transmitter with intrinsic safety barrier
  - High Level Float switch with intrinsic safety barrier. High Level Float switch will cause the station pumping to go into a hardware float backup mode that will function in the event of PLC failure

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Materials and Services Proposed

Item 1 - Professional Engineering

A. One project manager will be assigned as a primary point of contact through project completion
B. A project team consisting of up to (3) engineers will be assigned to the project
C. Engineering review meetings will be conducted on a timely basis as required
D. Industry best practices, proven control approaches and standardize objects will be implemented in the design, configuration and development of the entire system
E. Completely new controller configurations will be engineered for this specific project
F. The entire design will be completed internally with functional testing prior to start up
G. Complete documentation will be provided

Item 2 - Lift Station Control Panel

We will provide the following Lift Station Control Panel:

A. Free standing 66"H X 36"W X 24"D Double Sided Enclosure with inner doors
B. Welded 14 gauge 304 stainless steel
C. Drip shield
D. Stainless steel door hardware
E. Door handle with 3 point latch and provisions for padlock
F. Door wind catches
G. Inner doors with the following items assembled on door front:
    1. Utility and Portable Generator Circuit Breakers with sliding interlock
    2. Pump Circuit Breakers
    3. Pilot Lights, Pushbuttons, Selector Switches, Hour Meters
H. 18" leg kit
I. Ventilated skirts with bug screens
J. Doors, sides, top, bottom insulated. Doors to have removable insulation panels for summer operation.
K. Lifting eyes
L. Door print pocket
M. Alarm Light

Item 3 - Lift Station Control Panel Power Components

A. Utility and Portable Generator Circuit Breakers with mechanical interlock
B. Generator Receptacle (Verify match with City generator plug)
C. Three Phase Power Monitor
D. Power Distribution Blocks
E. Surge Protection
F. Pump Circuit Breakers
G. Pump FVNR Motor Starters with Thermal Overload Protection

Item 4 - Lift Station Control Panel Control Components

A. Selector Switches, Pilot Lights, Pushbuttons
B. Run Time Meters
C. Relays
D. Circuit Breakers
E. Timing Relays
F. Seal Fail/Overtemp (Verify Pump Manufacturer)

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G. Wiring Terminal Blocks
H. Fused Terminal Blocks
I. 120 VAC Surge Protection
J. Direct Current Power Supply
K. Exterior Alarm Light
L. Uninterruptible Power Supply
M. Intrinsic Safety Barrier (Digital)
N. Intrinsic Safety Barrier (Analog)
O. PLC Allen Bradley MicroLogix
P. PLC Backup Memory Module
Q. Remote Monitoring Hardware Firewall

Item 5 - Field Equipment (Wet well)

A. Radar Level Transmitter
B. High Level Float Switch

Item 6 - Control Panel Layout

A. Panel Exterior
   1. Alarm Light
   2. Generator Receptacle
B. Inner Door Arrangement
   1. Power Equipment Side
      (a) Main and Portable Generator Circuit Breakers
      (b) Pump Circuit Breakers
      (c) FVNR Motor Starters Thermal Overload Reset Pushbutton
   2. Control Equipment Side
      (a) Operator Interface Terminal (OIT)
      (b) Panel Lighting On/Off Selector Switch
      (c) Three Phase Power Normal Pilot Light
      (d) Wetwell High Level Float Pilot Light (Float Backup)
      (e) Float Backup Active Pilot Light
      (f) Float Backup Reset Pushbutton
      (g) Pump Hand-Off-Auto Selector Switches
      (h) Pump Seal Fail Pilot Lights
      (i) Pump Overtemp Pilot Lights
      (j) Pump Overtemp Reset Pushbuttons
      (k) Pump Running Pilot Lights
      (l) Pump Run Time Meters
C. Backpanel Arrangement
   1. Power Equipment Side
      (a) Main and Portable Generator Circuit Breakers
      (b) Power Distribution Blocks
      (c) Utility Power Monitor Relay and Fuses
      (d) Power Surge Protector
      (e) Pump Circuit Breakers
      (f) Pump FVNR Motor Starters
   2. Control Equipment Side
      (a) Remote Monitoring Hardware Firewall

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(b) Allen Bradley PLC and I/O Modules
(c) Control Relays and Timers
(d) 120 VAC Surge Protection
(e) DC Power Supply
(f) Panel Heater
(g) Intrinsic Safety Barriers
(h) Circuit Breakers and Fuses

Item 7 - Lift Station Control Panel Operation

A. General Operation
1. Each pump will have a Hand-Off-Auto selector switch. In the Hand position the pump will be required to run. In the Off position the pump will remain off. In the Auto position the pump will start and stop based on PLC control or backup float control.
2. Each pump will have seal fail and overtemp monitoring. If a pump is determined to be in overtemp an alarm will be activated and the pump will be prevented from running. If a pump seal fail is detected an alarm will be activated.
3. Three Phase power will be monitored. In the event of three phase power failure an alarm will be activated and the pumps will be prevented from running.

B. Normal Operation – PLC Control
1. The pumps will be started in a Lead/Lag control scheme. Pumps will be automatically alternated. In the event of a Lead Pump failure the Lag Pump will automatically become the Lead Pump.
2. The lift station pumps will normally be controlled based on level in the wet well. As the level rises above the Start Lead Pump level setpoint for an adjustable time delay the lead pump will be started. If the level in the wet well rises above the Start Lag Pump level setpoint for an adjustable time delay the lag pump will be started. When the level in the wet well drops below the Stop Pumps level setpoint for an adjustable time delay the pump(s) will be stopped.

C. Float Backup Operation
1. If the High Level float switch is activated Pump 1 will be required to run. If the High Level float switch remains activated for a time determined by a hardware timer Pump 2 will be required to run. The pump(s) will remain running until the High Level float is not active for a time determined by a hardware timer.

D. Operator Interface Terminal (OIT)
1. OIT Control
(a) Pump Hand-Off-Auto
(b) Pump Alternator 1-2/Auto/2-1
(c) Low Level Alarm Setpoint and adjustable time delay
(d) Stop Pumps Level Alarm Setpoint and adjustable time delay
(e) Start Lead Pump Level Setpoint and adjustable time delay
(f) Start Lag Pump Level Setpoint and adjustable time delay
(g) High Level Alarm Setpoint and adjustable time delay
(h) Alarm Enable/Disable for all alarms
(i) Adjustable time delays for all alarms
2. OIT Display
(a) Pump Status
(b) Pump Daily Runtime
(c) Pump Total Runtime

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(d) Pump Daily Number of Starts
(e) Pump Total Number of Starts
(f) Two Pumps Daily Runtime
(g) Two Pumps Total Runtime
(h) Two Pumps Daily Number of Starts
(i) Two Pumps Total Number of Starts
(j) Wetwell Level
(k) Wetwell Level Trend
(l) Float Switch Status

3. OIT Alarms
   (a) Pump Seal Fail
   (b) Pump Overtemp
   (c) Pump Fail To Start
   (d) Pump Overrun
   (e) Level Transducer Fail
   (f) Float Backup Active
   (g) Utility Power Fail
   (h) Control Power Fail
   (i) UPS Power Fail
   (j) Intrusion Alarm
   (k) Wetwell Low Level (Transducer)
   (l) Wetwell High Level (Transducer)
   (m) Wetwell High Level (Float Switch)
   (n) Communications Fail

Item 8 - Wastewater Treatment Facility SCADA
All lift station monitoring and alarm items listed above shall be integrated into the existing Wastewater Treatment Facility SCADA system.

Item 9 - PLC Programming
We will provide all PLC programming required to implement the sequence of operation and functionality described above.

Item 10 - Training
In Control will provide training as specified. Training shall occur in coordination with field startup site visits.

Item 11 - Submittals, Drawings, O&M's

A. Electronic drawings will be drafted and submitted for approval by the Engineer. Drawings will include all products provided by In Control.
B. As Built drawings will be provided electronically upon shipment of control panels
C. Final As Started drawings and O&M documents will be provided electronically upon substantial completion.

Item 12 - Demolition and Installation Services
In Control will furnish all Demolition and Installation Services through a licensed electrical contractor that specializes in municipal electrical work.

A. Coordination with utilities
B. Concrete work to increase width of existing control panel pads
C. Removal of existing control panel (to be turned over to Owner)
D. Installation of new control panel

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E. Installation of new radar level transmitter
F. Installation of new float switch
G. Provide and install new Service disconnect, utility meter socket, utility power wiring
H. Re-attach existing fiber optic interface enclosure
I. Electrical permits as required

Item 13 - Warranty

A. Standard In Control Terms and Conditions apply, no exceptions/exclusions. The warranty from In Control will be in force for eighteen (18) months after shipment or twelve (12) months from startup.

Item 14 - Non-Disclosure Agreement

A. All information contained in this document is considered privileged and confidential and is for the sole use by the designated entity/recipient and final Owner. Any disclosure, copying, distribution or other use is strictly prohibited without prior authorization by In Control. Upon the receipt and review of this document the intended entity/recipient is automatically accepting this mutual agreement.
B. System specifications, locations and access information shall be kept confidential to prevent unauthorized access indefinitely.

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The price for each Lift Station Control Panel as detailed above including installation is $62,121.00 USD net total excluding sales and use taxes. Freight is included, FOB shipping point. Submittal and Equipment delivery dates will be scheduled to meet project substantial completion date or project milestones when stated.

The individual price for each Lift Station including installation if Qty (6) Lift Station Control Panels are ordered at the same is $56,577.00 USD for a total of $339,460.00 USD net total excluding sales and use taxes. Freight is included, FOB shipping point. This represents a total cost savings of $33,266.00 or $5,544.00 per lift station control panel. The cost savings is due to volume equipment discounts from our suppliers as well as labor efficiencies.

The pricing above includes concrete work to increase the size of each existing control panel concrete pad. If the City prefers to do the concrete work at each site the price for each station can be reduced by $450.00 for a total of $2,700.00.

NOTICE: Due to the current global pandemic and impacts to supply chain, project delays may occur outside of our control.

Thank you in advance for the consideration of our offer and the opportunity to work together. Should you have any questions regarding this proposal, please contact me directly at your convenience. We look forward to hearing from you soon to secure and coordinate this project.

Respectfully,

Jeff Iverson
In Control | Sales & Consulting
Office: (763) 783-9500 Ext. 3001
Mobile: (612) 802-8875
JSIver@in-ctrl.com

ACCEPTANCE: To accept this proposal please return a signed copy with purchase order. Thank you!

Signature:_____ Purchase Order:_____

Print Name:_____ Date:_____

Title:_____ Proposal Number: QM20090101-02

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10350 Jamestown Street NE
Blaine, MN 55449
Phone: (763) 783-9500

Standard Terms and Conditions of Sale

These terms and conditions are in effect between the party ("Purchaser") issuing the purchase order ("Order") and IN CONTROL, INC. ("IN CONTROL").

1. ACCEPTANCE – Acceptance of this Order will be in writing within thirty (30) days of Order receipt. Acceptance will be based on compliance with the acceptance criteria set forth herein. Upon acceptance, this Order will constitute the entire agreement between IN CONTROL and Purchaser, supersede all prior negotiations, discussions and dealings and may not be modified or rescinded except by a writing signed by both Purchaser and IN CONTROL.
2. TERMINATION – If the Purchaser chooses to terminate this Order, the Purchaser will pay to IN CONTROL reasonable and proper cancellation charges, which may include a reasonable and customary profit only on Goods and Services accepted to date of receipt of the notice of cancellation.
3. ATTORNEY FEES - If either party commences or is made a party to an action or proceeding to enforce or interpret this Order, the prevailing party in such action or proceeding will be entitled to recover from the other party all reasonable attorneys' fees, costs and expenses incurred in connection with such action or proceeding or any appeal or enforcement of any judgment obtained in any such action or proceeding.
4. COUNTERPARTS - This Order may be executed in any number of counterparts, and each such counterpart will be deemed to be an original instrument.
5. INDEMNIFICATION - Purchaser will indemnify IN CONTROL and its customers and hold them harmless from and against any and all claims, actions, proceedings, costs, expenses, losses and liability, including all reasonable attorneys' fees, costs and expenses, arising out of or in connection with or relating to any Goods or Services furnished by Seller pursuant to this Order, including without limitation all product liability claims and any claims involving personal injury, death or property damage. The obligations set forth in this Section will survive the termination or fulfillment of this Order.
6. LIMITATIONS OF LIABILITY - In no event will IN CONTROL be liable in contract, tort, strict liability, warranty or otherwise, for any special, incidental or consequential damages, such as, but not limited to, delay, disruption, loss of product, loss of anticipated profits or revenue, loss of use of the equipment or system, non-operation or increased expense of operation of other equipment or systems, cost of capital, or cost of purchase or replacement equipment systems or power.
7. LIQUIDATED DAMAGES – Unless otherwise agreed to in writing between the Purchaser and IN CONTROL, IN CONTROL will not accept liquidated damages.
8. NONWAIVER - The failure by IN CONTROL to enforce at any time, or for any period of time, any of the provisions hereof will not be a waiver of such provisions nor the right of IN CONTROL thereafter to enforce each and every such provision.
9. PAYMENT TERMS - The payment terms are net thirty (30) days after invoice date. If an invoice dispute arises, the Purchaser will notify IN CONTROL within ten (10) days of receipt of invoice. The undisputed amount of the invoice will be paid within the payment terms. All reasonable attempts will be made between both parties to resolve the disputed portions of the invoice within the payment terms.
10. REMEDIES - Remedies herein reserved to IN CONTROL will be cumulative, and in addition to any other or further remedies provided in law or equity.
11. TRANSPORTATION - Unless otherwise specified, all deliveries from IN CONTROL will be F.O.B. factory, freight prepaid.
12. WARRANTY - IN CONTROL warrants that the Goods and Services furnished will be of good quality, free from defects in material, design and workmanship will conform to the specifications, drawings, or samples and are suitable for their intended purpose(s). The warranty from IN CONTROL will be in force for eighteen (18) months after shipment or twelve (12) months from startup, whichever is shorter. IN CONTROL reserves the right to terminate warranty should the Purchaser's account be in arrears.

BOLTON & MENK
Real People. Real Solutions.

1960 Premier Drive
Mankato, MN 56001-5900

Ph: (507) 625-4171
Fax: (507) 625-4177
Bolton-Menk.com

VIA EMAIL

October 7, 2020

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

RE: Clarifier Rehabilitation Proposal
City of Crosslake, Minnesota
Project No. M25.119925

Dear Ted:

Based on our previous discussions, I am pleased to submit this proposal for Clarifier Rehabilitation.

I. Background

The city's wastewater treatment facility was originally constructed in 2001-2002. The main facility is 18 years old. While most major components can be maintained by staff, the clarifier mechanisms are not easily maintained. The clarifier mechanisms are located in two (2) concrete tanks, 12-ft. in depth and 18-ft. in diameter. The mechanisms have few moving wear parts and generally fail with corrosion. The current clarifier arrangement also limits the treatment efficiency due to short-circuiting of flow. The useful life of any wastewater equipment, particularly submerged equipment, is 20-years, so the clarifier equipment has effectively reached this life. The concrete tanks typically have an effective life of 40-60 years or longer and are still in decent condition. We have reviewed options to rehab or replace the mechanisms and have determined replacement would be the best option as it would both extend life and improve performance. Additionally, stainless steel has been more cost effective in the last year and could result in an effective life of 40 years or more.

The work components of the clarifier project include:

- Removal and replacement of roof and ceiling to allow crane access;
- Replace shingle roof system with steel roofing on the entire building;
- Removal of existing rim feed mechanisms including scraper arms, drive shaft, deck and weirs;
- Installation of new center feed mechanism with scraper arms, drive shaft, deck and weirs;
- Modification of piping within the tank to fit new mechanism and scum removal system;
- Replace lighting in area with LED lights.

II. Schedule

A full schedule is as follows:

- City Approval — October 2020
- Design Improvements — November 2020-January 2021
- MPCA Review — February-March 2021
- Bid Improvements — March-April 2021
- Construction — May 2021-April 2022

III. Engineering Scope

The engineering costs related to the proposed improvements are presented in the following table. The scope of this proposal is for design services thru the bidding of the project. Construction related service scope and fees would be determined after bidding. Specifically, the project design scope includes:

Engineering Costs Clarifier Rehabilitation - City of Crosslake, Minnesota		
Task 1 – Design		**$39,350**
	• Final design and preparation of contract documents	
	• Structural engineering	
	• Electrical engineering	
	• Process and civil engineering	
	• Review meetings	
	• Staff review at 50%, 80% and final	
Task 2 – Bidding		**$5,960**
	• Advertising and plan distribution	
	• Contractor questions and addendums	
	TOTAL ENGINEERING COSTS	**$45,310**

Tasks 1 and 2 would be billed as lump sum fees. Due to the nature of construction and the possibility of unforeseen conditions and schedules, we would propose an estimated hourly fee for bidding construction related services with scope to be determined after bidding.

While the final scope of the project may change, the proposed work is budgeted for a construction cost range of $350,000-450,000.

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 me at (507) 380-0433.

Sincerely,

Bolton & Menk, Inc.

John Graupman, P.E.
Principal Environmental Engineer

cc: Phil Martin – Bolton & Menk, Inc.

BOLTON & MENK
Real People. Real Solutions.

1960 Premier Drive
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Ph: (507) 625-4171
Fax: (507) 625-4177
Bolton-Menk.com

VIA EMAIL

October 7, 2020

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

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

Dear Ted:

Based on our previous discussions, I am pleased to submit this proposal for Biosolids Handling Improvements.

I. Background

The City of Crosslake currently has limited liquid storage of biosolids. 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.

We have performed a preliminary review of alternatives with City staff including:

- Adding liquid storage tanks;
- Constructing drying beds;
- Constructing reed beds;
- Adding a biosolids dewatering tower.

While all alternatives could be viable, the current preferred alternative is to add 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.

A pilot test was being completed the first week of October 2020 to confirm performance.

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.

II. Schedule

We would begin the biosolids design immediately upon council approval and positive pilot testing results. It is understood bidding and construction may be delayed pending financing for this project. The schedule below is based upon the project proceeded without delay for reference.

A full schedule is as follows:

- City Approval — October 2020
- Design Improvements — November 2020- January 2021
- MPCA Plan Review — January-February 2021
- Bid Improvements — March-April 2021
- Construction — May 2021-April 2022

III. Engineering Scope

The engineering costs related to the proposed improvements are presented in the following table. The scope of this proposal is for pilot testing, and design services thru the bidding of the project. Construction may be delayed, and construction services scope would be determined once the project is bid. Specifically, the project design scope includes:

Engineering Costs Biosolids Improvements – City of Crosslake, Minnesota		
Task 1 – Design		**$79,350**
	• Final design and preparation of contract documents	
	• Structural engineering	
	• Electrical engineering	
	• Mechanical engineering	
	• Process and civil engineering	
	• Review meetings	
	• Staff review at 50%, 80% and final	
Task 2 – Bidding		**$8,400**
	• Advertising and plan distribution	
	• Contractor questions and addendums	
	TOTAL ENGINEERING COSTS	**$87,750**

Tasks 1 and 2 would be billed as lump sum fees. Due to the nature of construction and the possibility of unforeseen conditions and schedules, we would propose an estimated hourly fee for construction related services with scope to be determined once the project is bid.

While the final scope of the project may change, the proposed work is budgeted for a construction cost range of $1.0-$1.5 million.

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 me at (507) 380-0433.

Sincerely,

Bolton & Menk, Inc.

John Graupman, P.E.
Principal Environmental Engineer

JG:bja

cc: Phil Martin – Bolton & Menk, Inc.

Mock Assessment Determination

26-Oct-19

	Nagell Classification	Road Benefit		Sewer Benefit	
SF on lake, direct, $/lot	$ 2,000.00	$ 5,000.00		$ 5,000.00	$ 10,000.00
SF off lake, direct, $/lot	$ 1,500.00	$ 4,000.00		$ 4,000.00	$ 9,000.00
SF off lake, indirect, $/lot	$ 500.00	$ 1,000.00			
Non-res C/I direct, $/SF	$ 0.03	$ 0.15		$ 0.20	$ 0.50
Non-res P direct, $/SF	$ 0.02	$ 0.15		$ 0.05	$ 0.20

Zoning Legend
S - Single Family
LC - Limited Commercial
WC -Waterfront Commercial
P - Public

								CSAH 66 SANITARY SEWER EXTENSION									
								Road Assessment		Sewer Assessment					Connection Charge[1] Basis (2019)	Total Connection Cost
Line No.	Parcel ID No.	Zoned	Property Owner	Mailing Address	City	State	Zip Code	Road Basis	Cost	Sewer Basis	Area	Home Site	Cost	Total Assessed Cost	Cost/ERU[2]	
1	14090680	S	Moschogianis, Douglas A & Nancy L	10400 5th Ave Circle	Bloomington	MN	55420	$ 3,500.00	$ -	$ 7,500.00	0.55	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
2	14090681	S	Reidt Family Rev Trust	9211 Hillside Trl	Cottage Grove	MN	55016	$ 3,500.00	$ -	$ 7,500.00	0.47	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
3	14090687	S	Old Log Landing Homeowners	C/O Sandy Brodin 14152 Tall Timbers Trl	Crosslake	MN	56442	$ 3,500.00	$ -	$ 7,500.00	1.22	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
4	14090682	S	Fischer, Harlan L & Jan M	5650 Nelmark Ave NE	St. Michael	MN	55376	$ 3,500.00	$ -	$ 7,500.00	0.46	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
5	14090683	S	Maas, Scott A & Jean M	37171 CR 66	Crosslake	MN	56442	$ 3,500.00	$ -	$ 7,500.00	0.47	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
6	14090684	S	Patten, Justin D & Lane C	12355 Princeton Ave	Eden Prairie	MN	55347	$ 3,500.00	$ -	$ 7,500.00	0.51	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
7	14090685	S	Boller, Jamie & Melissa Ann Klima	5841 190th St E	Prior Lake	MN	55372	$ 3,500.00	$ -	$ 7,500.00	0.51	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
8	14090686	S	Hagen, Thomas M	2781 Leyland Trl	Woodbury	MN	55125	$ 3,500.00	$ -	$ 7,500.00	0.48	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
9	14090743	S	Perreault, Randy L & Julie A	51438 Dakota Cir	Rush City	MN	55069-3301	$ 3,500.00	$ -	$ 7,500.00	0.5	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
10	14090744	S	Portratz, Kelly J	8365 Kelzer Pond Dr	Victoria	MN	55386	$ 3,500.00	$ -	$ 7,500.00	1.22	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
11	14090746	LC	Smith, David J & Holly A	13898 Mary LN	Crosslake	MN	56442	$ 0.09	$ -	$ 0.35	0.91		$ 13,873.86	$ 13,873.86	$ 6,500	TBD
12	14090745	LC	Hanning Jt Trust Dated 12-31-12	13023 Anchor Pt Rd	Crosslake	MN	56442	$ 0.09	$ -	$ 0.35	1.78		$ 27,137.88	$ 27,137.88	$ 6,500	TBD
13	14090742	LC	Cross Lake, E-Free Church	37218 CR 66	Crosslake	MN	56442	$ 0.09	$ -	$ 0.20	3.12		$ 27,181.44	$ 27,181.44	$ 6,500	TBD
14	14090502	LC	Cross Lake, E-Free Church	37218 CR 66	Crosslake	MN	56442	$ 0.09	$ -	$ 0.20	4.67		$ 40,685.04	$ 40,685.04	$ 6,500	TBD
15	14090676	S	Anderson, Alan L & Deanna	PO Box 624	Crosslake	MN	56442	$ 3,500.00	$ -	$ 6,500.00	0.53	1	$ 6,500.00	$ 6,500.00	$ 4,000	TBD
16	14090675	LC	Gahn, David	5521 Malibu Dr	Edina	MN	55436	$ 0.09	$ -	$ 0.35	0.55		$ 8,385.30	$ 8,385.30	$ 6,500	TBD
17	14090674	S	L & B Schweich Properties LP	PO Box 1214	Lakeville	MN	55044	$ 3,500.00	$ -	$ 6,500.00	0.56	1	$ 6,500.00	$ 6,500.00	$ 4,000	TBD
18	14090673	S	Anderson, David W	2670 Kelly Pkwy Unit 217	Long Lake	MN	55356	$ 3,500.00	$ -	$ 6,500.00	0.77	1	$ 6,500.00	$ 6,500.00	$ 4,000	TBD
19	14090660	P	City of Crosslake	37028 CR 66	Crosslake	MN	56442	$ 0.09	$ -	$ 0.13	0		$ -	$ -	$ 4,000	TBD
20	14080584	S	Smith, David J & Holly A	13898 Mary Ln	Crosslake	MN	56442	$ 3,500.00	$ -	$ 0.35	0		$ -	$ -	$ 4,000	TBD
21	14080585	S	Anderson, Robert C & Melanie A Eisenbraun	24757 115th St NW	Zimmerman	MN	55398	$ 3,500.00	$ -	$ 7,500.00	0.35	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
22	14080587	S	State, Matthew & Tonya	3518 Crosslough Trl	Rosemount	MN	55068	$ 3,500.00	$ -	$ 7,500.00	0.63	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
23	14080588	S	Baker, Steven V & Jennifer A	3111 Park Dr	St Cloud	MN	56303	$ 3,500.00	$ -	$ 7,500.00	0.43	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
24	14080589	S	Hollerich, Kenneth J & Suzan J	2141 Savidge Lake Rd	Cleveland	MN	56017	$ 3,500.00	$ -	$ 7,500.00	0.63	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
25	14080590	S	Schmelz, Paul D & Vicki Brawley	11236 Creekridge Dr	Eden Prairie	MN	55347	$ 3,500.00	$ -	$ 7,500.00	0.37	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
26	14080591	S	Gleason, Julie A Trust U/A 7-17-06	PO Box 114	Crosslake	MN	56442	$ 3,500.00	$ -	$ 7,500.00	0.27	1	$ 7,500.00	$ 7,500.00	$ 4,000	TBD
27	14080623	WC	Moonlite Bay LLC	C/O AHHP Corp, PO Box 257	Crosslake	MN	56442	$ 0.09	$ -	$ 0.50	2.6		$ 56,628.00	$ 56,628.00	$ 6,500	TBD
28	14080624	WC	Moonlite Bay LLC	C/O AHHP Corp, PO Box 257	Crosslake	MN	56442	$ 0.09	$ -	$ 0.50	0.81		$ 17,641.80	$ 17,641.80	$ 6,500	TBD
29	14080627	LC	Moonlite Holdings LLC	11429 Snake Trl SW	Motley	MN	56466	$ 0.09	$ -	$ 0.50	1.74		$ 37,897.20	$ 37,897.20	$ 6,500	TBD
30	14080643	LC	Moonlite Holdings LLC	11429 Snake Trl SW	Motley	MN	56466	$ 0.09	$ -	$ 0.50	0.57		$ 12,414.60	$ 12,414.60	$ 6,500	TBD
31	14080656	S	Beyer, Robert	37754 County Road 66	Crosslake	MN	56442	$ 3,500.00	$ -	$ 6,500.00	5.4	2	$ 13,000.00	$ 13,000.00	$ 4,000	TBD

32	14080655	S	Genereux, Stephen A & Barbara J	PO Box 841	Crosslake	MN	56442	$ 3,500.00	$ -	$ 6,500.00	5.1	1	$ 6,500.00	$ 6,500.00	$ 4,000	TBD
33	14080634	LC	Fraser, Leo & Doris Trustees	Fraser Trust, 37670 CR 66	Crosslake	MN	56442	$ 0.09	$ -	$ 0.20	4.23		$ 36,851.76	$ 36,851.76	$ 6,500	TBD
34	14080633	LC	Fraser, Leo & Doris Trustees	Fraser Trust, 37670 CR 66	Crosslake	MN	56442	$ 0.09	$ -	$ 0.20	3.61		$ 31,450.32	$ 31,450.32	$ 6,500	TBD
35	14080620	LC	Double B Holdings, LLC	2455 12th St SE	St Cloud	MN	56304	$ 0.09	$ -	$ 0.20	4.32		$ 37,635.84	$ 37,635.84	$ 6,500	TBD
36	14080632	S	Olson, Katie	37538 CR 66	Crosslake	MN	56442	$ 2,750.00	$ -	$ 6,500.00	0.56	1	$ 6,500.00	$ 6,500.00	$ 4,000	TBD
37	14080631	S	Kyle Family Limited Partnership	1140 Tonkawa RD	Long Lake	MN	55356	$ 2,750.00	$ -	$ 6,500.00	0.51	1	$ 6,500.00	$ 6,500.00	$ 4,000	TBD
38	14080630	S	Stanaitis, Florence J Trust	9711 Laforet Dr	Eden Prairie	MN	55347-3565	$ 2,750.00	$ -	$ 6,500.00	0.46	1	$ 6,500.00	$ 6,500.00	$ 4,000	TBD
39	14080629	S	Stanaitis, Florence	615 Central Ave N	Faribault	MN	55021	$ 2,750.00	$ -	$ 6,500.00	0.4	1	$ 6,500.00	$ 6,500.00	$ 4,000	TBD
40	14080628	P	City of Crosslake	37028 CR 66	Crosslake	MN	56442	$ 0.09	$ -	$ 0.13	0		$ -	$ -	$ 4,000	TBD
41	14080599	LC	61 Marine & Sports North, LLC	13751 Daggett Pine Rd	Crosslake	MN	56442	$ 0.09	$ -	$ 0.35	1.66		$ 25,308.36	$ 25,308.36	$ 6,500	TBD
42	14080598	LC	Schmelz, Paul & Boller, Jamie	5841 190th St E	Prior Lake	MN	55372	$ 0.09	$ -	$ 0.35	0.55		$ 8,385.30	$ 8,385.30	$ 6,500	TBD
43	14080597	LC	Peak Partners LLC	100 3rd Ave S, Ste 3304	Minneapolis	MN	55401	$ 0.09	$ -	$ 0.35	0.96		$ 14,636.16	$ 14,636.16	$ 6,500	TBD
44	14090503	LC	Kreitz-Clow, Eva Marie	34750 Peoria Rd	Pequot Lakes	MN	56472	$ 0.09	$ -	$ 0.35	0.89		$ 13,568.94	$ 13,568.94	$ 6,500	TBD
45																
46													**Total Assessed Amount**	**$ 594,681.80**		

[1]Connection Charge is a direct charge that is applied at the time of connection when the property owner makes connection to the City sanitary sewer system.

[2]ERU or Equivalent Residential Unit means a term used for the purpose of calculating the total connection charge for a property.