



**CITY OF RIVER FALLS WISCONSIN  
UTILITY ADVISORY BOARD AGENDA  
CITY HALL – COUNCIL CHAMBERS  
November 21, 2016**

Call Meeting to Order: 6:30 p.m.  
Roll Call  
Approval of Minutes: October 17, 2016

**ACTION MAY BE TAKEN ON ANY OF THE FOLLOWING ITEMS**

**PUBLIC COMMENTS:**

**CONSENT AGENDA:**

1. Acknowledgement of the following minutes:
  - a. West Central Wisconsin Biosolids Facility Commission – 09-20-16
  - b. POWERful Choices Committee – 10-13-16

**RESOLUTIONS**

2. N Interceptor Sewer Project:
  - a. Resolution Recommending Preferred Route for N Interceptor Sewer
  - b. Resolution Recommending Preferred Concept for St. Croix Street Outfall
3. Resolution Recommending Purchase and Installation of a Variable Frequency Drive (VFD) for Well 5

**REPORTS:**

4. Finance Report
5. Utility Dashboards
  - a. Electric
  - b. Water
  - c. Waste Water Treatment Plant
  - d. Powerful Choices
6. Monthly Utility Report

**ANNOUNCEMENTS:**

**ADJOURNMENT:**

*Council members may be in attendance for informational purposes only.  
No official Council action will be taken.*

**REGULAR MEETING**

**RIVER FALLS UTILITY ADVISORY BOARD**

**October 17, 2016 6:30 p.m.**

**Council Chambers, City Hall**

The Regular Meeting of the River Falls Utility Advisory Board was called to order by President Hanson at 6:30 p.m. Present: Kevin Swanson, Patrick Richter, Diane Odeen, Grant Hanson, Duane Pederson, Tim Thum, and Adam Myszewski. Staff present: Kevin Westhuis, Utility Director; Kristi Hartmon, Utility Administrative Assistant; Weston Arndt, WPPI Energy Services Coordinator; Ron Groth, Water/Wastewater Superintendent; Wayne Siverling, Electric Operations Superintendent; Julie Bergstrom, Finance Director.

**M/S Odeen/Swanson to approve minutes of the September 19, 2016 Regular Meeting. Motion Carried.**

**PUBLIC COMMENTS:**

**CONSENT AGENDA:**

1. Acknowledgment of the following minutes:  
West Central Wisconsin Biosolids Facility Commission – 08-16-16  
POWERful Choices Committee – 09-15-16

**M/S Myszewski/Pederson to approve Consent Agenda. Motion Carried.**

**RESOLUTIONS:**

2. Resolution recommending shared savings loan for Moody's, Inc. – Weston Arndt gave a short presentation on Moody's application for a shared savings loan to update their exterior lot lighting with LED lighting. They currently have 1,000 watt fixtures and looking to cut number of fixtures in half and go to 200 and 300 watt fixtures. This will be a great energy savings for them and improve the esthetics of the exterior of their building as well. After the energy efficiency savings they are roughly requesting \$15,000 (waiting on final number from Focus on Energy). A full financial review was not done because the loan was less than \$25,000 (staff agreed it would not be necessary in this case). Staff did look at Moody's utility bill payment history, which was a flawless bill payment history. Personal guarantee will be signed by the owners. Arndt asked the board for their recommendation to bring this to the City Council at their next meeting. Board member Swanson stated that Moody's annual out of pocket cost (after the energy savings from the project) would be roughly \$300 per year annually for the five year loan on a \$20,000 plus project. Arndt stated the savings reduced on their energy bill should get them closer to the cash flow. This is what this program is designed to do. Richter asked Arndt to clarify for the education of the public where the savings come from. Arndt stated that the State of Wisconsin requires utilities to collect money from utility bills to administer energy efficiency programs to encourage customers to make

upgrades in their lighting, compressed air systems, etc. Municipal utilities have the option to keep those funds local and administer their own programs or send them into a state pool where those funds are used for a program called Focus on Energy. Westhuis stated that we send roughly \$60,000 to Focus on Energy (collected by customers) and with Mike Noreen and Weston Arndt working on these programs River Falls gets about \$150,000 back into the community to use on programs like this one.

- a. Resolution No. 2016-16 Approving Shared Savings Agreement with Moody's Inc. M/S Odeen/Myszewski, motion passed.
- b. 2016-17 Approving Shared Savings Agreement and Promissory Note with WPPI Energy M/S Odeen/Richter, motion passed.

### **NEW BUSINESS:**

3. Electric Reliability. Westhuis introduced this topic and stated that we had several outages that affected a large number of customers and staff was wondering if we have had more outages recently compared to past years. Weston Arndt gave a presentation on electric reliability and the perceived increase in the number and severity of outages in River Falls. Arndt gave a season recap of 2016 storms (30 interruptions affecting 854 customers), talked about how staff measures reliability and reliability trends and compared them to other areas. Staff uses American Public Power Association's (APPA) eReliability Tracker to record and analyze electric outages. The metrics used are (ASAI) Average Service Availability Index (%), (SAIDI) System Average Interruption Duration Index (in minutes), (SAIFI) System Average Interruption Frequency Index (interruptions per customer), and (CAIDI) Customer Average Interruption Duration Index (in minutes). This data can be used to analyze trends and benchmark reliability. In summary, the number of interruptions in 2016 is on pace to be relatively average, the number of customers impacted and the duration of the outages reflects that the severity has been greater. When compared to other municipalities in our region, the River Falls system has been quite reliable.
4. Community Solar Update (plan to fully subscribe the project and a landscape update). Weston Arndt gave a presentation on the plan to fully subscribe the Community Solar Project. The Community Solar has been operational for 10 months and the goal was to have it fully subscribed by the end of the 2016. Arndt provided an update on recent activities and opportunities that came up in working with customers and trying to achieve that goal. There are 186 shares that are sold and paid for, TW Equities have reserved 90 shares, Winfield Sterling Ponds reserved 90 shares and Windfield Mann Valley reserved 90 shares. 354 of the 810 shares are currently unallocated. Arndt discussed questions that have been brought up by customers who may want to purchase solar and what happens to that credit that has already been produced from almost a year ago. What is in it for customers who are paying the same price, but getting less credit? There is a larger customer looking at a large portion of the community solar and can we offer them a payment plan and what is available. Staff reviewed several

possibilities, address the energy credit issue and payment plan options for this customer and additional customers moving forward. Staff proposed to utilize WPPI Energy's Member Energy Efficiency and Renewable Energy Loan Program (Member Loan Program) to purchase the (354) available shares and fully subscribe the Solar Garden. These shares would be subscribed to multiple City electric accounts so they could start utilizing the credits. The shares would be available to retail customers through tariff-authorized transfer transactions. RFMU would utilize the local Community Solar Loan program as a financing tool to assist retail customers in buying these shares. Through the transfer of shares, the City can charge a pro-rated fee, to recover its investment and pay off the member loan. Utility Director Westhuis summarized why the City of River Falls would want to buy these shares now; it would be for the opportunity to take that credit of what has been produced the last year and pass that onto the customers to help them reduce the cost of buying the next batch they want to buy. Finance Director, Bergstrom asked Arndt to clarify that the loan is not contingent on the City buying all the shares. Arndt said the loan could be standalone or find another way to finance it. Westhuis stated that there has been a business or two that have expressed interest in buying the remainder of these panels and it is likely the solar project could be sold out by the end of the year. This concept will also be brought to the City Council.

5. Utility Westhuis gave an update on the solar landscaping to provide solutions to the visibility of the solar panels from the houses across the street. Westhuis showed a picture of the installed "skilled screen" with natural prairie grasses printed on it. There will also be other options displayed which include grasses and trees planted in front of the solar screen, and an option of just plants and trees, and an option of the two combined. Advisory Board member Pederson asked what the neighbors think of it. Westhuis stated that he has not received any comments, but he will reach out to the neighbors once all the options are available to look at.
6. Utility Director Westhuis gave an update and timeline of activity related to the construction and modifications for the new Power Plant Substation project. This project will begin this fall, which will consist of pouring a concrete pad for the transformer built by Virginia Transformer that will be delivered and set on the new pad in late November or early December. Phase two will start in early 2017 with the construction of the switch gear building and XCEL Energy's construction of their control building. Westhuis showed plans of the future building with the look and feel that it will have. The switchgear is being built by Siemens and will be delivered this year and will be stored by the city until the final installation in 2017. Phase three will involve cabling, connections, SCADA installation, and ultimate ties to the electric system. This phase will be completed by mid-summer 2017. Phase 4 will involve fencing and site beautification.
7. Water/Wastewater Superintendent Groth gave an update on the WWTP Project. Groth stated they are getting close and have about a month until fully operational. Groth

showed pictures of the construction process. The items that still need to be complete are electrical (just installed today), moving the DAFT unit to the new biosolids building, new RAS liners to clarifiers, SCADA system, chemical feed system, blacktop and concrete and seeding. Blacktop and seeding may wait until spring of 2017 depending on weather. Board member Odeen asked if there would be an open house. Groth and Westhuis said there would be an open house scheduled next year sometime and that is a good idea. Westhuis stated that Groth has done a great job managing this project and Miron Construction is doing a great job and the project is staying on time and on budget.

### **REPORTS:**

8. Finance Report: Financial reports were included in the UAB packet for review. There was also ratio analysis included in this month's packet. Bergstrom stated it is showing from all the funds that the debt (if a particular fund had debt) is getting paid off so that ratio is going down. The net income to gross revenues is quite a low number which means our revenues are close to our expenses which means we are not overcharging people. The highest one is in the sewer fund and that is one that staff will look at in the future.
9. Utility Dashboards for, electric, water, wastewater and POWERful Choices were included in the UAB Packets.
10. Monthly Utility Report was included in the UAB packets for review. Westhuis stated that the telecom tenants are putting their equipment back on the Sycamore Water tower now that that project is complete. The Sycamore Water Tower was nominated for tank of the year and was number 13 out of about 400. It will be featured on the calendar that the paint manufacturer (Tnemec) puts out.

### **ADJOURNMENT:**

M/S Swanson/Myszewski moved to adjourn at 7:54 p.m. Unanimous.

Reported by: Kristi Hartmon, Utility Administrative Assistant

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Duane Pederson, Secretary



## MINUTES

October 13, 2016

Riverwalk Art and Antiques

12:00 p.m. – 1:00 p.m.

Committee members and guests present: Mike Noreen (RFMU), Matt Fitzgerald (UWRF), Greg Koehler (RFMU), Mike Stifter (RF City), Aleisha Miller (Miller ESCAPE LLC), Gabrielle Chapin (UWRF student), Alan Symicek (UWRF), Lauren Kaminski (RFSD), Kevin Westhuis (RFMU), Ken Thill (RF City) and Rhonda Davison (RFMU). *Some attendees may have been missed as the sign in sheet did not get passed around.*

Mike Noreen welcomed everyone and talked about the upcoming electronics and battery recycling event that will take place next week Saturday (October 22<sup>nd</sup>). This event encourages the community to properly dispose of small appliances, electronic devices, batteries including car batteries, and all kinds of florescent light bulbs. This is a FREE event and open to the community. St Croix Valley Habitat for Humanity held their 20<sup>th</sup> Anniversary event Saturday October 8<sup>th</sup>. Mike Noreen attended and told about testimonials shared by some of the homeowners at the Eco Village. These residents are very grateful to have homes to live in instead of small apartments. Mike asked for the approval of the minutes from the September 15<sup>th</sup> meeting Matt Fitzgerald moved to approve the minutes, Ken Thill seconded. Meeting minutes were approved by all.

### **1. Low Income programming opportunities**

Mike explained how the Public Benefits (Commitment to Community) program works. State mandated funds collected by the utility for this program can be sent to the State for distribution, or kept for local programs. RFMU chooses to keep the funds for local programs. Funds are then distributed 50% for low income programs and 50% for energy efficiency programs, as directed by the State. Keeping funds local is beneficial to the customers because they receive more funds than if State would issue the funds, because the utility can direct the distribution and increase the allowance for low income recipients. Rather than 100% the customer receives 125%.

### **2. Non-profit organization - grant development**

Mike had us break into small groups to discuss the matching grant program worksheet. Topics included Cause of poverty, but not the symptoms of poverty. Example: cause of poverty is poor mental health, the symptom is mismanaging their money. The goal of the grant is to work with organizations that address the causes of poverty. The worksheet asked for input on; Eligible organizations and why, Ineligible organizations and why, number of grants (cap on funds), Steps on how the program works, Deliverables/expected outcomes, and What's missing? This information will be tabulated, City and RFMU staff will use the information to develop a grant and then share proposal for review at the next meeting.

### **3. Other items of interest**

Time ran out to cover this item.

West Central Wisconsin Biosolids Facility

Commission meeting minutes

September 20th 2016

Meeting was called to order by Gary Newton at 8:40 am.

Board members present: Gary Newton, Greg Engeset, John Bond, and Steve Skinner.

Board members absent: Kevin Westhuis

Other present at the meeting: Joe Beaudry, and Ron Groth and Eugene Laschinger

**Consent Agenda**

Motion was made to approve bills for the month of September. Bills totaling \$150,867.89. Motion Passed. M/S Greg/John

Motion was made to approve the August meeting minutes. Motion passed. M/S Greg/John

**Financial Report**

Randy discussed the monthly financial reports. Motion was made to approve the financial report. Motion passed. M/S Steve/John

**Facilities report**

Facility pounds up 3.2% with member pounds at 2.2% and non-members at 7.1%. Facility gallons up 0.3% with member's gallons at -2.0% and non-members at 8.4%. Bioset rams have been installed and service was performed in house. Annual inspection was done last week on the Bioset. Water meter has been installed on one of the centrifuges to monitor water usage of the centrifuge.

**Old Business**

**Scada update by Eugene Laschinger:**

A Scada punch list has been made and many things have been taken care of. The emergency eye wash station installation needs to be finished. Some of the strobe lights are inoperative and need replacing. Bioset is having some operational issues due to sensor issues. There was talk about having training on centrifuge's operation and putting a O&M manual for the facility to have on hand on how to operate centrifuges. Reporting forms need to be created from the Scada system to Randy's reporting system. Scada project completion date set for November 30<sup>th</sup> 2016. There was discussion about using an air scrubber again to help air quality. No action taken at this time. Eugene talked about purchasing more tags for the Scada system for future additions to the system. Motion was made to update Wonder ware system for \$6900 to add more tags to the system. M/S Greg/Steve

**New Business**

**Eleva/Strum contract approval:**

Motion was made to approve the Eleva/Strum contract. M/S Greg/Steve

#### Pure Air Odor control proposal:

Anthony Yamini of Pure Air Filtration and Steve Reed with Electric Pump were present to talk about the Pure Air Proposal. Anthony explained how the unit is designed to remove all odor causing compounds. The unit is made of fiberglass with a UV protective coating. The media is a glandular product which typically has around a two year life spanned. Unit has easy preventive maintenance. Pure air offers on-site service of the unit and media when service life is used up. Spent media is safe and landfill disposalable. The media cost about \$100 dollars per cubic foot. The media replacement cost for the size of unit the Biosolids would need would cost around \$150,000 dollars. The Pure Air unit electric motors can be operated by VFD drives for better operation and control which also helps extend media life span. Antony said how Pure Air would need to do air quality testing to see what type of media would be required. Pure air can perform air quality testing in house so no need to outsource the air testing. Air quality report would be important data to have regardless if the Pure Air system was purchased. Anthony was going to check on air quality test pricing. No action was taken on proposal at this time.

#### 2017Health Insurance options and rates:

2017 Health Insurance discussion was tabled until October meeting because no information on options or rates pricing were available at time of meeting.

#### Preliminary 2017 budget:

There was discussion on the 2017 budget but no action taken on items discussed at this time.

#### Closed Session:

Closed session agenda was tabled until next month meeting.

#### Adjournment:

Meeting was adjourned at 11:53 am. M/S Steve/Greg

## MEMORANDUM

**TO:** Utility Advisory Board

**FROM:** Reid Wronski, P.E., City Engineer

**DATE:** November 21, 2016

**TITLE:** **Resolution Recommending Preferred Route for North Interceptor Sewer.**

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### RECOMMENDED ACTION

Adopt attached resolution recommending a preferred route for the North Interceptor Sewer between the North Main Street Lift Station and downstream manhole 1272.

### BACKGROUND

On November 16, 2015, staff presented a draft Request for Proposals to the Utility Advisory Board and laid out a plan for proceeding forward with necessary planning of a North Interceptor Sewer project.

On March 21, 2016, the Utility Advisory Board adopted a resolution recommending that the City Council enter into an agreement with TKDA for professional services necessary to complete initial work for the North Interceptor Sewer Project.

On March 22, 2016, the Common Council of the City of River Falls authorized the City Administrator to enter into an agreement with TKDA for professional services necessary to complete initial work for the North Interceptor Sewer Project that included the following major work items:

1. Downstream Interceptor Planning And Preliminary Design
2. **N. Interceptor Routing Study**
3. St. Croix Street Outfall Study

On July 18, 2016 the Utility Advisory Board adopted a resolution accepting recommendations of the Technical Memorandum regarding downstream interceptor plan for North Interceptor dated July 7, 2016.

### DISCUSSION

Attached is a *Technical Memorandum - North Interceptor Lift Station to MH 1272 Routing* from TKDA. This technical memorandum recommends a specific route for the future North Interceptor between the Lift Station and MH 1272. Representatives from TKDA will be at the UAB meeting to present their recommendations.

## **N. Interceptor Routing**

**November 21, 2016**

**Page 2 of 2**

If the UAB adopts a recommended preferred route for the North Interceptor, TKDA will begin preparation of preliminary plans which will be used to identify permanent and temporary easements needed to construct the project and maintain the system. An acquisition map will be brought to the City Council for approval before the Land Acquisition Specialist begins negotiations with affected property owners.

### **CONCLUSION**

Staff recommends approval of the attached resolution accepting recommendations of the Technical Memorandum regarding downstream interceptor plan for North Interceptor.



444 Cedar Street, Suite 1500  
Saint Paul, MN 55101  
651.292.4400  
tkda.com

## Memorandum

<b>To:</b>	<u>Reid Wronski</u> <u>City of River Falls</u> <u>222 Lewis Street</u> <u>River Falls, WI 54022</u>	<b>Reference:</b>	<u>North Interceptor Lift Station to</u> <u>MH 1272 Routing</u>
<b>From:</b>	<u>Ron Quanbeck, PE</u>	<b>Project No.:</b>	<u>16105.000</u>
<b>Date:</b>	<u>11/11/16</u>		

This technical memorandum discusses rerouting the North Interceptor downstream from the Kinnickinnic Lift Station to Manhole (MH) 1272. The purpose of the project is elimination of the Kinnickinnic Lift Station with a gravity interceptor. This memorandum addresses selection of the route for the interceptor.

### Existing System

North Interceptor drainage flows through the Kinnickinnic Lift Station located on the west side of Main Street south of the Kinnickinnic River. An 8 inch forcemain follows the west side of Main Street 528 feet to south of Quarry Road where it discharges to a gravity system that continues south to MH 1274 which is located in the existing St. Croix Street Outfall. The gravity sewer is composed of a combination of 2,030 feet 12 inch diameter pipe and 686 feet of 15 inch diameter pipe. The existing North Interceptor from the Kinnickinnic Lift Station to MH 1272 is shown on Figure 1.

### Project Purpose

The Kinnickinnic Lift Station, forcemain and downstream sanitary sewer will need to be replaced to accommodate increasing flows from continued development in the North Interceptor area. In addition, maintenance needs are increasing as the lift station ages. The significant investment to replace the lift station, forcemain and downstream pipes can be applied to a new gravity sewer instead that would reduce operating costs including eliminating ongoing energy costs to run the lift station.

During investigation of a gravity sewer to replace the lift station, it was recognized that the difference in elevation between the lift station and MH 1274 is not enough to achieve minimum pipe grade, so the replacement will need to extend to MH 1272. The existing connection from MH 1274 to MH 1272 is 373 feet of 15 inch diameter pipe.

The area projected to flow to the North Interceptor is shown in Figure 9 of the Sanitary Sewer Collection System Study dated March 2009 prepared by Ayres Associates. Based on this information, it has been decided that the North Interceptor from the Kinnickinnic Lift Station to MH 1272 should be a 21 inch diameter pipe.

As shown in Figure 9, the North Interceptor is expected to eventually provide service for an area west of the Kinnickinnic River and generally north of County Road MM. A gravity connection is preferred over a lift station to minimize operational costs. The neighborhood west of the Kinnickinnic River generally drains to a low area along Riverside Drive. Therefore, this is where the sanitary sewer will drain and where a gravity sewer would cross the River.

The primary goals of replacing the lift station are:

1. Increase capacity of the North Interceptor to accommodate projected future growth
2. Reduce operating cost by replacing the lift station with a gravity sanitary sewer system
3. If possible, facilitate service to the area west of the Kinnickinnic River north of County Road MM.

### Route Options

The alignment of the existing sanitary sewer was initially considered. The primary advantage of this route is that it is on existing right-of-way and easements. This route was discarded as not feasible.

- The deep excavation would encompass the entire right-of-way
- The limited bedrock information available indicates a very large quantity of slow, expensive rock excavation is likely
- Construction impacts on adjacent properties especially access would be great
- Construction Impacts to existing utilities
- Extensive temporary conveyance
- A gravity connection to the area to be served west of the Kinnickinnic River would not work

Two additional routes from the Lift Station to west of St. Croix Street and three routes from there to MH 1274 that are shown in Figure 2 were considered. MH 1274 to MH 1272 will follow the route of the existing pipe. Note that the position of MH 1274 may be adjusted depending on the outcome of the St. Croix Street Outfall discussion, but the general location will remain the same.

Route A (Green) and Route B (Blue) are two routes to get from the Lift Station to west of St. Croix Street in line with Quarry Avenue. Route 1 (Red), Route 2 (Yellow), and Route 3 (Orange) all begin at that point and end at MH 1274.

### Route Selection

A number of factors were considered in reviewing and selecting a preferred route. A matrix comparing the routes was prepared. The broad categories in the matrix are:

- Relative Cost
- Environmental Impacts
- Private Property Impacts
- Construction Difficulty
- Synergy With Other Goals

These broad categories were broken down into subcategories with preferred alternatives generated for each from which an overall preferred route was chosen. It should be noted that some categories are more important than others and were therefore more highly weighted. The comparison matrix is attached to this memo.



## Preferred Route

Route A was selected as preferred to Route B.

- Route A is a little shorter and requires shallower excavation
- The limited bedrock information available indicates Route B would have significantly more rock excavation.
- Route B would require temporary conveyance
- Route B would impact Main Street and Quarry Road more and have greater utility impacts
- Route A has more easement acquisition required
- Unfortunately Route A may require removal of a few very nice trees

Route 2 was selected as the preferred route to connect Route A to MN 1274.

Route 1

- Shorter, but deeper and the limited bedrock information available indicates it would have significantly more rock excavation
- Greatest tree impacts
- Crosses and therefore limits more developable property
- A gravity sewer from west of the Kinnickinnic River will not work

Route 2

- Longest route
- Shallowest excavation (minimally shallower than Route 3)
- Wetland impacts similar to Route 3
- The limited bedrock information available indicates it would have less rock excavation
- Crosses undevelopable floodplain
- Less cropland impact than Route 3
- Allows gravity connection to west of the Kinnickinnic River

Route 3

- Depth similar to Route 2
- Wetland and floodplain impacts similar to Route 2
- The limited bedrock information available indicates it would have rock excavation similar to Route 2
- Significant cropland impacts
- Slightly fewer tree impacts than Route 2
- Much more difficult gravity connection to west of the Kinnickinnic River

## Easements

The majority of the preferred route crosses private property so easements will need to be acquired. Valuable property features impacted such as trees or developability will be considered during easement negotiations.

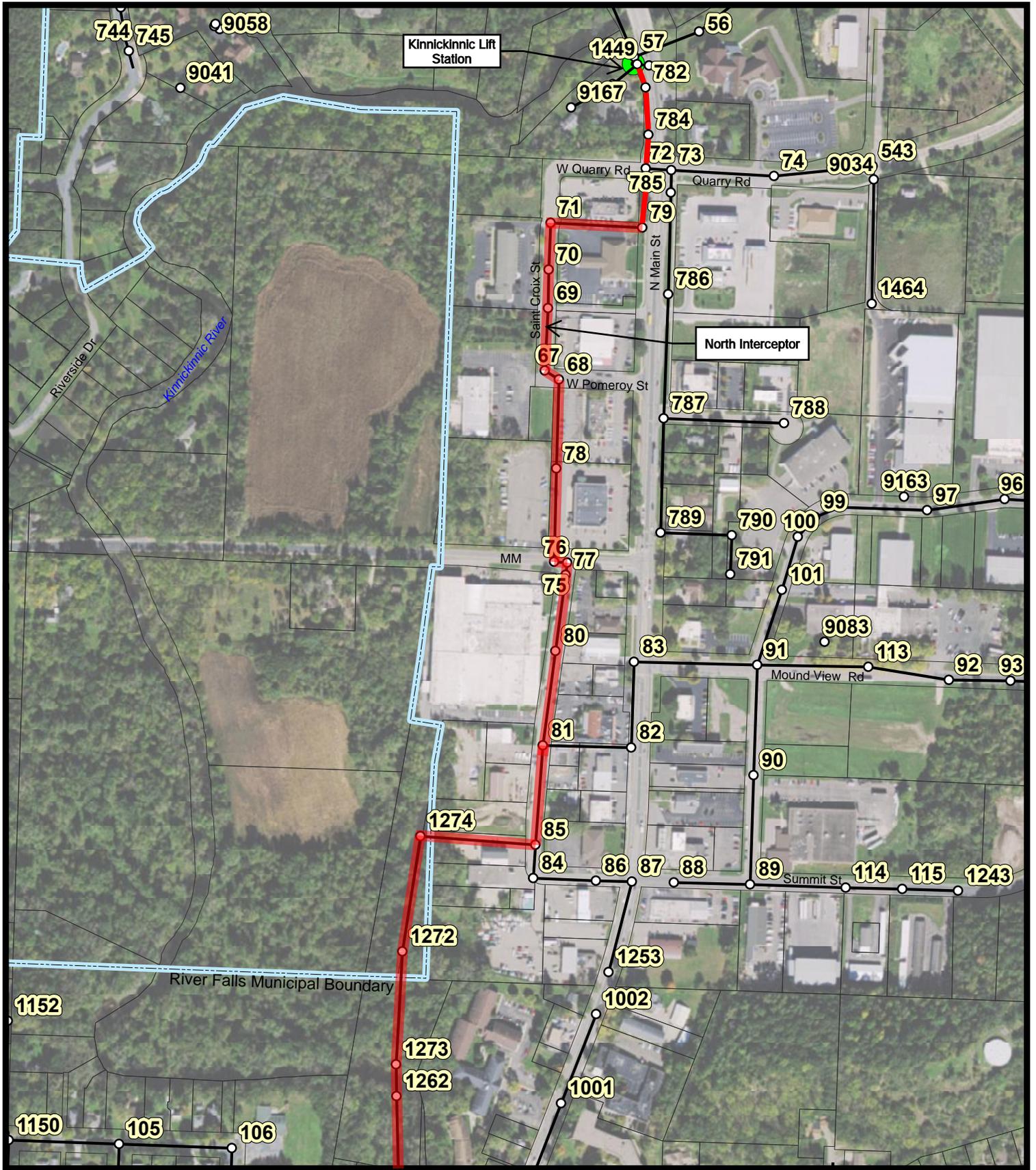
An access route with a surface sufficient for driving a large truck to each manhole will be needed. The surfacing material has not yet been determined. The access generally follows the easement for the pipe. If a different route to one or more manholes is desired, easements or similar access rights will need to be acquired also.



**Recommendation**

Select Route A and Route 2 as the preferred route.





0 150 300 600 Feet

# River Falls North Interceptor

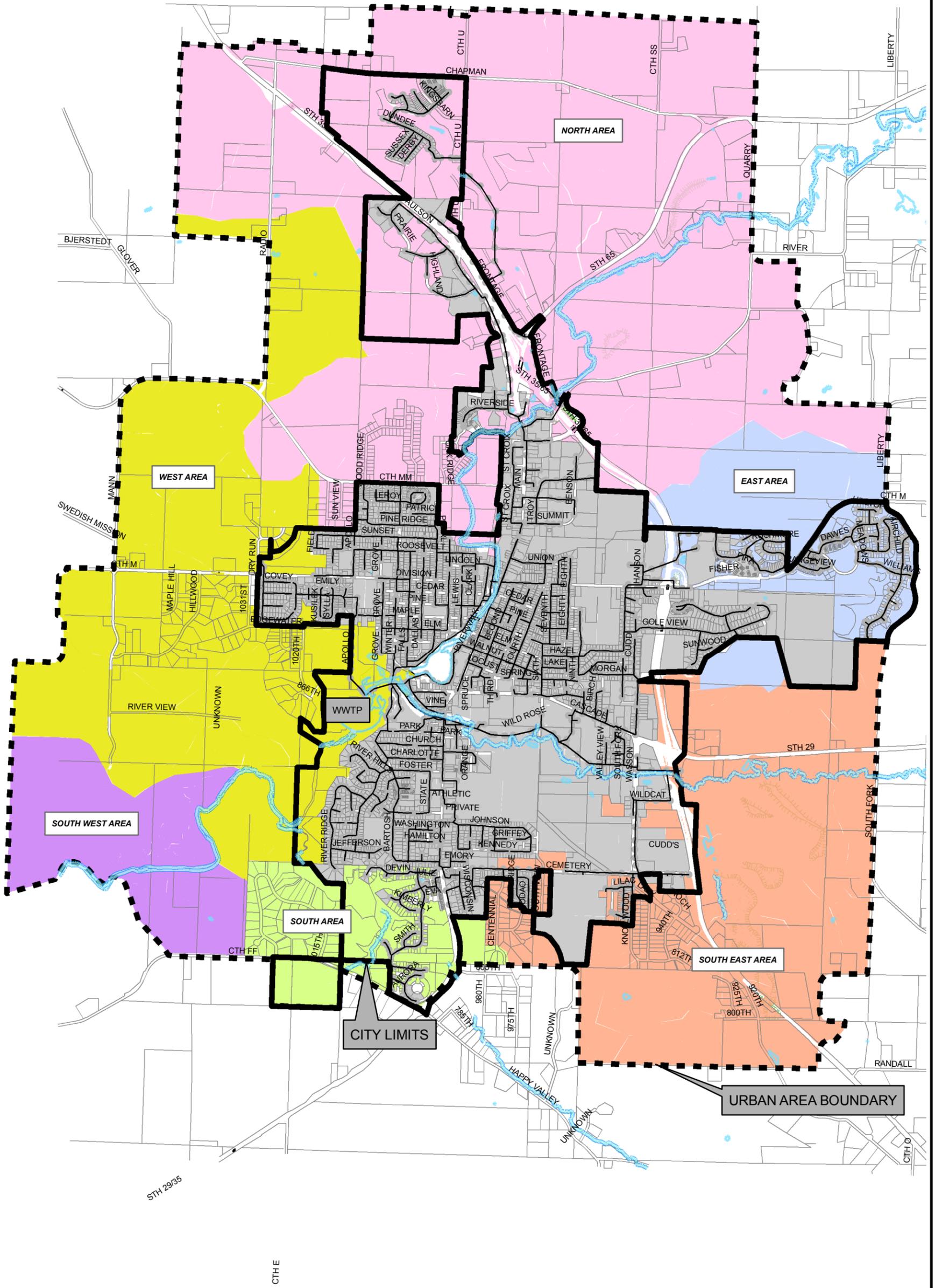
Figure 1



Date: 7/5/2016



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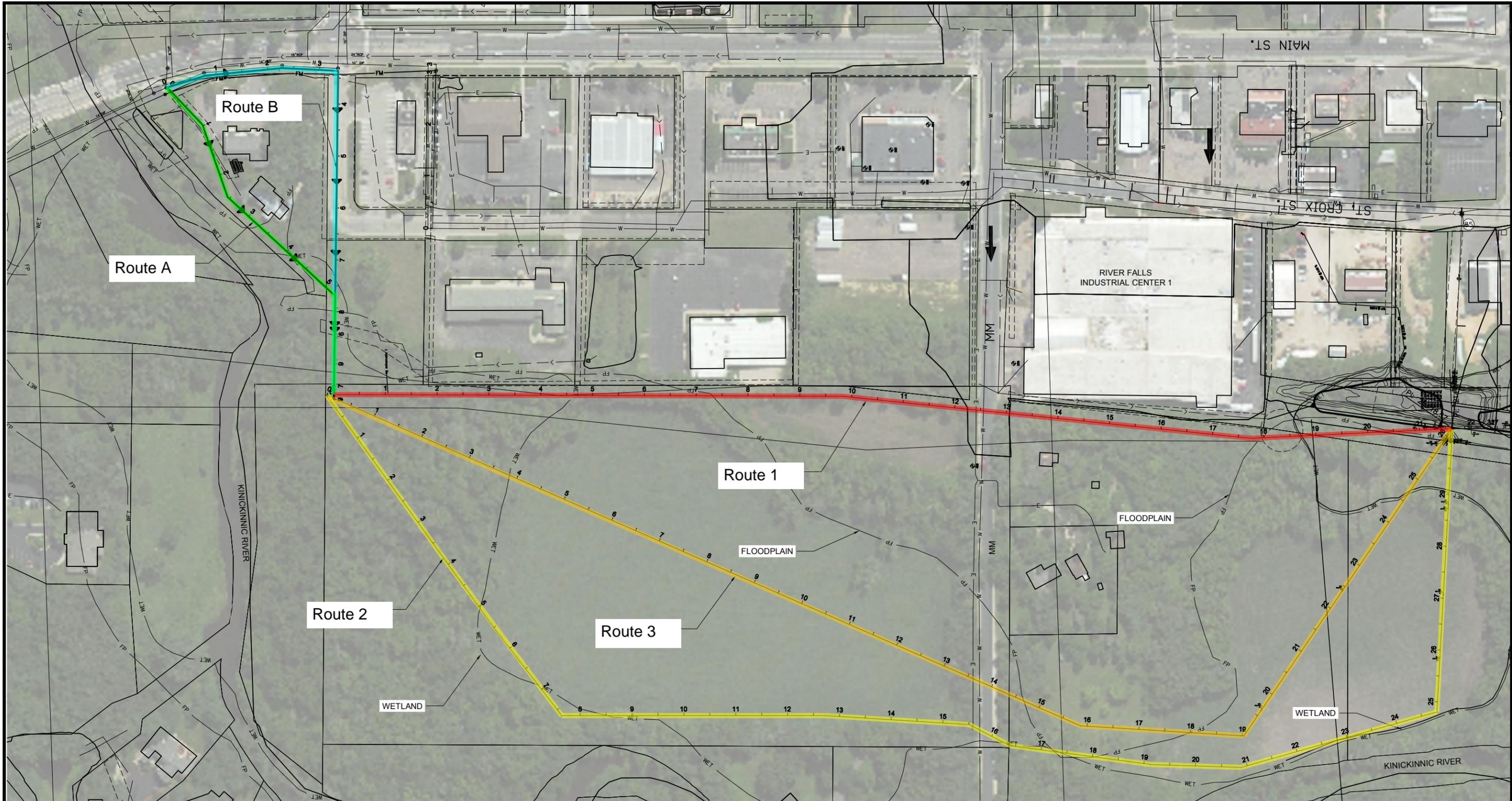


**AVRES**  
ASSOCIATES

SANITARY SEWER STUDY  
RIVER FALLS MUNICIPAL UTILITIES  
MARCH 2009

URBAN AREA BOUNDARY  
SEWER SERVICE AREAS





DATE: 10-6-2016

PROJECT NO.  
16105.000

RECORD NO. SHEET NO.

C0

FIELD BOOK: 10/06/2016  
 Plot Date: 10/06/2016  
 User: tkda\mre  
 Project: 16105.000  
 Drawing: 16105.000  
 Title: RIVER FALLS INDUSTRIAL CENTER 1 - WETLANDS AND FLOODPLAIN STUDY - SITE BASE EXPORT - OUTLINE 2 - SHP

NO.	DATE	BY	DESCRIPTION OF REVISIONS

DESIGNED MRE	DRAWN KAP	I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA
CHECKED MRE	DATE _____	
		LIC. NO. _____



444 Cedar Street, Suite 1500  
 Saint Paul, MN 55101  
 651.292.4400  
 tkda.com

RIVER FALLS	WISCONSIN
CLIENT NO.	MSA NO.

Figure 2

**North Interceptor Routing Matrix**

Factor	Basis for Rating	Weighting	Alternative			Preferred Alternative	Route A - Green	Route B - Blue	Preferred Alternative
			Route 1 - Red	Route 2 - Yellow	Route 3 - Orange				
<b>Relative Cost</b>		<b>High</b>	<b>• High</b>	<b>• Medium</b>	<b>• Medium</b>	<b>2,3</b>	<b>• Low</b>	<b>• High</b>	<b>A</b>
Pipe Length	Mainline Length (21")	Low	• 2550	• 3400	• 3000	1	• 750	• 1000	A
	Connection Length (10")	Low	• 940	• 320	• 735	2			
	Total Length	Medium	• 3490	• 3720	• 3735	1			
Average Depth (Maximum)	Average Depth over length of pipe	High	• 15.8' (20.8')	• 11.4' (16.2')	• 11.6' (17.6')	<b>2,3</b>	• 15.5' (19.8')	• 19.8' (21.2')	A
Rock Removal	Expected Rock Removal Required	High	• Rock expected through knob near MM	• Least likely to encounter rock	• Least likely to encounter rock	<b>2,3</b>	• Rock expected near lift station, but not as deep as Route B	• Rock expected though most of route	A
Land Acquisition	Total Land Acquisition required	Medium	• Required for entire length, could abut property line	• Required for entire length	• Required for entire length	1,2,3	• Yes. Some existing sewer easement does exist	• Yes. Majority is within existing ROW	B
Temporary Conveyance	Temporary Conveyance required	Medium	• None	• None	• None	1,2,3	• None	• Likely required for construction along Main Street	A
<b>Environmental Impacts</b>		<b>Low</b>	<b>• Medium</b>	<b>• Medium</b>	<b>• Medium</b>	<b>3</b>	<b>• Medium</b>	<b>• Low</b>	<b>B</b>
Wetland Impacts	Length of Pipe in NWI Wetland	Low	• Portions within wetland, 2nd least impact	• Majority within wetland, most impact	• Portions within wetland, least impact	3	• Portions within wetland	• Small amount in wetland	B
	Tree Removal	Low	• Tree removal anticipated along entire route	• Tree removal anticipated along majority of route.	• Tree removal anticipated along segments of route	3	• Removal of "marquee" trees likely	• Minimal	B
	Cropland Impacts	Low	• No cropland impacts	• Minor cropland impacts, temporary impacts during construction	• High impact	1			
<b>Private Property Impacts</b>		<b>High</b>	<b>• Medium</b>	<b>• Low</b>	<b>• Medium</b>	<b>2</b>	<b>• Medium</b>	<b>• Medium</b>	<b>B</b>
Land Acquisition	Total Land Acquisition required	Medium	• Required for entire length, could abut property line	• Required for entire length	• Required for entire length	1,2,3	• Yes. Some existing sewer easement does exist	• Yes. Majority is within existing ROW	B
	Impacts to developable property	High	• Will impact developable land around Division/MM	• None	• Minimal	2	• Minor. Bloom property would have slight impact, Worms Trust would be impacted	• Minor. Worms Trust would be impacted	B
	Construction impacts	Medium	• Minor Impacts to cropland	• Minimal impacts	• Impacts to cropland	1,2	• Minor.	• Very high impacts; roadway closures and access impacts	A
<b>Construction Difficulty</b>		<b>Medium</b>	<b>• Medium</b>	<b>• Low</b>	<b>• Low</b>	<b>2,3</b>	<b>• Low</b>	<b>• High</b>	<b>A</b>
Phasing Required	Anticipated Length of Construction	Low	• Medium construction speed; potential for rock, deeper construction	• Medium fast construction speed; shallow construction	• Medium fast construction speed; shallow construction	2,3	• Medium fast construction speed; potential for rock, shallow construction	• Slow construction speed; confined space, deep, large amounts of restoration, many existing utilities	A
	Temporary Conveyance	Medium	• None	• None	• None	1,2,3	• None	• Likely required for construction along Main Street	A
	Rock Removal	High	• Rock expected through knob near MM	• Least likely to encounter rock	• Least likely to encounter rock	2,3	• Rock expected near lift station, but not as deep as Route B	• Rock expected though most of route	A
	Regulatory Requirements	Low	• Temporary wetland impacts, County Highway Crossing	• Temporary wetland impacts, close to river, county highway crossing	• Temporary wetland impacts, county highway crossing	1,2,3	• Temporary wetland impacts	• Temporary wetland impacts, working in State ROW	A
<b>Synergy with other goals</b>		<b>Medium</b>	<b>• Medium</b>	<b>• High</b>	<b>• Medium</b>	<b>2</b>	<b>• Medium</b>	<b>• Medium</b>	<b>A,B</b>
Future Trail Use	Will this project affect future trail construction or use	Medium	• No	• Access road could be used as a river corridor trail	• No	2	• Access road could be used as a river corridor trail	• No	A
	Elevation at proposed river crossing	High	• 874.5	• 873.3	• 874.3	2			
	Ease of access to pipe	High	• Will require access to be constructed/maintained, could be accessed from businesses	• Will require access to be constructed/maintained, potential for off season access through cropland	• Will require access to be constructed/maintained, potential for off season access through cropland	1	• Minor access road would be required	• Very easy, majority within roadway/ROW	B
	Pipe Access during flooding	Low	• Portions within floodplain	• Majority within floodplain	• Majority within floodplain	1	• Partially in floodplain	• Majority outside floodplain	B





RESOLUTION NO. 2016-18

**RESOLUTION RECOMMENDING PREFERRED ROUTE FOR N INTERCEPTOR SEWER**

**WHEREAS**, On November 16, 2015, staff presented a draft Request for Proposals to the Utility Advisory Board and laid out a plan for proceeding forward with necessary planning of a North Interceptor Sewer project; and

**WHEREAS**, on March 21, 2016, the Utility Advisory Board adopted a resolution recommending that the City Council enter into an agreement with TKDA for professional services necessary to complete initial work for the North Interceptor Sewer Project; and

**WHEREAS**, on March 22, 2016, the Common Council of the City of River Falls authorized the City Administrator to enter into an agreement with TKDA for professional services necessary to complete initial work for the North Interceptor Sewer Project; and

**WHEREAS**, TKDA has prepared a Technical Memorandum - North Interceptor Lift Station to MH 1272 Routing dated November 11, 2016; and

**WHEREAS**, this technical memorandum contains specific recommendations regarding routing for North Interceptor Lift Station to MH 1272; and

**WHEREAS**, staff recommends accepting the recommendation.

**NOW, THEREFORE, BE IT RESOLVED** that the Utility Advisory Board of the City of River Falls hereby accepts recommendations of the Technical Memorandum regarding North Interceptor Lift Station to MH 1272 Routing dated November 11, 2016.

**BE IT FURTHER RESOLVED** that the Utility Advisory Board of the City of River Falls hereby directs TKDA to prepare preliminary plans which will be used to identify permanent and temporary easements needed to construct the project and maintain the system.

Dated this 21st day of November, 2016.

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Grant Hanson, Board President

ATTEST:

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Jennifer Zeiler , City Clerk

## MEMORANDUM

**TO:** Utility Advisory Board

**FROM:** Reid Wronski, P.E., City Engineer  
Crystal Raleigh, P.E., Sr. Civil Engineer

**DATE:** November 21, 2016

**TITLE:** **Resolution Recommending Preferred Concept for St. Croix Street Outfall.**

### RECOMMENDED ACTION

Adopt attached resolution recommending preferred concept for St. Croix Street Outfall.

### BACKGROUND

On November 16, 2015, staff presented a draft Request for Proposals to the Utility Advisory Board and laid out a plan for proceeding forward with necessary planning of a North Interceptor Sewer project.

On March 21, 2016, the Utility Advisory Board adopted a resolution recommending that the City Council enter into an agreement with TKDA for professional services necessary to complete initial work for the North Interceptor Sewer Project.

On March 22, 2016, the Common Council of the City of River Falls authorized the City Administrator to enter into an agreement with TKDA for professional services necessary to complete initial work for the North Interceptor Sewer Project that included the following major work items:

1. Downstream Interceptor Planning And Preliminary Design
2. N. Interceptor Routing Study
3. **St. Croix Street Outfall Study**

On July 18, 2016 the Utility Advisory Board adopted a resolution accepting recommendations of the Technical Memorandum regarding downstream interceptor plan for North Interceptor dated July 7, 2016.

### DISCUSSION

Attached is a *Technical Memorandum - St. Croix Street Outfall Study* from TKDA. This technical memorandum reviews a number of different concepts for reconfiguring the St. Croix Street Outfall pond before recommending a concept. Representatives from TKDA will be at the UAB meeting to present their recommendations.

## **St. Croix Street Outfall**

**November 21, 2016**

**Page 2 of 2**

If the UAB adopts a recommended concept for the St. Croix Street Outfall, TKDA will complete preparation of preliminary plans identifying any necessary permanent and temporary easements needed to construct and maintain the project. An acquisition map will be brought to the City Council for approval before the Land Acquisition Specialist begins negotiations with affected property owners.

### **CONCLUSION**

Staff recommends approval of the attached resolution accepting recommendations of the Technical Memorandum regarding a preferred concept for the St. Croix Street Outfall.



444 Cedar Street, Suite 1500  
 Saint Paul, MN 55101  
 651.292.4400  
 tkda.com

## Memorandum

<b>To:</b>	Reid Wronski	<b>Reference:</b>	St. Croix Street Outfall Study
	City of River Falls		
	222 Lewis Street		
	River Falls, WI 54022	<b>Project No.:</b>	16105.000
<b>From:</b>	Matt Wassman, PE	<b>Routing:</b>	
<b>Date:</b>	11/11/2016		

### Purpose and Background

TKDA was retained by the City of River Falls to develop concept plans for the rehabilitation and expansion of the existing St. Croix Street Outfall Pond. The rehabilitation and expansion of the existing pond is needed in order to enhance its function of providing peak discharge rate control, total suspended solids (TSS) removal and total phosphorus (TP) removal consistent with current standards.

Constructed in the early 1990's, the existing St. Croix Street Outfall Pond treats stormwater runoff from a large portion of downtown River Falls prior to discharging to the Kinnickinnic River. Sediments have accumulated to the point where the sediment capturing ability of the pond has been significantly reduced.

This memorandum documents the preliminary design of multiple stormwater treatment options that will provide rate control and volume control, and help reduce TSS and thermal loads to the river from existing developed areas.

### Data Collection

The following data was collected, reviewed, and utilized for this study.

- 2015 St. Croix County LiDAR data and imagery
- Available record and as-built drawings for the pond
- Survey data
- Federal Emergency Management Agency Digital Flood Insurance Rate Maps
- Storm sewer outfall sewersheds provided by the City

### Site Description

The existing St. Croix Street Outfall Pond was designed and constructed in late 1990, early 1991. The pond was constructed on permanent limited easement. The pond is bounded by an abandoned railroad embankment to the west, a commercial building and parking lot to the north, steep slopes to the east, and a ravine that drains to the Kinnickinnic River to the south. The abandoned railroad embankment to the west follows the delineated 100-year floodway boundary. See Attachment 1 for a general location

map and Attachment 2 for an aerial of the existing pond which also shows the 100-year floodplain and floodway boundaries.

The existing pond receives runoff from a 48-inch storm sewer pipe which collects runoff from approximately 91 acres contributing from St. Croix Street, Main Street, Troy Street, Mound View Road, Summit Road, and Benson Street. See Attachment 3 for an existing drainage area map.

The pond was originally designed with a 3 foot permanent pool. Low flows drain through a 12-inch CMP riser pipe which connects to a 72-inch outlet control structure. Large flows exceeding the capacity of the 12-inch CMP riser overtop the 72-inch outlet control structure and then discharge through a 48-inch outlet pipe into a stilling basin which drains into a ravine and ultimately to the Kinnickinnic River approximately 600 feet to the south. The pond is filled with sediment and is in need of cleaning.



*Existing Sediment Laden Pond*





*Existing Sediment Laden Pond*

### **Stormwater Treatment Concepts 1 and 2**

Multiple stormwater treatment concepts were developed. The first two concepts include a multi-cell configuration with the first two cells being wet ponds. The first cell (Wet Pond 1) is a pre-treatment cell which includes a 5-foot deep permanent pool with 5-feet of temporary storage. The second cell (Wet Pond 2) includes a 10-foot deep permanent pool with 9-feet of temporary storage. A 10-foot maintenance access bench is provided around the perimeter of both wet cells to facilitate periodic removal of accumulated sediment. Both cells include aquatic benches at the normal water level no steeper than a 10(H):1(V) for at least 8-feet to provide safety and to support fringe emergent growth. Both wet cells include a primary low flow outlet pipe with an outlet structure designed to control peak discharge rates for the 1-, 2-, 10-, and 100-year storm events. Both cells include a secondary riprap emergency spillway to convey large flows exceeding the capacity of the primary outlet pipe.

The difference between the two proposed stormwater treatment system concepts is in cell three. Cell three of Concept 1 includes an infiltration/filtration basin (basin). The basin grading maximizes the entire area within the existing ravine outside of the designated floodway boundary. Maximizing cell three increases the surface area for infiltration and filtration to occur and provides additional peak



discharge rate reduction. A 30-inch filtration media section lies below the basin bottom. The media section consists of a 12-inch filter topsoil layer over an 18-inch layer of sand. Runoff will filter through the media section and either infiltrate into the soil profile or enter 8-inch perforated subsurface drain pipes. As the runoff filters through the media and into the subsurface drains, the runoff will be cooled prior to discharging to the river. This option does require the removal of the trees which currently provide shade resulting in cooling of the runoff. See Attachment 4 for a grading plan of Concept 1.

Cell 3 of Concept 2 includes a network of rock weepers in lieu of the infiltration/filtration basin. This option avoids removal of the trees. The rock weepers will be placed on the surface along the contour avoiding large mature trees that provide the most shade. Four rows of rock weepers are planned with a row every one foot drop in elevation. The smaller most frequent storms will flow from Wet Pond 2 to the rock weeper system through the 12-inch adverse grade pipe. The adverse grade pipe allows for skimming of floatables (oils, trash, debris, etc.) and also draws cooler water from below the normal water level of Wet Pond 2. Higher flows will overtop the internal concrete weir wall placed in the outlet control structure. See Attachment 5 for a grading plan of Concept 2.

**Water Quality and Quantity Results for Concepts 1 and 2**

A water quality summary table for existing conditions, Concept 1 and Concept 2 are shown in Tables 1, 2 and 3 respectively.

**Table 1 – Water Quality - Existing Conditions**

Contaminate	Load Reduction %
	Existing Wet Pond
TSS	57.5
TP	26.4

**Table 2 – Water Quality - Proposed Concept 1**

Contaminate	Load Reduction %			
	Overall	Wet Pond 1	Wet Pond 2	Infiltration/ Filtration Basin
TSS	89.5	54.0	60.0	47.4
TP	72.7	22.7	35.7	46.3

**Table 3 – Water Quality - Proposed Concept 2**

Contaminate	Load Reduction %						
	Overall	Wet Pond 1	Wet Pond 2	Rock Weeper 1	Rock Weeper 2	Rock Weeper 3	Rock Weeper 4
TSS	89.1	54.0	60.1	27.7	24.6	23.6	23.3
TP	72.9	22.7	35.7	22.6	20.3	19.6	19.4



A comparison of peak discharge rates for Concept 1 and Concept 2 to pre-developed conditions and existing conditions is shown in Table 4.

**Table 4 – Comparison of Peak Discharge Rates – Concepts 1 and 2**

Storm Event	Pre-Developed Conditions (cfs)	Existing Conditions (cfs)	Proposed Concept 1 (cfs)	Proposed Concept 2 (cfs)
1-Year	13.5	58.6	13.6	33.5
2-Year	19.4	69.7	27.8	41.5
10-Year	58.0	124.0	67.7	85.4
100-Year	173.9	227.5	159.6	150.1

**DNR Coordination**

A meeting and site visit was held with the DNR on August 3, 2016 to discuss the two proposed concepts. The site visit included inspection of the existing pond and a walk through of the entire ravine/channel downstream of the existing pond to the Kinnickinnic River. During the field walk, multiple springs providing fresh cold water to the channel were encountered. The presence of springs confirmed the designation that the channel was a Class II trout stream. As a result of this finding, it was determined that Concepts 1 and 2 would not be feasible.

**Stormwater Treatment Concepts 3, 4 and 5**

Concept 3 included re-grading the existing pond within the existing footprint to provide a wet pond with the maximum amount of storage volume for water quality purposes. An outlet control structure was designed to provide the maximum amount of rate reduction. The grading included 3:1 inslopes, an 8-foot wide 10:1 bench, and a 10-foot wide berm around the perimeter of the pond for maintenance access. See Attachment 6 for a grading plan of Concept 3.

Concept 4 included re-grading the existing pond within the existing footprint similar to Concept 3 but also expanding the wet pond to the east. This concept would require the acquisition of private property to expand the pond. See Attachment 7 for a grading plan of Concept 4.

Concept 5 included the same footprint as Concept 3 but converted the wet pond to a dry infiltration/filtration pond which also incorporated filtration media and underdrains. Converting the wet pond to a dry pond allowed for the removal of the 8-foot wide 10:1 bench which increased the available storage in the pond. See Attachment 8 for a grading plan of Concept 5.

**Water Quality and Quantity Results for Concepts 3, 4 and 5**

A water quality summary table for Concepts 3, 4 and 5 are shown in Tables 5.

**Table 5 – Water Quality - Concepts 3, 4 and 5**

Contaminate	Load Reduction %		
	Concept 3	Concept 4	Concept 5
TSS	63.2	71.1	70.9
TP	31.7	40.0	50.6



A comparison of peak discharges for Concepts 3, 4 and 5 to pre-developed conditions and existing conditions is shown in Table 6.

**Table 6 – Comparison of Peak Discharge Rates – Concepts 3, 4 and 5**

Storm Event	Pre-Developed Conditions (cfs)	Existing Conditions (cfs)	Proposed Concept 3 (cfs)	Proposed Concept 4 (cfs)	Proposed Concept 5 (cfs)
1-Year	13.5	58.6	46.9	45.6	44.8
2-Year	19.4	69.7	55.0	54.3	53.5
10-Year	58.0	124.0	96.0	95.4	95.0
100-Year	173.9	227.5	194.2	194.1	194.0

**Recommendation**

Concepts 1 and 2 were eliminated due to the presence of springs and the channel being designated as a Class II trout stream. The increase in TSS and TP removal and peak discharge rate reduction that Concept 4 provided over Concept 3 was not a large enough increase to justify the acquisition of private property. Concept 5 converted the wet pond of Concept 3 to a dry infiltration/filtration pond. The conversion from a wet pond to a dry infiltration/filtration basin increased the TSS removal and TP removal from Concept 3 and also increased the peak discharge rate reduction. Our recommendation is to move forward with final design of Concept 5.



# City of River Falls Street Grid Map



- Principal Arterial
- Bridge - Principal Arterial
- Minor Arterial
- Bridge - Minor Arterial
- Collector
- Bridge - Collector
- Local Road
- Private Road
- Corporate Limits

City of River Falls  
 Engineering Dept  
 222 Wisconsin St., Suite 225  
 River Falls, WI 54022  
 (715) 425-0900

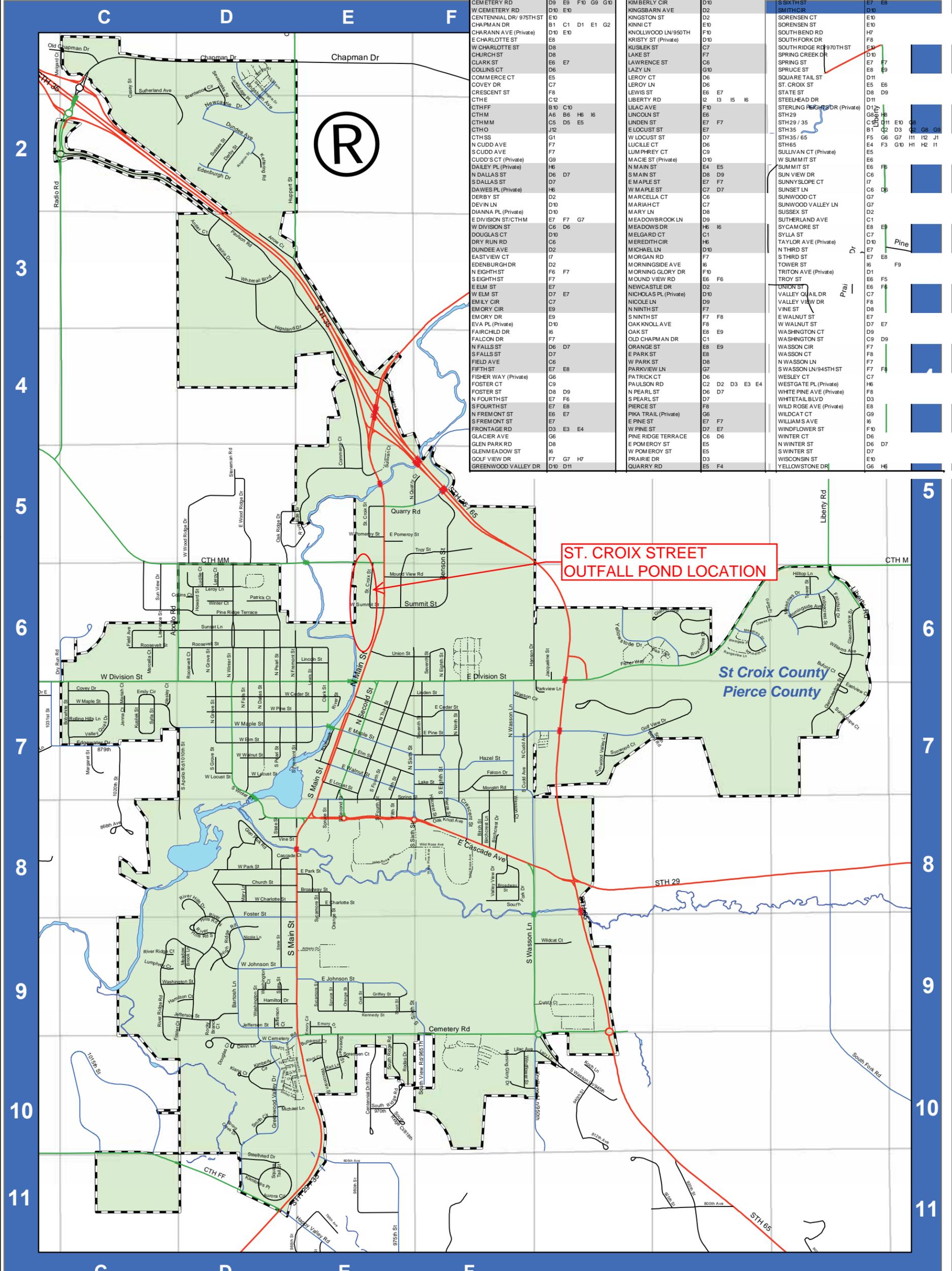
September 2014

STREET N MES	RD	STREET N MES	RD	STREET N MES	RD
ANTLER CT	D3	GRIFFEY ST	E9	W QUARRY RD	E5
APOLLO RD	C6	N GROVE ST	D6 D7	N QUARRY CT	F5
S APOLLO RD/1010TH ST	C7	S GROVE ST	D9	RADIO RD	C1 C2 C3 C4
ARROW CT	D3	HAMILTON CT	D9	RANGEVIEW LN (Private)	H6
ATHLETIC DR (Private)	E9	HAMILTON DR	C6	RIDGECREST ST	H6
AURORA CIR	D11	HANSON DR	C6	RIVER HILLS DR	D8
BALMORAL PL	D2	HAZEL ST	F7	RIVER HILLS RD N	D8 D9
BANDLE ST (Private)	D1	HIGH RIDGE RD	D9	RIVER HILLS RD S	D9
BARTOSH LN	D8 D9	HIGHLAND DR	D3 E3	RIVER RIDGE CT	C9
BENNETT ST (Private)	D10 E10	HILLCREST ST	F8	RIVER ST	C9
BENSON ST	F5 F6	HILTOP LN	I6	RIVERSIDE DR	E5
BIRCH ST	F8	HOWARD ST	D6	N RIVERWALK (Alley)	D9
BIRCHCREST DR	F8	HUPPERT ST	D2 D3	S RIVERWALK (Alley)	E7
BIRCHCREST LN	F8	JACQUELINE ST	G7	ROCKY BRANCH CT	D9
BOBWHITE ST	C7	JEFFERSON CT	C9 D9	RODAO DR	E10
BRENTWOOD CIR	D1	JEFFERSON ST	C9 D9	ROLLING HILLS LN	C7
BROADWAY ST	E8 F8	JENNA CT	C7	ROOSEVELT CT	D6
BUFORD CT	I6	JESSICA PL (Private)	D10	ROOSEVELT ST	C6 D6
BUTTERNUT CT	E10	E JOHNSON ST	E9 E9	RUSHMORE DR	H6
CAMBRIDGE PL	D2	W JOHNSON ST	D9	N SECOND ST	E7
E CASCADE AVE	E8 F8 G8	JULIE AVE (Private)	D10	S SECOND ST	E7
W CASCADE AVE	E8	KAMLOOPS PL	D11	SEVENOAKS ST	D2
CASCADE CT	D8	KARLIN	E10	SEVENTH ST	F6 F7
CASEY ST	C1	KENNEDY ST	E9	SHIRLEY AVE (Private)	D10
E CEDAR ST	E7 F7	KETTERING RD	D2	SHORT ST	E9
W CEDAR ST	D7 E7	KIANA CT	D10	N SIXTH ST	E7
CEMETERY RD	D9 E9 F10 G9 G10	KIMBERLY CIR	D10	S SIXTH ST	E7 E8
W CEMETERY RD	E10	KINGSBARN AVE	D2	SMITH CIR	D10
CENTENNIAL DR/ 975TH ST	E10	KINGSTON ST	D2	SORENSEN CT	E10
CHAPMAN DR	S1 C1 D1 E1 G2	KINNI CT	E10	SORENSEN ST	E10
CHARANN AVE (Private)	D10 E10	KVOLLWOOD LN/950TH	F10	SOUTH BEND RD	H7
E CHARLOTTE ST	E8	KRISTY ST (Private)	D10	SOUTH FORK DR	F8
W CHARLOTTE ST	D8	KUSILEK ST	C7	SOUTH RIDGE RD/970TH ST	E9
CHURCH ST	D8	LAKE ST	F7	SPRING CREEK DR	D10
CLARK ST	E6 E7	LAWRENCE ST	C6	SPRING ST	E7 F7
COLLINS CT	D6	LAZY LN	G10	SPRUCE ST	E8 E9
COMMERCE CT	E5	LEROY CT	D6	SQUARE TAIL ST	D11
COVEY DR	C7	LEROY LN	D6	ST. CROIX ST	E5 E6
CRESCENT ST	F8	LEWIS ST	E6 E7	STATE ST	D8 D9
CTHE	C12	LIBERTY RD	I2 I3 I5 I6	STEELHEAD DR	D11
CTHFF	B10 C10	LILAC AVE	F10	STERLING HEIGHTS DR (Private)	D1
CTHM	A6 B6 H6 I6	LINCOLN ST	E6	STH29	G8 H8
CTHMM	C5 D5 E5	LINDEN ST	F7	STH29 / 35	C10 H11 E10 G8
CTHO	J12	E LOCUST ST	E7	STH35	B1 C2 D3 G2 G8 G9
CTHSS	D1	W LOCUST ST	D1	STH35 / 65	F5 G6 G7 H1 H2 J1
N CUDD AVE	F7	LUCILLE CT	D6	STH65	E4 F3 G10 H1 H2 I1
SCUDD AVE	C9	LULLPHRY CT	C9	SULLIVAN CT (Private)	E5
CUDD ST CT (Private)	G9	MACIE ST (Private)	D10	W SUMMIT ST	E6
DAILEY PL (Private)	H6	N MAIN ST	E4 E5	SUMMIT ST	E6 F6
N DALLAS ST	D6 D7	S MAIN ST	D8 D9	SUN VIEW DR	C6
S DALLAS ST	D7	E MAPLE ST	E7 F7	SUNNYSLOPE CT	I7
DAWES PL (Private)	H6	W MAPLE ST	C7 D7	SUNSET LN	C6 D6
DERBY ST	D2	MARCELLA CT	C6	SUNWOOD CT	G7
DEVIN LN	D10	MARIAH CT	C7	SUNWOOD VALLEY LN	G7
DIANNA PL (Private)	D10	MARY LN	D8	SUSSEX ST	D2
E DIVISION ST/CTHM	F7 G7	MEADOWBROOK LN	D9	SUTHERLAND AVE	C1
W DIVISION ST	C6 D6	MEADOWS DR	H6 I6	SYCAMORE ST	E8
DOUGLAS CT	D10	MELGARD CT	C1	SYLLA ST	C7
DRY RUN RD	C6	MEREDITH CIR	H6	TAYLOR AVE (Private)	D10
DUNDEE AVE	D2	MICHAEL LN	D10	N THIRD ST	E7
EASTVIEW CT	I7	MORGAN RD	F7	THIRD ST	E7 E8
EDENBURGH DR	D2	MORNINGSIDE AVE	I6	TOWER ST	F9
N EIGHTH ST	F6 F7	MORNING GLORY DR	F10	TRITON AVE (Private)	D1
S EIGHTH ST	F7	MOUND VIEW RD	E6 F6	TROY ST	E6
E ELM ST	E7	NEWCASTLE DR	D2	UNION ST	F5
W ELM ST	D7 E7	NICHOLAS PL (Private)	D10	VALLEY QUAIL DR	E6
EMILY CIR	C7	NICOLE LN	D9	VALLEY VIEW DR	F8
EMORY CIR	E9	N NINTH ST	F7	VINE ST	C1
EMORY DR	E9	S NINTH ST	F7 F8	E WALNUT ST	E7
EVA PL (Private)	D10	OAKKNOLL AVE	F8	W WALNUT ST	D9 E7
FAIRCHILD DR	I6	OAK ST	E8 E9	WASHINGTON CT	D7
FALCON DR	F7	OLD CHAPMAN DR	C1	WASHINGTON ST	C9 D9
N FALLS ST	D6 D7	ORANGE ST	E8 E9	WASSON CIR	F7
S FALLS ST	D7	E PARK ST	E8	WASSON CT	F8
FIELD AVE	C6	W PARK ST	D8	N WASSON LN	F7
FIFTH ST	E7 E8	PARKVIEW LN	G7	S WASSON LN/945TH ST	F7 F8
FISHER WAY (Private)	G6	PATRICK CT	D6	WESLEY CT	C7
FOSTER CT	C9	PAULSON RD	C2 D2 D3 E3 E4	WESTGATE PL (Private)	H6
FOSTER ST	D8 D9	N PEARL ST	D6 D7	WHITE PINE AVE (Private)	F8
N FOURTH ST	E7 F6	S PEARL ST	D7	WHITETAIL BLVD	D3
S FOURTH ST	E8	PIERCE ST	F8	WILD ROSE AVE (Private)	E9
N FRENCH ST	E6 E7	PIKA TRAIL (Private)	G6	WILDCAT CT	G8
S FRENCH ST	E7	E PINE ST	E7 F7	WILLAMSA AVE	I6
FRONTAGE RD	D3 E3 E4	W PINE ST	D7 E7	WINDFLOWER ST	F10
GLACIER AVE	D6	PINE RIDGE TERRACE	C6 D6	WINTER CT	D6
GLEN PARK RD	G6	E POMEROY ST	E5	N WINTER ST	D6 D7
GLENMEADOW ST	I6	W POMEROY ST	E5	S WINTER ST	D7
GOLF VIEW DR	F7 G7 H7	PRAIRIE DR	D3	WISCONSIN ST	E10
GREENWOOD VALLEY DR	D10	QUARRY RD	E5 F4	YELLOWSTONE DR	G6 H6

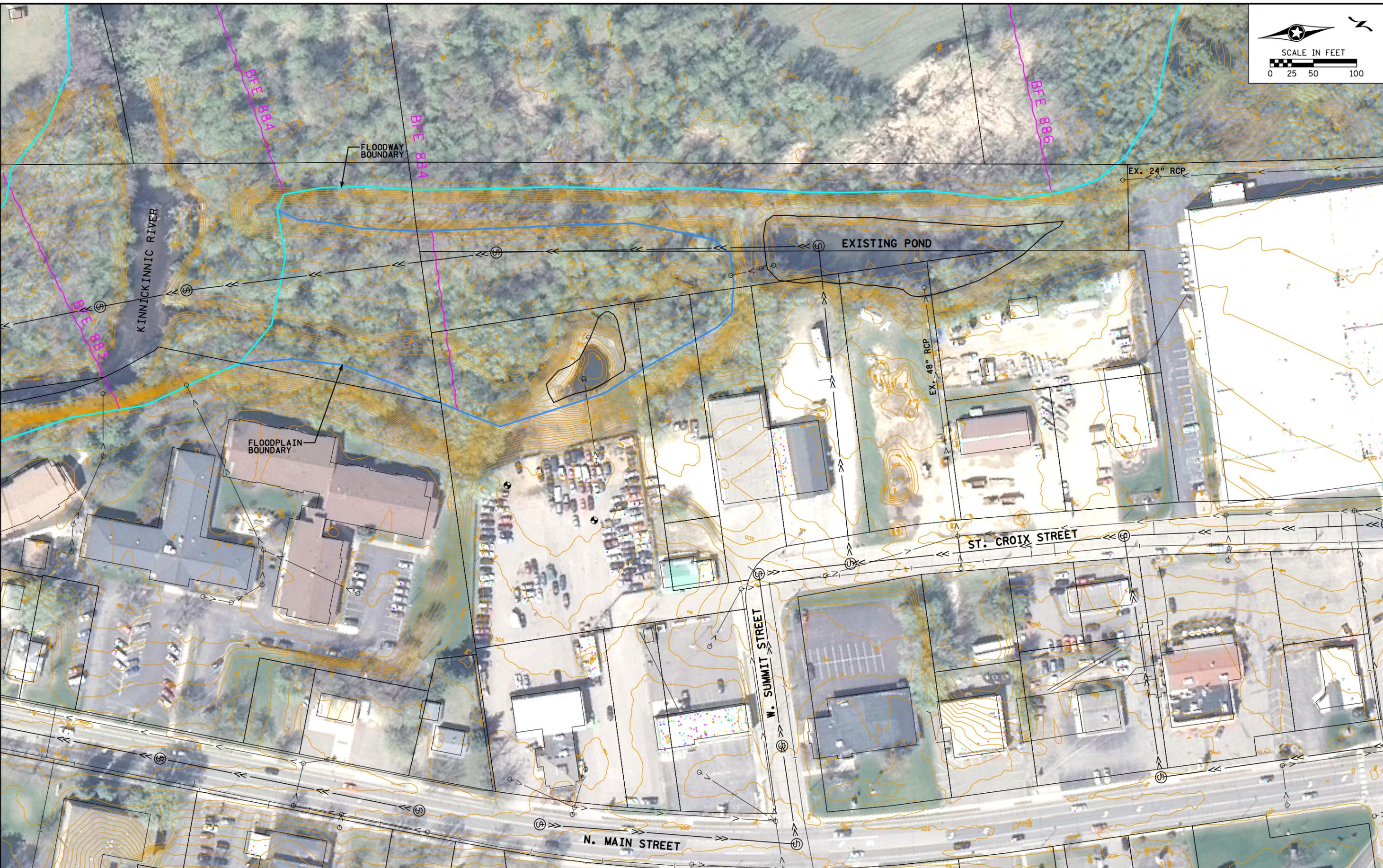
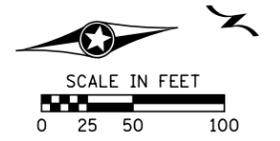


**ST. CROIX STREET  
 OUTFALL POND LOCATION**

St Croix County  
 Pierce County



DATE: 11/9/2016 TIME: 8:31:36 PM  
 FILENAME: K:\r-riverfalls\City\6105000004\_Production\01\_CAD\02\_Sheets\Highway River Falls\_Existing\_pond.dgn



DRAWN BY:  
 CHECKED BY:

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: \_\_\_\_\_  
 PRINTED NAME: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LIC. NO. \_\_\_\_\_



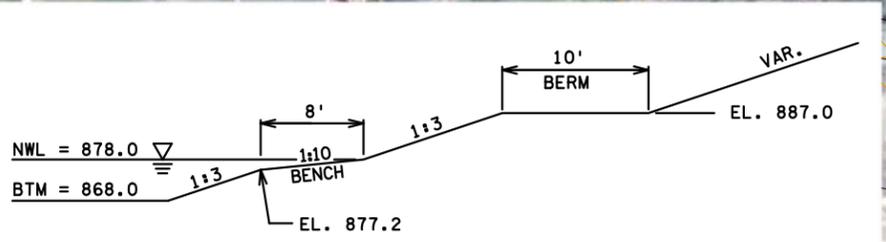
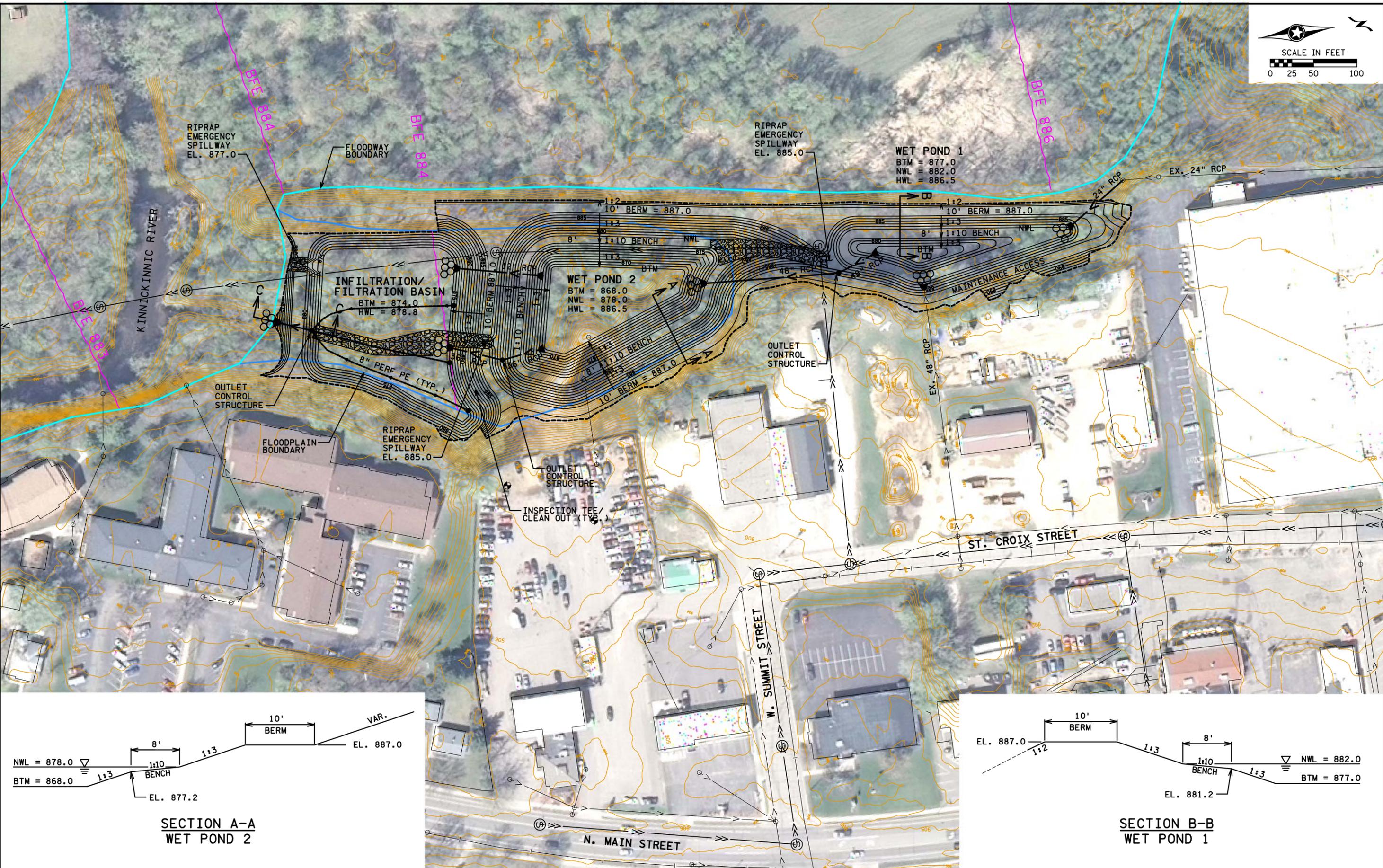
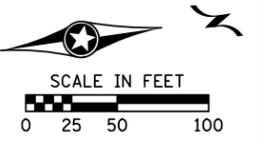
CITY OF RIVER FALLS

ST. CROIX ST. OUTFALL POND

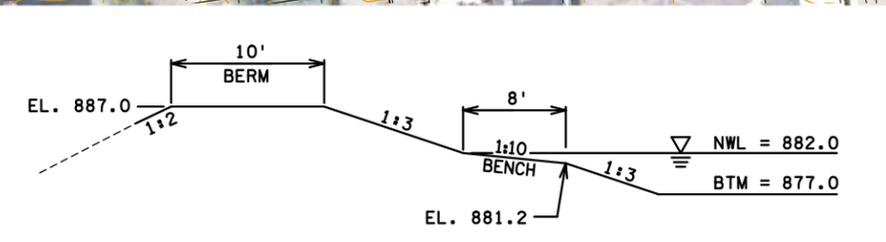
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**SECTION A-A**  
**WET POND 2**



**SECTION B-B**  
**WET POND 1**

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 CHECKED BY:

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: \_\_\_\_\_  
 PRINTED NAME: \_\_\_\_\_  
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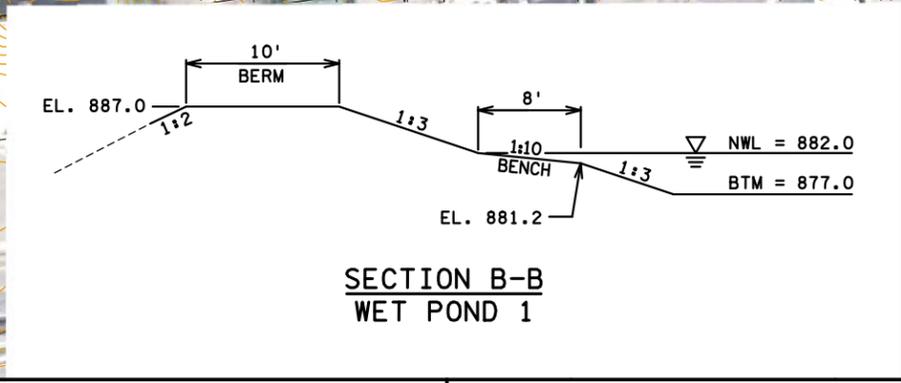
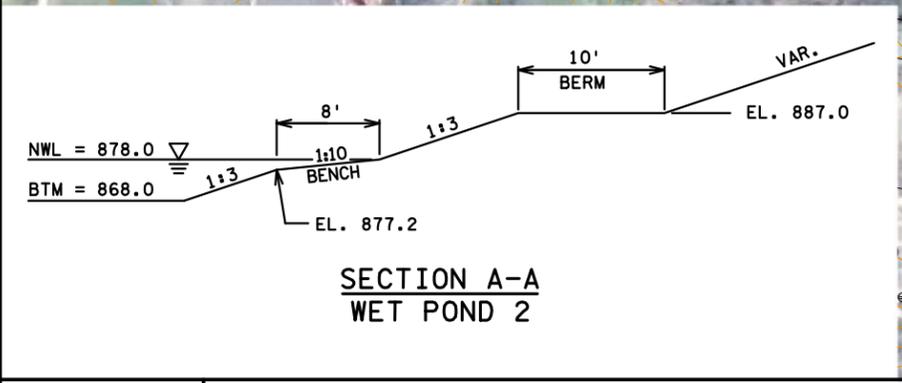
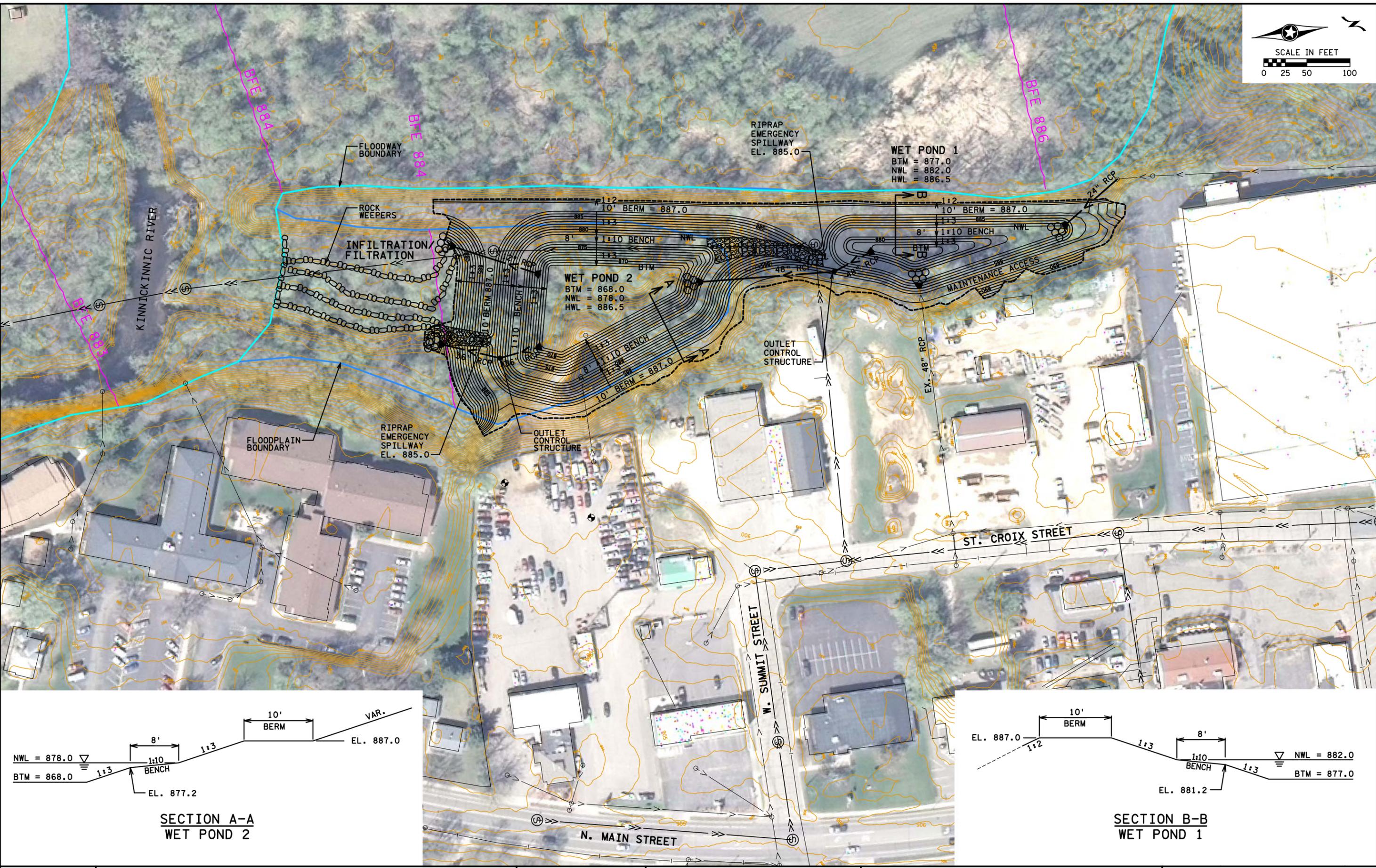
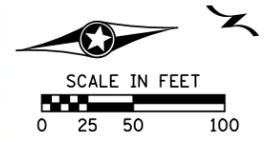


CITY OF RIVER FALLS

CONTOUR PLAN  
 CONCEPT 1

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 Sheet No. \_\_\_ of \_\_\_ Sheets

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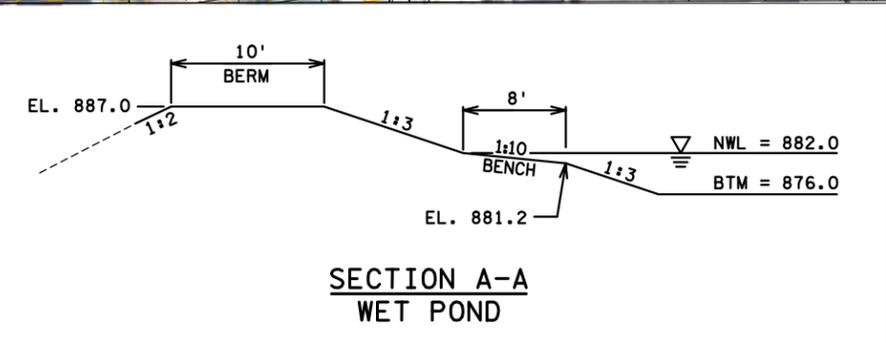
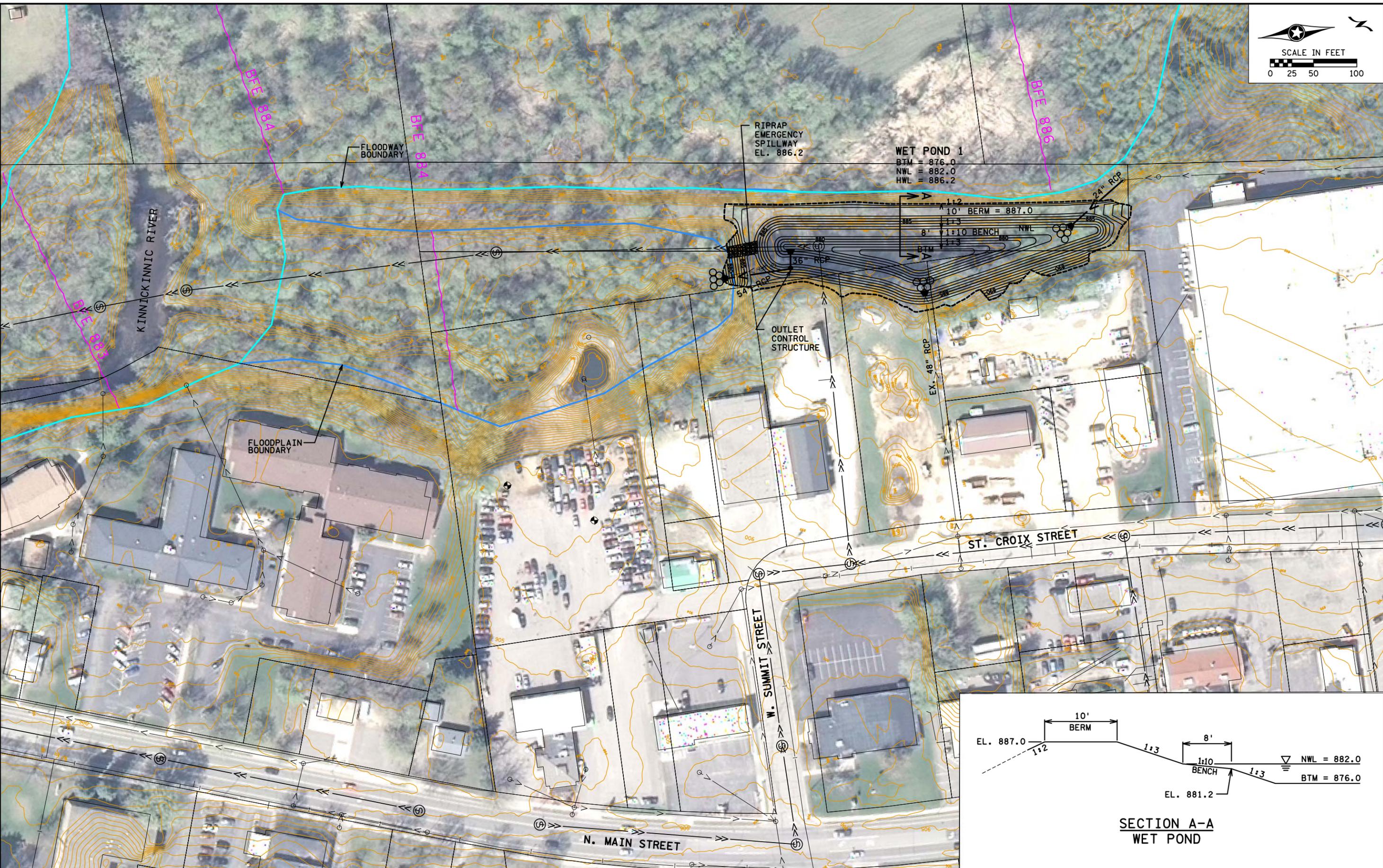
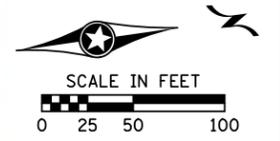


CITY OF RIVER FALLS

CONTOUR PLAN  
 CONCEPT 2

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 Sheet No. \_\_\_ of \_\_\_ Sheets

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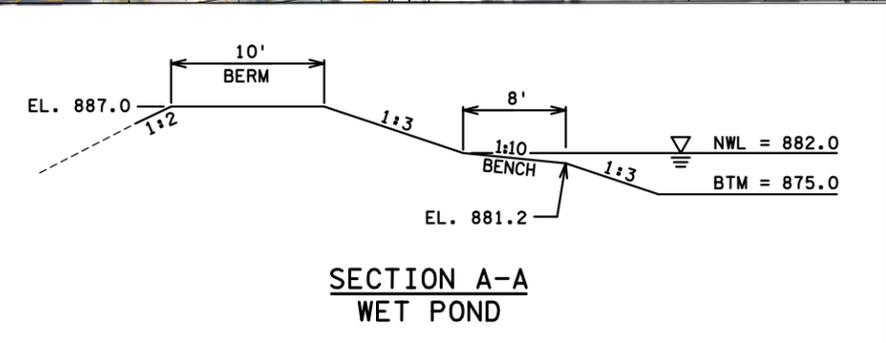
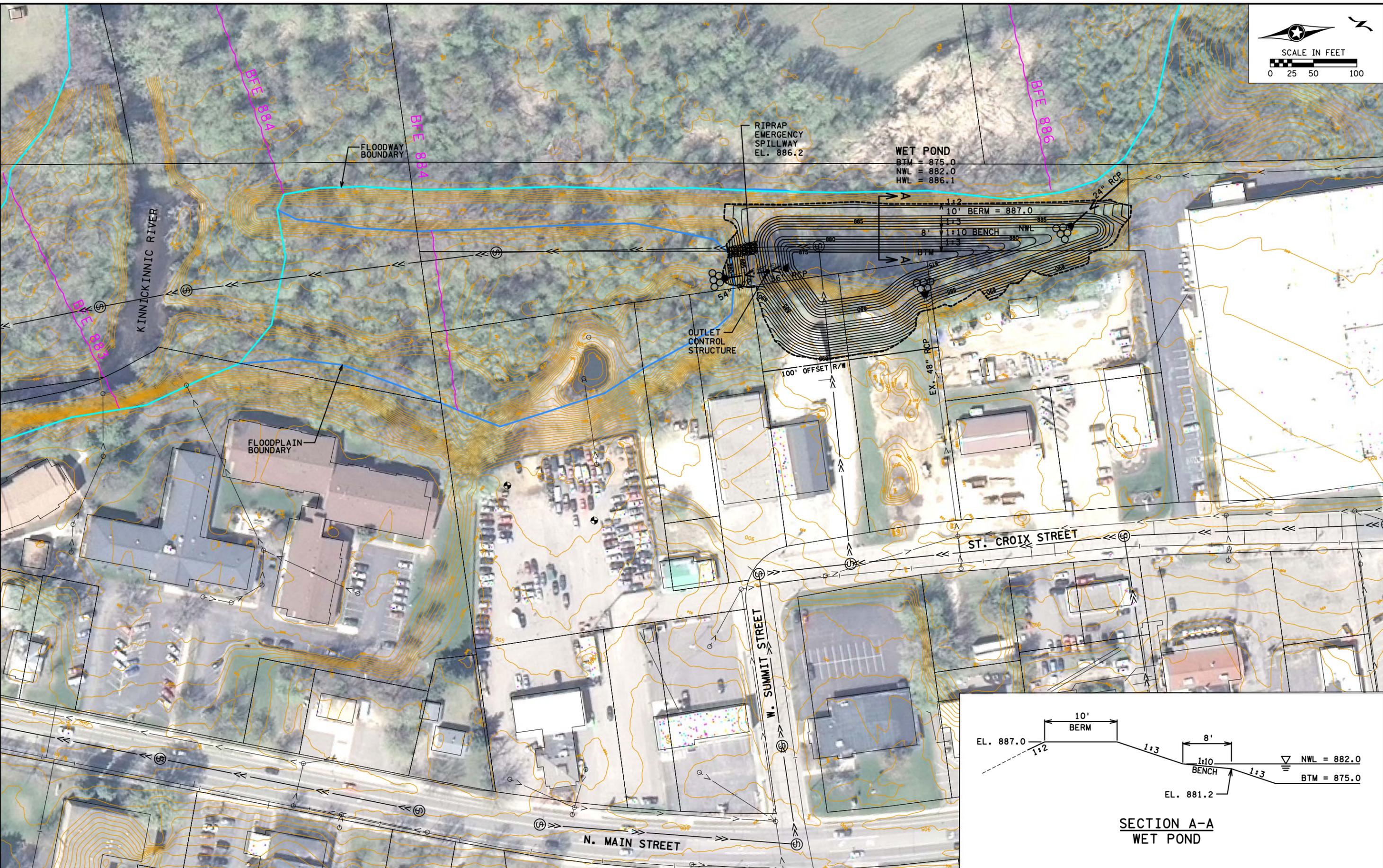
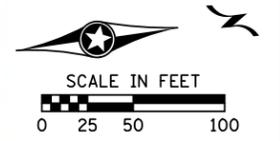


CITY OF RIVER FALLS

CONTOUR PLAN  
 CONCEPT 3

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 Sheet No. \_\_\_\_ of \_\_ Sheets

DATE: 8/12/2016 TIME: 10:50:06 AM  
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 CHECKED BY:

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SIGNATURE: \_\_\_\_\_  
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 DATE: \_\_\_\_\_ LIC. NO. \_\_\_\_\_

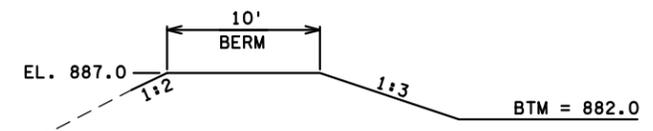
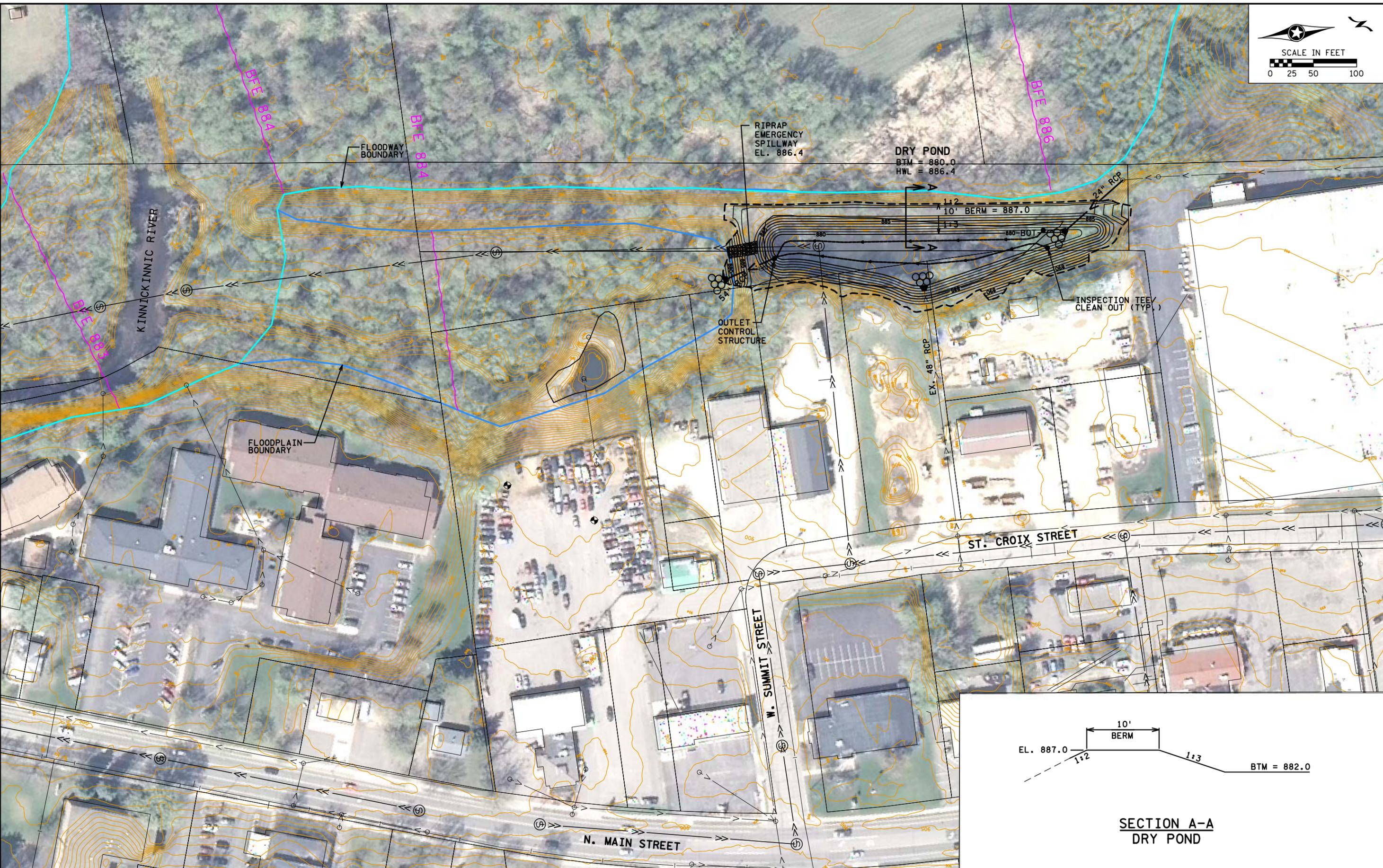
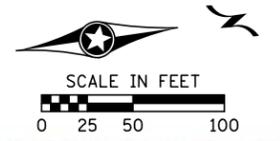


CITY OF RIVER FALLS

CONTOUR PLAN  
 CONCEPT 4

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**SECTION A-A**  
**DRY POND**

DRAWN BY:  
 CHECKED BY:

I HEREBY CERTIFY THAT THIS SHEET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: \_\_\_\_\_  
 PRINTED NAME: \_\_\_\_\_  
 DATE: \_\_\_\_\_ LIC. NO. \_\_\_\_\_



CITY OF RIVER FALLS

CONTOUR PLAN  
 CONCEPT 5C

PROJ. NO. \_\_\_\_\_  
 Sheet No. \_\_\_ of \_\_\_ Sheets



RESOLUTION NO. 2016-19

**RESOLUTION RECOMMENDING PREFERRED CONCEPT  
FOR ST. CROIX STREET OUTFALL**

**WHEREAS**, On November 16, 2015, staff presented a draft Request for Proposals to the Utility Advisory Board and laid out a plan for proceeding forward with necessary planning of a North Interceptor Sewer project; and

**WHEREAS**, on March 21, 2016, the Utility Advisory Board adopted a resolution recommending that the City Council enter into an agreement with TKDA for professional services necessary to complete initial work for the North Interceptor Sewer Project; and

**WHEREAS**, on March 22, 2016, the Common Council of the City of River Falls authorized the City Administrator to enter into an agreement with TKDA for professional services necessary to complete initial work for the North Interceptor Sewer Project; and

**WHEREAS**, TKDA has prepared a Technical Memorandum - St. Croix Street Outfall Study; and

**WHEREAS**, this technical memorandum contains specific recommendation regarding a preferred concept for the St. Croix Street Outfall; and

**WHEREAS**, staff recommends accepting the recommendation.

**NOW, THEREFORE, BE IT RESOLVED** that the Utility Advisory Board of the City of River Falls hereby accepts recommendations of the Technical Memorandum - St. Croix Street Outfall Study dated November 11, 2016.

**BE IT FURTHER RESOLVED** that the Utility Advisory Board of the City of River Falls hereby directs TKDA to prepare preliminary plans which will be used to identify permanent and temporary easements needed to construct the project and maintain the system.

Dated this 21st day of November, 2016.

---

Grant Hanson, Board President

ATTEST:

---

Jennifer Zeiler , City Clerk



## MEMORANDUM

**To:** Utility Advisory Board

**From:** Kevin Westhuis, Utility Director

**Date:** November 21, 2016

**Re:** Well Pump #5 Variable Frequency Drive (VFD)

---

### INTRODUCTION

This memorandum provides background into the water department's consideration of installing a variable frequency drive (VFD) on well pump #5.

### BACKGROUND

Feedback from water customers in the Quail Ridge and Rolling Hills (See attachment "A") Subdivisions on the West side of town have led staff to perform pressure monitoring on this part of the water distribution system. Monitoring revealed that during the starting and stopping of well pump #5, pressure surges and pressure drops were recorded. These events are noticeable to end users which create a poor customer experience, particularly when customers are showering. Pressures would surge when the well #5 pump starts up and pressures would fall significantly when the pump in well #5 would shut off.

### DISCUSSION

Since the pressure fluctuations occur during starting and stopping of the pump, a potential solution is to provide smooth starting, ramp up, ramp down, and stopping of the well pumps. A common method to accomplish this is to install a variable frequency drive (VFD) to replace across-the-line controllers or soft-starts for the electric motors. VFDs allow for manual or automatic speed changes of the motor that occur gradually, thus eliminating pressure surges. In addition to the gradual changes to the speed of the pump during starting and stopping, the speed can be maintained at any selected speed, offering flexibility to the operators. This can allow operators to choose slower speeds that are less likely to pump sand, open throttling valves that restrict flow, and allow for automated level control of water towers.

Another significant benefit to VFDs is the potential for electrical energy savings. Pump flows, pressures, and power can be estimated based on centrifugal pump affinity laws. These can be summarized as follows:

- A change in pump speed provides a directly proportional change in flow.
- A change in pump speed provides a squared proportional change in head.
- A change in pump speed provides a cubed proportional change in horsepower.

**Well #5**

Well #5 is rated to produce a flow of 1,550 gpm. The electric motor is rated at 200 hp. Well #5 is currently billed as a Small Power CP-1 electric customer, thus roughly half of the electric charges are from demand components. This offers an opportunity for VFD installation to provide reduced flow at a reduced demand. While the pump may run more hours to achieve the same total gallons pumped, there will be significant cost savings. It is expected that a speed reduction to 1,000 gpm would be acceptable and provide sufficient head. The annual electric costs for Well #5 were \$29,800 in 2015. The estimated energy cost savings from a VFD installation is \$13,000 annually.

**FINANCIAL CONSIDERATION AND BIDS**

Quotes were solicited from 5 vendors and we received proposals from two. Connelly Industrial Electric was \$17,575 which included a new Programmable Logic Controller (PLC) for the Supervisory Control and Data Acquisition (SCADA) system (Attachment "B"). A total of \$13,960 of the proposal is eligible for Focus on Energy incentives. The other proposal was submitted by NEO for \$21,740 and did not include a new SCADA PLC (Attachment "C").

Estimated Incentive:

Focus on Energy:	\$40 per hp x 200 hp; capped at 50% costs	\$8,000
WPPI Energy:	Match of Focus up to 60% of project costs	<u>\$2,545</u>
		\$10,545

Simple Payback: 6 months

**CONCLUSION**

Because of the operational benefits to our customers, energy cost reductions, and efficiency incentives; staff is recommending that the City Council approve the resolution allowing City staff to hire Connelly Industrial Electric in the amount of \$17,575 to complete the motor change out and electrical communication upgrade.



**RESOLUTION NO. 2016-20**

**RESOLUTION APPROVING THE PURCHASE OF  
VARIABLE FREQUENCY DRIVE MOTOR AND PUMP  
AT WELL #5**

**WHEREAS**, The River Falls Municipal Water Utility has identified a specific residential area on the West side of town, encompassing nearly 200 homes, that is experiencing significant water pressure variations; and

**WHEREAS**, the water department has identified a solution for the problem that includes the installation of a new Variable Frequency Drive (VFD) motor and pump at well #5; and

**WHEREAS**, after receiving bids to complete this installation, staff would like to contract with low bidder Connelly Industrial Electronics, Incorporated to complete the work in the amount of \$17,575.00; and

**WHEREAS**, this expenditure will be paid for out of the water utility fund; and

**WHEREAS**, energy rebates in the amount of \$10,545.00 combined with energy savings of \$13,000.00 annually give this project a simple six month payback; and

**NOW, THEREFORE, BE IT RESOLVED** that the City of River Falls Utility Advisory Board recommends that staff contract with Connelly Industrial Electronics, Incorporated to complete the work.

Dated this 21st day of November, 2016.

\_\_\_\_\_  
Grant Hanson, President

ATTEST:

\_\_\_\_\_  
Jennifer Zeiler, City Clerk

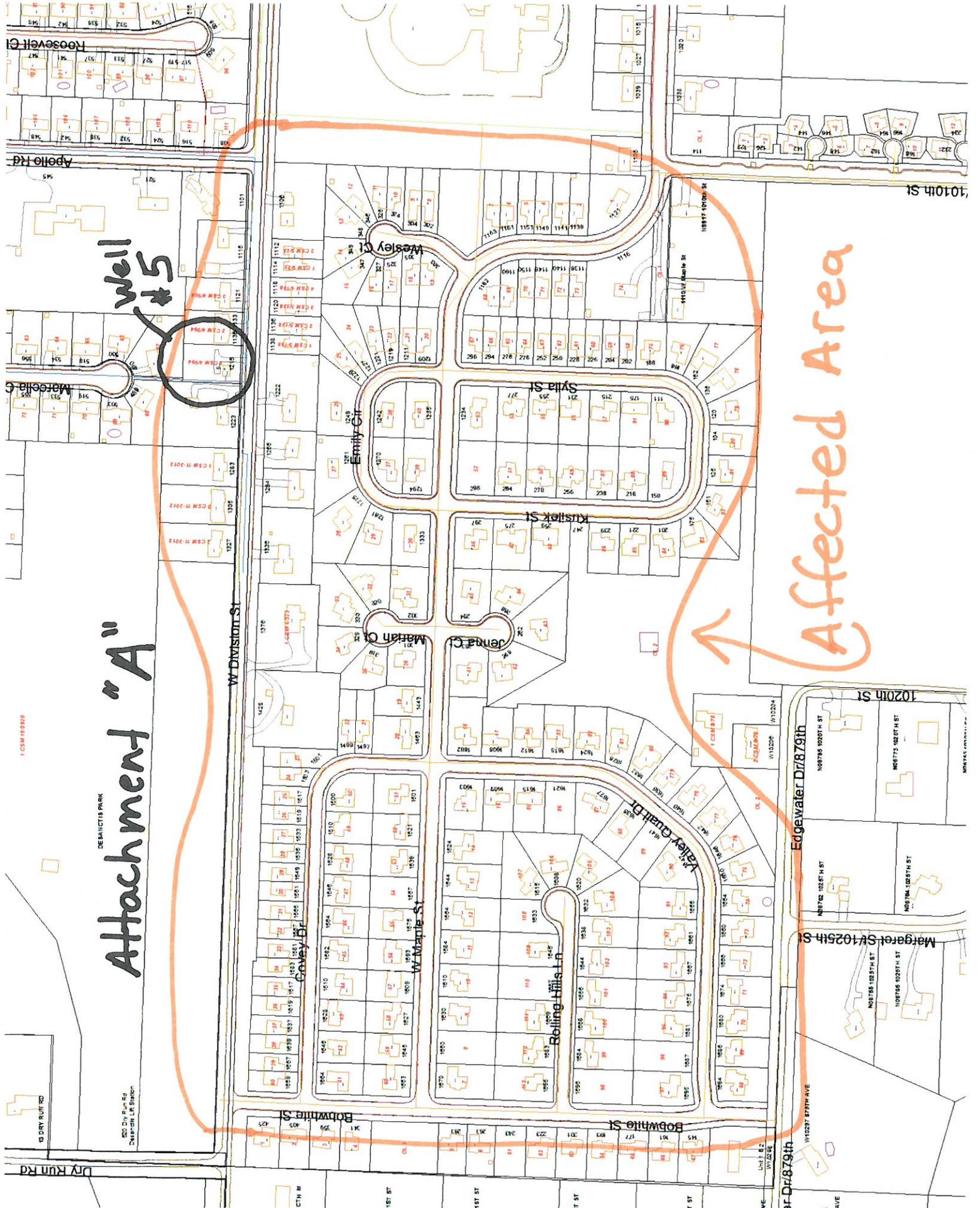
# Attachment "A"

DEBANCITIS PARK

500 Dry Run Rd  
Dearfield, LA 70046

Well #5

# Affected Area





September 9, 2016

River Falls Municipal Utilities  
Ronald Groth  
950 Benson Street  
River Falls WI 54022

Attachment "B"

**RE: Well No. 5 VFD Project  
Well No. 5 Control Panel Update**

Dear Ron:

Thank you for the opportunity to provide River Falls Municipal Utilities with a quote for the aforementioned Projects.

**Materials: Well No. 5 VFD Project** **\$9,925.00**  
Qty 1, Drive 200HP 460V 3-Phase

**Labor: Well No. 5 VFD Project** **\$2,035.00**  
Estimate (20) Hours On-Site Tech Labor Services including travel  
for installation, programming, and start-up

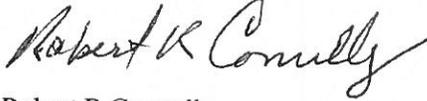
**Materials - Wells Control Panel Update: Well No. 5** **\$3,615.00**  
Qty 1, NEMA 12 Enclosure and Panel  
Qty 1, AB MicroLogix PLC  
Qty 1, TVSS 1-Phase 120V  
Qty 1, GFCI  
Qty 1, 500VA UPS  
Qty 1, 24VDC Power Supply  
Qty 1, 10Amp Breaker  
1 Lot Tech Labor programming services  
1 Lot All other components and control devices: legend plates, fuses, terminals,  
Panduit, Din-Rail, wiring, wire labeling, and assembly labor.

**Budget – Well No. 5 Electrician Services** **Budget \$2,000.00 (estimated)**  
1 LOT Electrician Services – 1 day materials and labor

**Note: The above quote does not include any:**  
Sales and Use Tax  
Bond costs, license, permits, or electrical inspection fees  
Other Pump Station Maintenance other than specified  
Pumps, Pipe, Valve, Fittings of any kind – unless specifically noted otherwise  
Removal or disposal of any existing equipment  
Excavation or backfill work of any kind  
Concrete work of any kind  
Unloading of equipment from delivery trucks or temporary storage thereof  
Labor or any other miscellaneous equipment or services required to facilitate  
Installation and interconnection of components other than specified

If you have any questions, please feel free to contact me at 651-773-5422 office or 651-247-0299 cell.

Respectfully submitted,



Robert R Connelly

---

Escalation: Price is firm 90 days from date of Proposal.  
Freight: (X) Price is FOB Factory ( ) Freight allowed to jobsite. (X) No freight included.  
Start Up: As stated in above Proposal.  
Taxes: ALL APPLICABLE SALES TAX MUST BE ADDED.  
Delivery: As scheduled and after receipt of an approved order.  
Terms: NET 30 days payment terms.

THE SELLER RESERVES THE RIGHT TO REVIEW AND REVISE THIS PROPOSAL AFTER 90 DAYS FROM ISSUANCE

River Falls Municipal Utilities  
Ronald Groth

I accept this proposal and all terms thereof:

PO No.: \_\_\_\_\_ Accepted: \_\_\_\_\_

Date: \_\_\_\_\_ Title: \_\_\_\_\_

# Attachment "C"



DATE: October 14, 2016

**To: Ron Groth**  
**River Falls Municipal Utilities**

Neo Electrical Solutions, LLC is pleased to offer the following proposal to complete the scopes of work as outlined and shown for Divisions of work noted below for the referenced project. **This Proposal is final and subject to the attached General Terms, Clarifications and Exclusions.**

**Project: 200 HP VFD**

**Bid Date / Time:**

**Project Plans & Specifications:**

**Addendums Received and acknowledged:**

**Divisions of work included in this proposal: 26**

**Exclusions within Divisions of works**

**Scope:** Install new 200 HP NEMA 1 VFD to replace a starter. Included miscellaneous pipe and wire to feed VFD and some controls circuits.

**Total Base Electrical Proposal: \$21,740.00**

Thank you for the opportunity to price this project. If you should have any questions or required additional information, please feel free to contact me anytime at the below listed numbers.

Sincerely,

**Allan Freer**  
Project Manager/Estimator  
Office: 715-808-0463  
Cell: 715-245-9764

**GENERAL TERMS / CLARIFICATIONS / EXCLUSIONS:**



1. Only those items listed above are included in this proposal. Any alteration and/or deviation from the above described work will require an official approved and signed Change Order prior to proceeding with the work, or, an official Construction Change Directive from a proper authority.
2. No Utility Company fees or charges for anything directly or indirectly related to the construction of the above referenced project are included, to be paid for by others.
3. No additional insurance premium costs included for additional contractor insurance requirements. See attached current Certificate of Liability Insurance for Neo Electrical Solutions, LLC.
4. No Payment and Performance Bond cost included.
5. A one-year warranty on all workmanship, materials, and equipment performed and installed shall take effect on the project's scheduled and published substantial completion date.
6. No warranty included for any materials/equipment provided by others and installed/wired by our electricians, and, no warranty included for any lamps.
7. Neo Electrical Solutions, LLC will not be held liable for repairing/replacing any existing systems unmarked underground components that become damaged by our work activities.
8. All work and materials included shall be in compliance with nationally recognized electrical construction standards, an official Testing Laboratory, NEC or local inspector requirements, the project's specified quality requirements, and the agreed to project schedule.
9. Any equipment for other construction trades requiring a special power connection will be additional work..
10. Any delays caused by the owner and/or other project contracted parties (or their affiliates) which impose additional costs for Neo Electrical Solutions, LLC will be deemed legally compensatory.
11. Proposal includes the provision and/or safe installation of all electrical materials as described by licensed and competent electricians, as well as all applicable permits, project required shop drawings, submittals, working and reporting documents, close-out materials, commissioning and owner training requirements, and, professional project management services throughout.
12. No maintenance activities or services included for equipment supplied and installed per this proposal after acceptance/approval has been received.
13. Member NECA, employing IBEW Local 14, 110, & 292 licensed electricians.
14. Proposal is valid thirty (30) days from issue date.
15. No Retainage shall be withheld.



November 16, 2016

To: Utility Advisory Board

From: Tracy Biederman, Accountant

Re: **October 2016** Financial Statements (Electric, Water, Sewer, Storm Water)

Electric fund: Total revenue for the ten months ending is \$11,330,686. Year to date total expenses are \$10,970,418; generating a change in net position of \$360,268.

- Hydraulic expenses are lower in 2016 as the majority of the sediment survey was performed and paid in 2015.
- Distribution expenses are higher in 2016 due to the increase in locates for underground line expenses and directional boring for fiber install.
- Other Operating Expenses are higher with the 2015 addition of \$900,000 in net plant assets at the beginning of 2016.
- Period ending cash and investments balance is a positive \$7.39 million. Total Liabilities are \$1.18 million.

Water fund: Total revenue for the water fund is \$1,512,275. Year to date total expenses are \$1,449,791; generating a change in net position of \$62,484.

- Water consumption has increased 1.82% over the prior period to date; generating an increase of \$108,657 in revenue dollars.
- Since the inception of the water rate changes; Residential and Irrigation sales dollars have seen an increase of 13% and 21% respectively.
- Water Treatment maintenance has increased with the purchase of new chemical feed scales and tanks in 2016.
- Period ending cash and investments balance is a positive \$1.45 million. Total Liabilities are \$2.23 million.

Sewer fund: Year to date revenue for the sewer fund is \$2,821,162. Year to date total expenses are \$2,241,847; generating a change in net position of \$579,316.

- Maintenance of Sewage collection is higher in 2016 due to the timing of Insituforms' request for payment of services. In 2015 the costs were recognized in December. In addition, internal labor for maintenance is higher year-to-date.
- Debt Service is higher due to the 2016A Revenue Bond issuance costs.
- Period ending cash and investments balance is a positive \$5.61 million. Total Liabilities are \$10.17 million.

Storm Water fund: Year to date revenue for the storm water fund is \$439,882. Year to date total expenses are \$402,836; generating a change in net position of \$37,046.

- The fund's operating revenue remains flat in comparison to 2015; the additional \$5,000 is related to storm water permits to Winfield, Allina, and RFEDC.
- Operating expenses are higher in 2016 with the addition of the Operations Director's 1/5<sup>th</sup> allocation.
- Period ending cash and investments balance is a positive \$332,120. Total Liabilities are \$188,579.

Please contact me if you have any questions regarding the monthly financial reports.



# Balance Sheet

## October 2016

F ND	Description	Period Net Change	ccount Balance
<b>610 Electric</b>			
<b>assets</b>		<b>Total assets</b>	<b>49,778 07</b>
			<b>21,540,869 38</b>
	Cash and nvestments	88,263 01	7,395,942 60
	ccounts Receivable	(92,232 79)	1,144,806 73
	Prepaid nventor	(108,010 24)	772,045 92
	Constr in Progress	131,048 01	979,488 60
	Capital ssets	94,973 05	24,482,618 57
	D Capital ssets	(64,262 97)	(13,342,895 04)
	De erred Resources	0 00	108,862 00
<b>liabilities</b>		<b>Total liabilities</b>	<b>(49,318 86)</b>
			<b>(1,183,594 44)</b>
	ccounts Pa able	(24,394 62)	(1,014,932 95)
	Non-Current iab	(567 00)	(89,972 75)
	Debt Outstanding	825 39	(103,870 37)
	De erred Resources	(25,182 63)	25,181 63
<b>Fund Balance</b>		<b>Total Fund Balance</b>	<b>(459 21)</b>
			<b>(20,357,274 94)</b>
	Fund Balance	(459 21)	(20,357,274 94)
		<b>Total liabilities Fund Balance</b>	<b>(49,778 07)</b>
			<b>(21,540,869 38)</b>



# Balance Sheet

## October 2016

F ND	Description	Period Net Change	ccount Balance
<b>620 Water</b>			
	<b>assets</b>	<b>Total assets</b>	<b>11,916 39</b>
			<b>16,021,338 48</b>
	Cash and investments	58,984 58	1,449,104 72
	ccounts Receivable	(10,234 96)	143,424 18
	Prepaid nventor	0 00	63,647 83
	Non-Current assets	67 35	337,883 75
	Constr in Progress	0 00	720,685 18
	Capital assets	0 00	18,892,461 55
	D Capital assets	(36,900 58)	(5,630,664 73)
	De erred Resources	0 00	44,796 00
	<b>liabilities</b>	<b>Total liabilities</b>	<b>7,982 49</b>
			<b>(2,237,774 97)</b>
	ccounts Pa able	13,421 46	(354,787 93)
	Non-Current iab	14 86	(29,256 29)
	Debt Outstanding	(5,453 83)	(1,853,730 75)
<b>Fund Balance</b>	<b>Total Fund Balance</b>	<b>(19,898 88)</b>	<b>(13,783,563 51)</b>
	<b>Fund Balance</b>	<b>(19,898 88)</b>	<b>(13,783,563 51)</b>
	<b>Total liabilities</b>	<b>Fund Balance</b>	<b>(11,916 39)</b>
			<b>(16,021,338 48)</b>



# Balance Sheet

## October 2016

F ND	Description	Period Net Change	ccount Balance
<b>630 Waste Water</b>			
<b>assets</b>		<b>Total assets</b>	<b>135,629 97</b>
		<b>28,190,419 71</b>	
	Cash and nvestments	(388,041 08)	5,610,703 18
	ccounts Receivable	(6,751 23)	315,799 12
	Prepaid nventor	0 00	17,200 00
	Non-Current ssets	150 54	411,938 90
	Constr in Progress	573,709 43	3,463,406 69
	Capital ssets	0 00	27,811,941 54
	D Capital ssets	(43,437 69)	(9,501,405 72)
	De erred Resources	0 00	60,836 00
<b>liabilities</b>		<b>Total liabilities</b>	<b>(166,694 95)</b>
		<b>(10,178,633 30)</b>	
	ccounts Pa able	(224,871 32)	(771,487 10)
	Non-Current iab	1,976 00	(222,055 71)
	Debt Outstanding	58,213 98	(9,339,475 16)
	De erred Resources	(2,013 61)	154,384 67
<b>Fund Balance</b>	<b>Total Fund Balance</b>	<b>31,064 98</b>	<b>(18,011,786 41)</b>
	<b>Fund Balance</b>	<b>31,064 98</b>	<b>(18,011,786 41)</b>
	<b>Total liabilities Fund Balance</b>	<b>(135,629 97)</b>	<b>(28,190,419 71)</b>



# Balance Sheet October 2016

F ND	Description	Period Net Change	ccount Balance
<b>640 Storm Water</b>			
<b>assets</b>		<b>Total assets</b>	<b>686 70</b>
		<b>6,171,089 11</b>	
	Cash and investments	15,678 66	332,119 65
	ccounts Receivable	(2,088 03)	45,116 40
	Constr in Progress	0 00	28,903 33
	D Fixed ssets	(12,903 93)	5,748,573 73
	De erred Resources	0 00	16,376 00
<b>liabilities</b>		<b>Total liabilities</b>	<b>8,447 56</b>
		<b>(188,579 05)</b>	
	ccounts Pa able	(8,932 44)	(40,024 30)
	Debt Outstanding	17,380 00	(148,554 75)
<b>Fund Balance</b>		<b>Total Fund Balance</b>	<b>(9,134 26)</b>
		<b>(5,982,510 06)</b>	
	Fund Balance	(9,134 26)	(5,982,510 06)
		<b>Total liabilities Fund Balance</b>	<b>(686 70)</b>
			<b>(6,171,089 11)</b>



## Financial Statement October 2016

	Current Year				Prior Y-T-D
	Budget	Month	Y-T-D	% Budgeted	
<b>610 - Electric</b>					
<b>Revenue</b>					
Charges for Services	\$14,189,533	\$988,751	\$10,927,171	77%	\$11,189,164
Interest	\$15,000	\$1,344	\$36,906	246%	\$17,797
Miscellaneous	\$622,488	\$26,185	\$334,410	54%	\$325,959
Other Financing	\$30,000	\$0	\$32,198	107%	\$256,709
<b>Total Revenue</b>	<b>\$14,857,021</b>	<b>\$1,016,281</b>	<b>\$11,330,686</b>	<b>76%</b>	<b>\$11,789,629</b>
<b>Expense</b>					
Hydraulic Power Generation	\$32,569	\$2,172	\$42,149	129%	\$63,339
Purchased Power	\$10,866,597	\$763,437	\$7,967,090	73%	\$8,127,957
Transmission	\$25,997	\$0	\$7,933	31%	\$51,082
Distribution	\$1,106,753	\$30,142	\$712,736	64%	\$673,820
Customer Accounts	\$621,039	\$56,725	\$463,914	75%	\$433,571
Administrative & General	\$394,911	\$14,982	\$262,062	66%	\$278,601
Other Operating Expenses	\$764,700	\$66,728	\$698,168	91%	\$654,159
Debt Service	\$277,008	\$25,183	\$251,826	91%	\$0
Transfers to Other Funds	\$767,447	\$56,454	\$564,539	74%	\$529,413
<b>Total Expense</b>	<b>\$14,857,021</b>	<b>\$1,015,822</b>	<b>\$10,970,418</b>	<b>74%</b>	<b>\$10,811,941</b>
<b>Net Total 610 - Electric</b>	<b>\$0</b>	<b>\$459</b>	<b>\$360,268</b>	<b>75%</b>	<b>\$977,688</b>



## Financial Statement October 2016

	Current Year				Prior Y-T-D
	Budget	Month	Y-T-D	% Budgeted	
<b>620 - Water</b>					
<b>Revenue</b>					
Special Assessments	\$0	\$0	\$0	0%	\$30,311
Charges for Services	\$1,313,137	\$128,928	\$1,263,526	96%	\$1,167,766
Interest	\$3,474	\$558	\$5,812	167%	\$1,924
Miscellaneous	\$459,145	\$7,048	\$114,536	25%	\$113,072
Other Financing	\$85,080	\$13,593	\$128,402	151%	\$113,648
<b>Total Revenue</b>	<b>\$1,860,836</b>	<b>\$150,127</b>	<b>\$1,512,275</b>	<b>81%</b>	<b>\$1,426,720</b>
<b>Expense</b>					
Transmission	\$437,754	\$25,192	\$323,077	74%	\$316,392
Pumping	\$139,492	\$8,258	\$92,962	67%	\$111,931
Water Treatment	\$75,901	\$2,227	\$72,186	95%	\$63,147
Customer Accounts	\$117,111	\$5,861	\$67,612	58%	\$69,445
Administrative & General	\$187,321	\$10,410	\$139,510	74%	\$138,411
Other Operating Expenses	\$365,844	\$36,901	\$340,791	93%	\$309,798
Debt Service	\$66,119	\$5,439	\$54,241	82%	\$56,647
Transfers to Other Funds	\$471,294	\$35,941	\$359,412	76%	\$334,535
<b>Total Expense</b>	<b>\$1,860,836</b>	<b>\$130,228</b>	<b>\$1,449,791</b>	<b>78%</b>	<b>\$1,400,306</b>
<b>Net Total 620 - Water</b>	<b>\$0</b>	<b>\$19,899</b>	<b>\$62,484</b>	<b>80%</b>	<b>\$26,414</b>



## Financial Statement October 2016

	Current Year				Prior Y-T-D
	Budget	Month	Y-T-D	% Budgeted	
<b>630 - Waste Water</b>					
<b>Revenue</b>					
Special Assessments	\$0	\$0	\$0	0%	\$33,517
Charges for Services	\$3,079,754	\$266,277	\$2,641,055	86%	\$2,607,220
Interest	\$4,500	\$1,697	\$29,077	646%	\$7,337
Miscellaneous	\$36,614	\$2,954	\$44,510	122%	\$43,924
Other Financing	\$59,480	\$12,930	\$106,521	179%	\$108,011
<b>Total Revenue</b>	<b>\$3,180,348</b>	<b>\$283,859</b>	<b>\$2,821,162</b>	<b>89%</b>	<b>\$2,800,009</b>
<b>Expense</b>					
Operation	\$529,477	\$27,803	\$317,377	60%	\$362,199
Maintenance	\$558,637	\$160,144	\$398,907	71%	\$346,866
Bio Solids	\$394,000	\$27,923	\$267,408	68%	\$297,678
Customer Accounts	\$285,187	\$6,080	\$115,960	41%	\$120,679
Administrative & General	\$360,773	\$18,664	\$242,489	67%	\$247,463
Other Operating Expenses	\$493,000	\$43,438	\$457,995	93%	\$479,569
Debt Service	\$99,737	\$15,709	\$290,088	291%	\$124,499
Transfers to Other Funds	\$459,537	\$15,162	\$151,622	33%	\$151,622
<b>Total Expense</b>	<b>\$3,180,348</b>	<b>\$314,924</b>	<b>\$2,241,847</b>	<b>70%</b>	<b>\$2,130,575</b>
<b>Net Total 630 - Waste Water</b>	<b>\$0</b>	<b>\$(31,065)</b>	<b>\$579,316</b>	<b>80%</b>	<b>\$669,434</b>



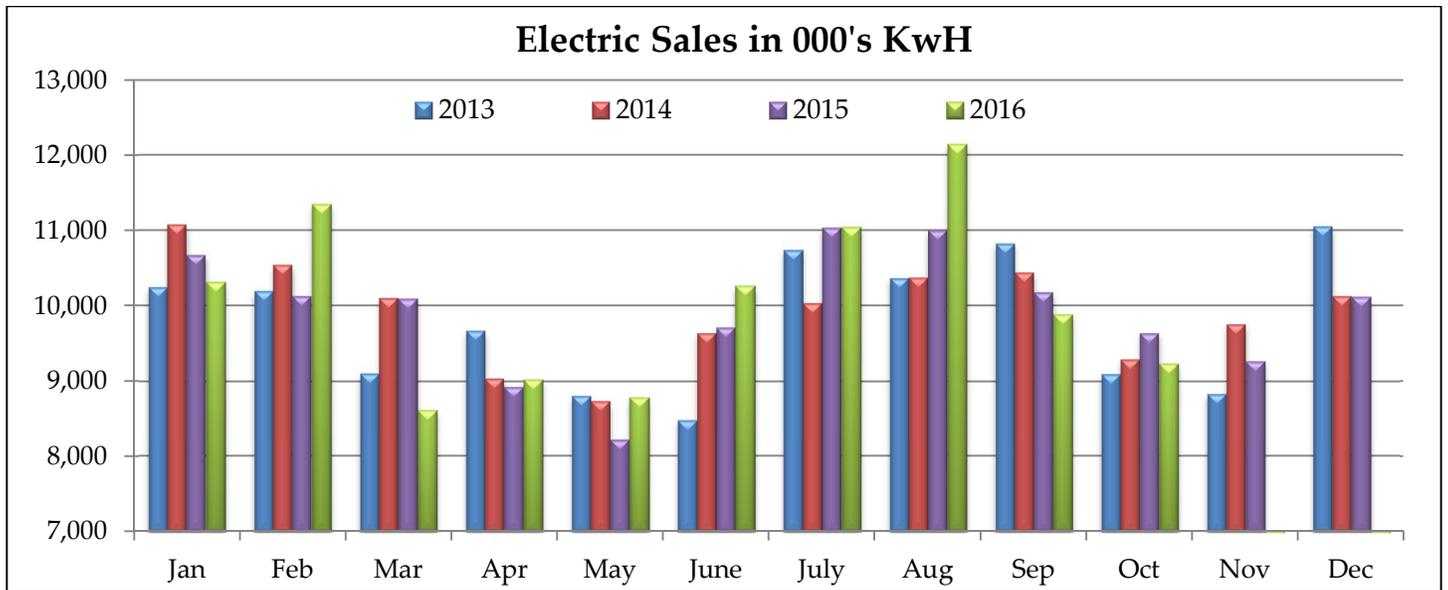
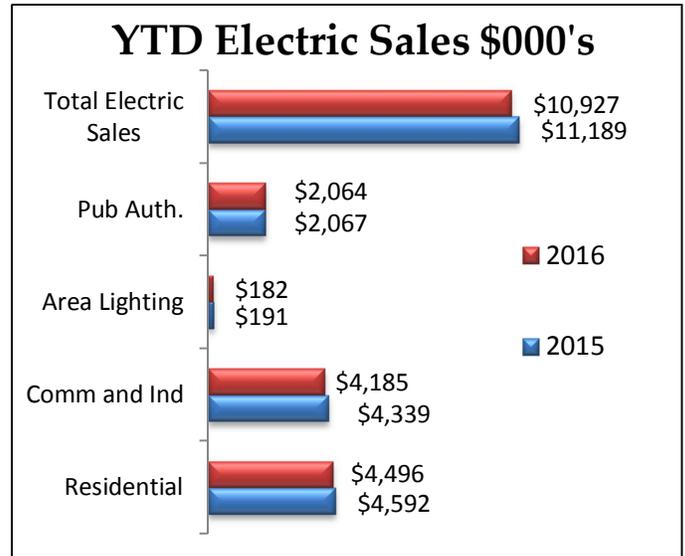
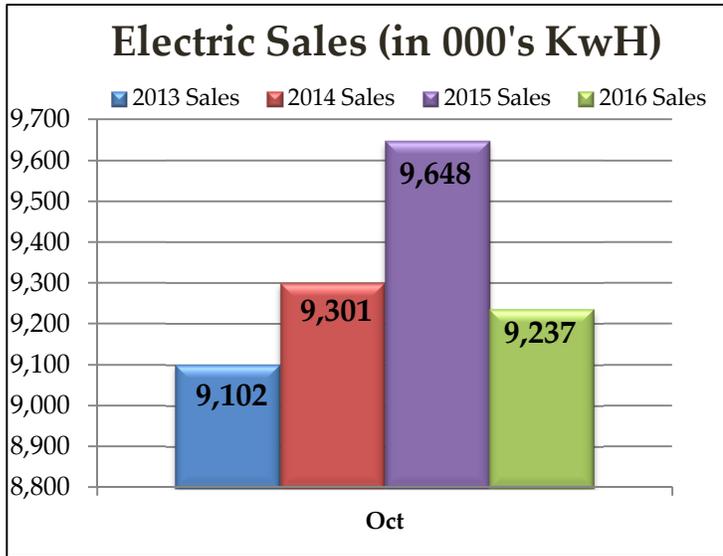
## Financial Statement October 2016

	Current Year				Prior Y-T-D
	Budget	Month	Y-T-D	% Budgeted	
<b>640 - Storm Water</b>					
<b>Revenue</b>					
Charges for Services	\$505,000	\$43,113	\$435,576	86%	\$430,982
Interest	\$500	\$0	\$139	28%	\$218
Miscellaneous	\$77,136	\$0	\$0	0%	\$0
Other Financing	\$5,000	\$417	\$4,167	83%	\$4,167
<b>Total Revenue</b>	<b>\$587,636</b>	<b>\$43,530</b>	<b>\$439,882</b>	<b>75%</b>	<b>\$435,366</b>
<b>Expense</b>					
Storm Water	\$587,636	\$34,396	\$402,836	69%	\$427,267
<b>Total Expense</b>	<b>\$587,636</b>	<b>\$34,396</b>	<b>\$402,836</b>	<b>69%</b>	<b>\$427,267</b>
<b>Net Total 640 - Storm Water</b>	<b>\$0</b>	<b>\$9,134</b>	<b>\$37,046</b>	<b>72%</b>	<b>\$8,099</b>

# River Falls Municipal Utility

## ⚡ Electric Dashboard ⚡

### October 2016

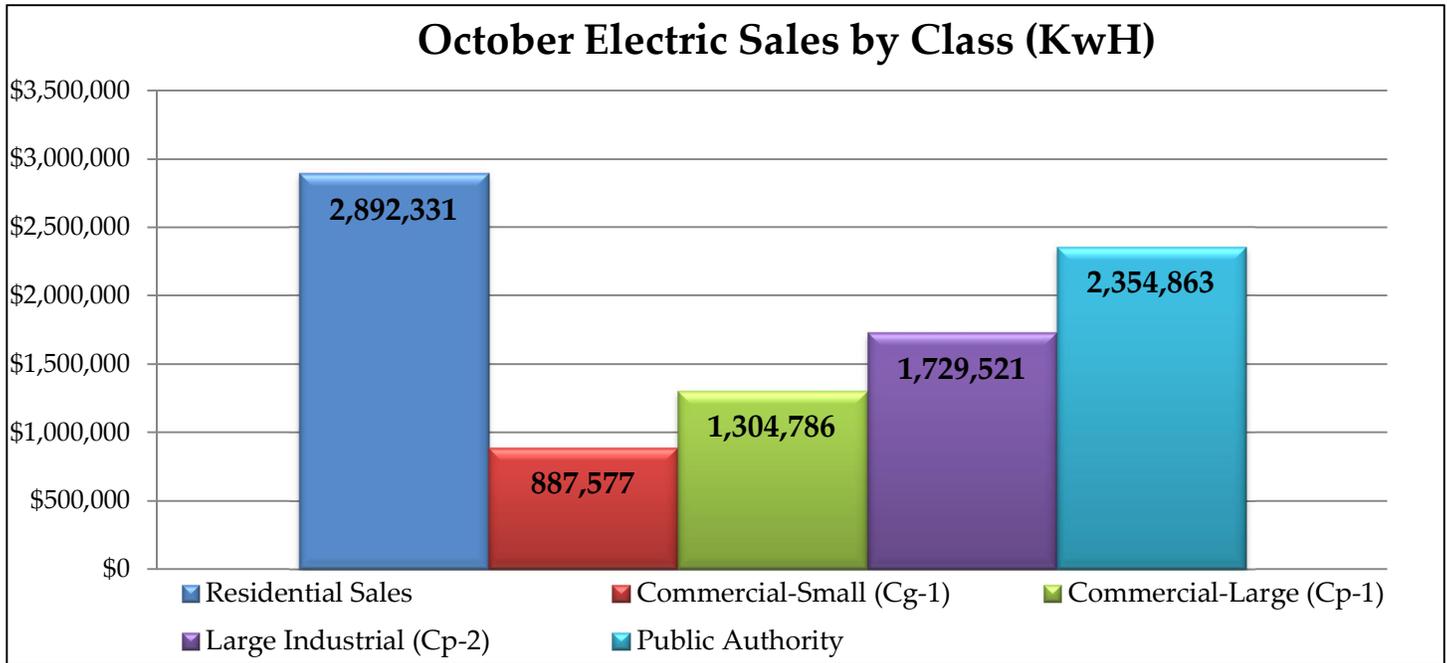


*The Power of Community*

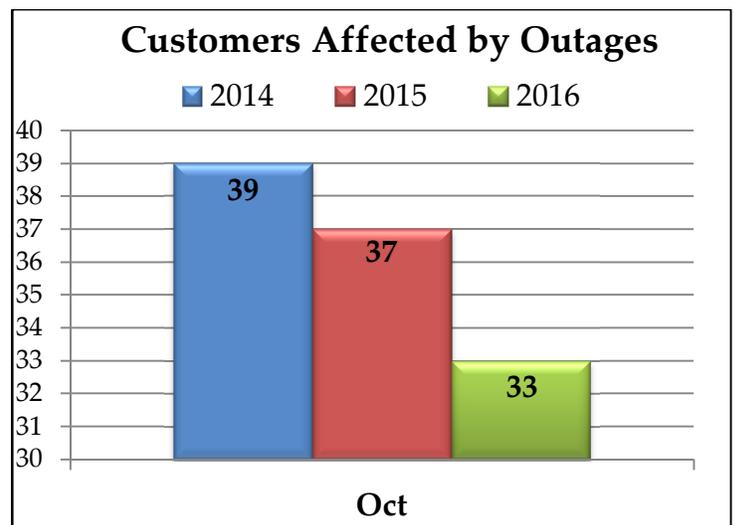
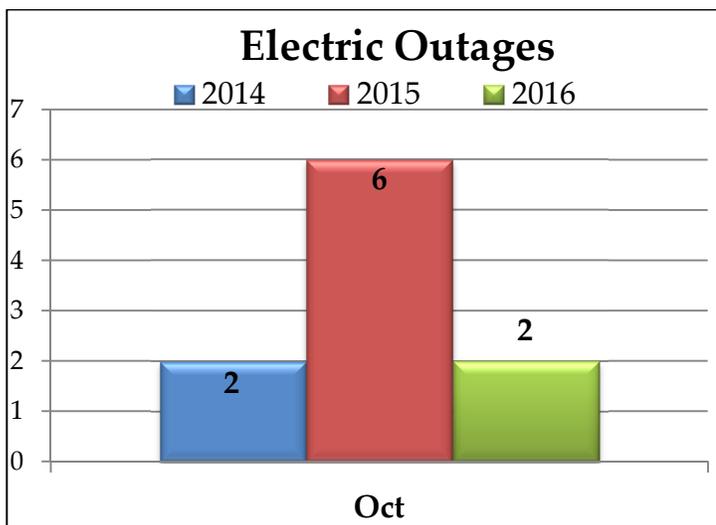
# River Falls Municipal Utility

## Electric Dashboard

October 2016



### Electric Outages



For more information please contact: Kevin Westhuis  
(715) 426-3442 or [kwesthuis@rfcity.org](mailto:kwesthuis@rfcity.org)

# River Falls Municipal Utility

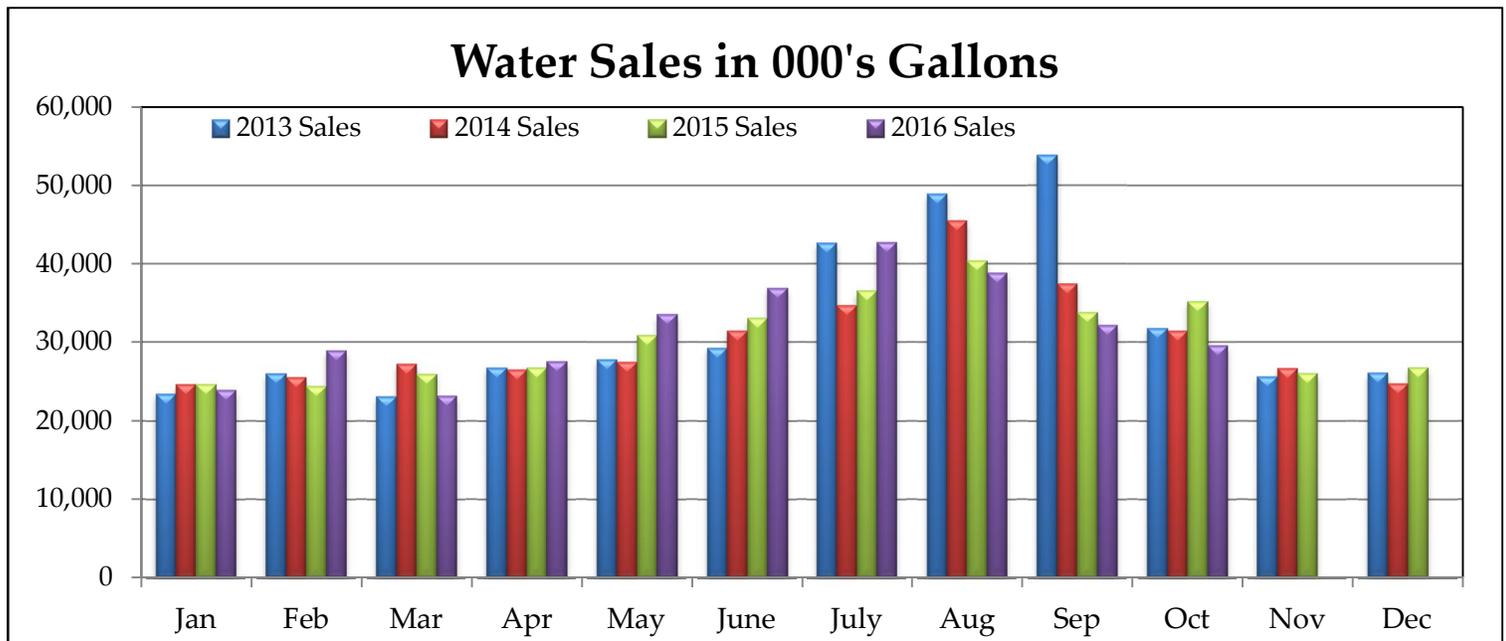
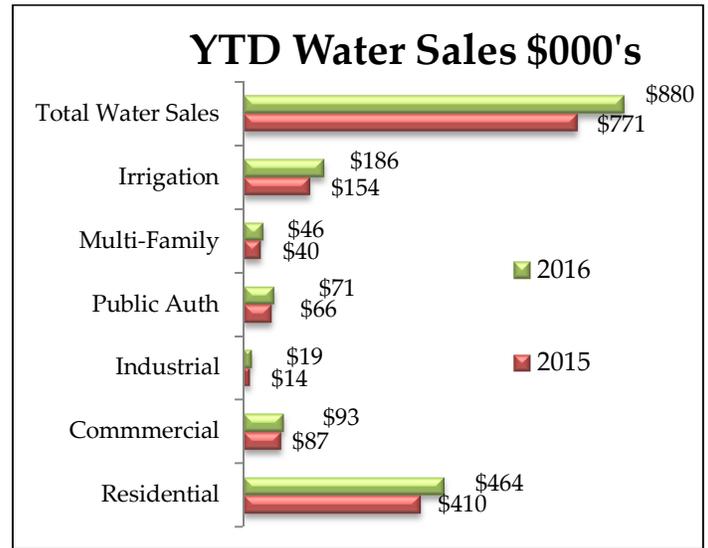
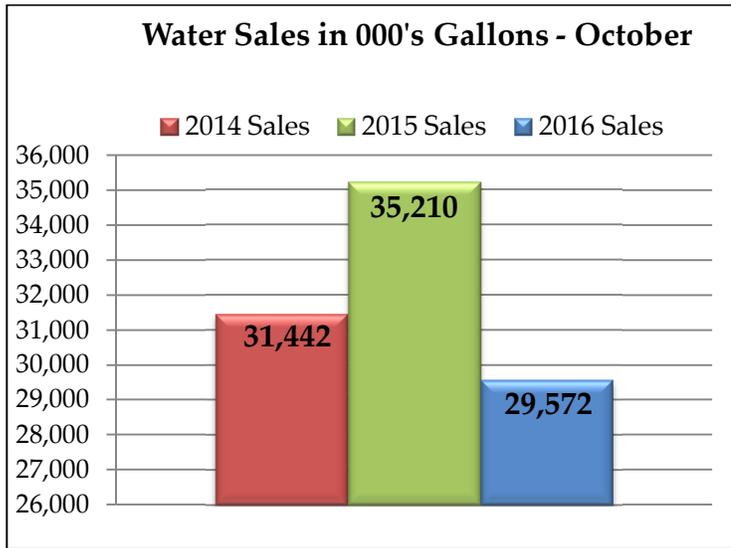


## Water Dashboard



October 2016

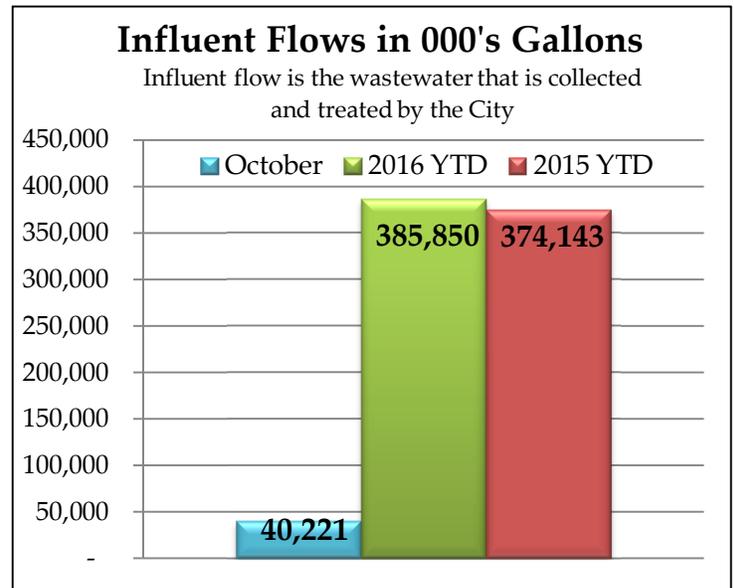
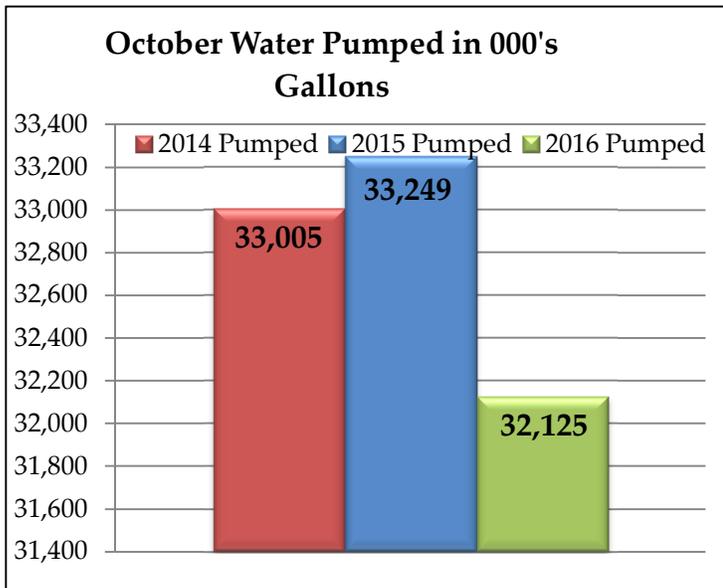
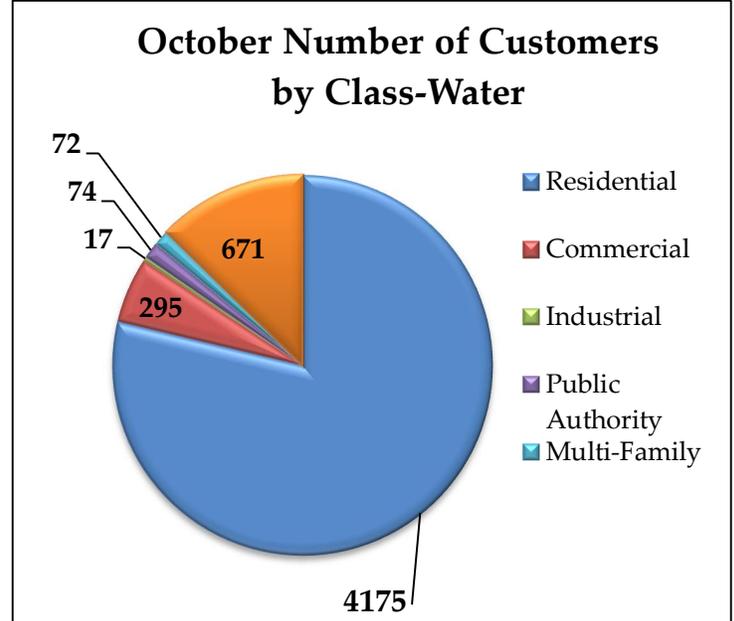
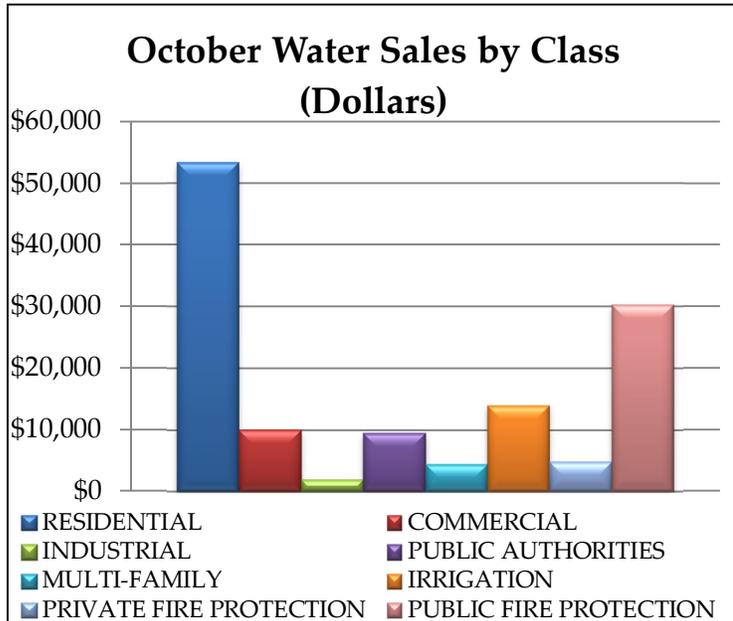
### Water Sales



*Providing a safe and reliable supply of high quality water to the River Falls community we serve.*

# River Falls Municipal Utility Water Dashboard

**October 2016**



Used as a comparison between water pumped versus water treated.

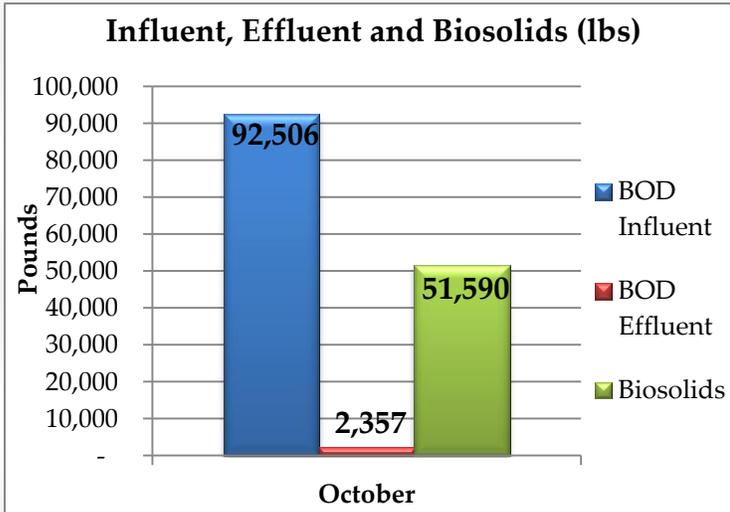


*Providing a safe and reliable supply of high quality water to the River Falls community we serve.*

# River Falls Municipal Utilities Waste Water Treatment Plant

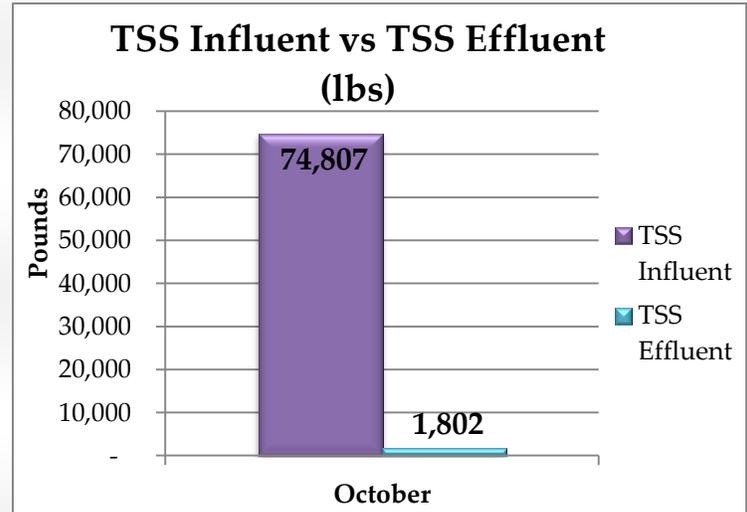
## For October 2016

### Influent, Effluent and Biosolids (lbs.)



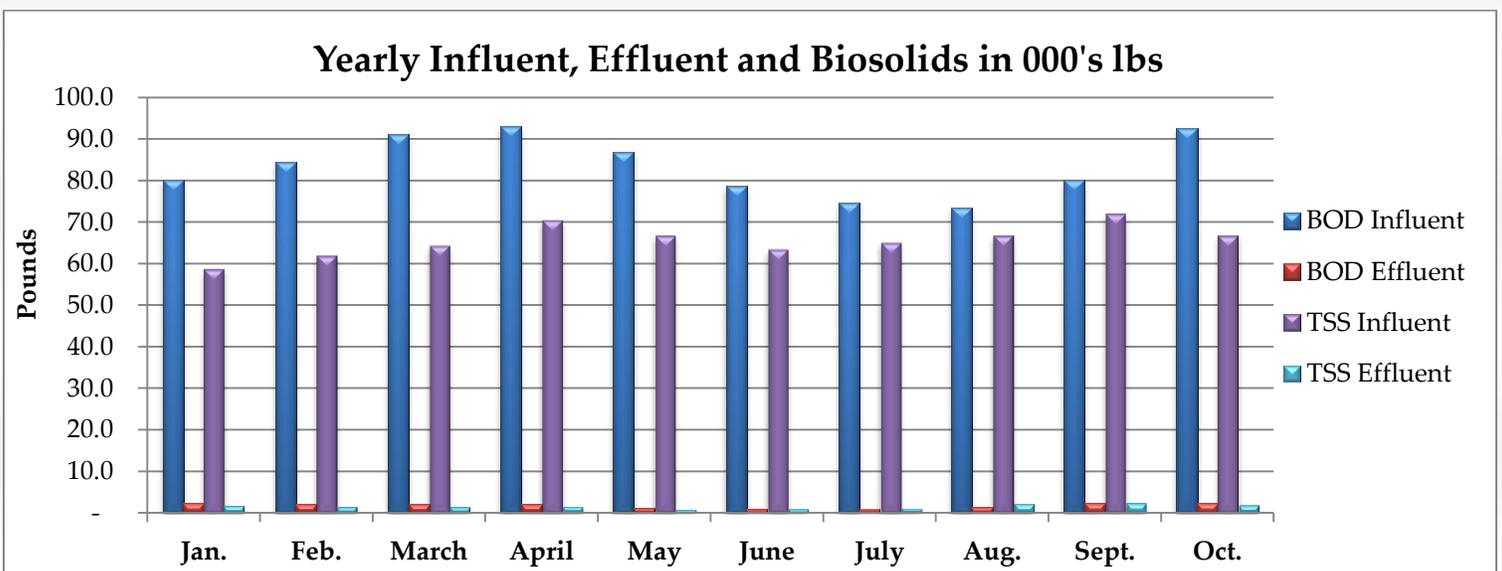
The Biochemical Oxygen Demand (BOD) Influent and BOD Effluent pounds represent pounds of oxygen needed for treatment.

### TSS Influent vs TSS Effluent (lbs)



The TSS Influent and TSS Effluent represent the pounds of Total Suspended Solids entering the Waste Water Treatment Plant versus going out into the Kinnickinnic River.

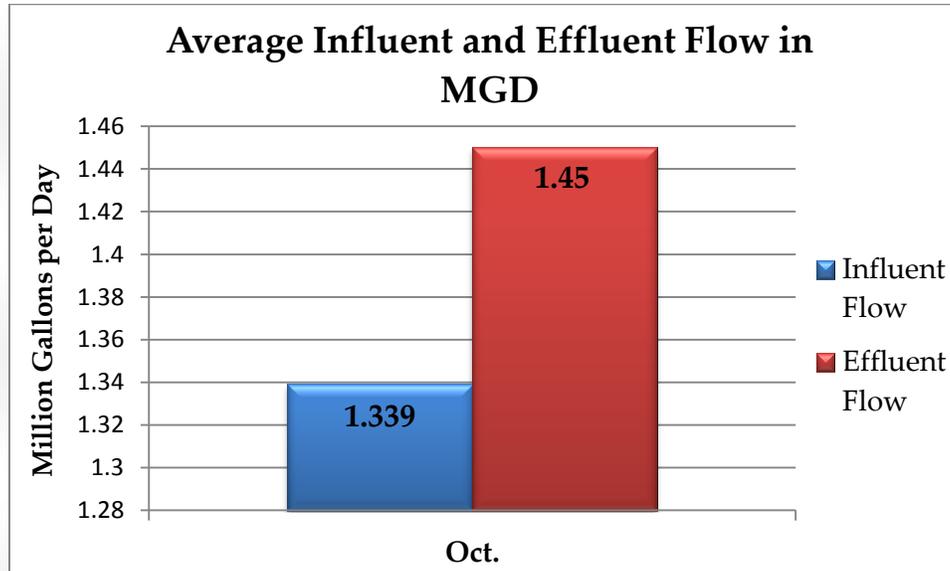
### Yearly BOD and TSS Influent and Effluent (in 000's lbs.)



This graph represents the average monthly pounds of both BOD and TSS coming into the plant and being discharged at the plant's outfall into the Kinnickinnic River for the year 2016.

# River Falls Municipal Utilities Waste Water Treatment Plant

## Average Influent and Effluent Flow in MGD



This graph represents the average daily flow into the treatment plant as well as the average daily flow discharged into the Kinnickinnic River. The design flow for the Treatment plant is 1.8 million gallons per day (MGD).

## WWTP Facts

### Vocabulary:

**BOD:** Biochemical Oxygen Demand represents pounds of oxygen needed for treatment.

**EFFLUENT:** Water and waste flowing out of the Waste Water Treatment Plant.

**INFILTRATION:** to pass into or through (a substance) by filtering or permeating. Infiltration numbers are self-induced and not leak related.

**INFLUENT:** Water and waste flowing into the Waste Water Treatment Plant.

**TSS:** Total Suspended Solids are solid materials, including organic and inorganic, that are suspended in the water and have to be removed.

### Did You Know....

- Excess bacteria removed from the Treatment Plant is called Bio-Solids which can be land spread or treated more to become a fertilizer or soil conditioner.

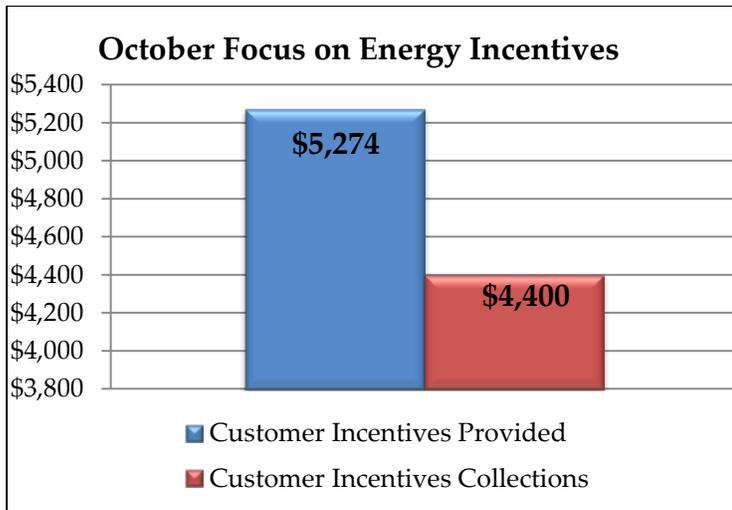


For more information please contact: Bill Swenson  
(715) 426-3531 or [wswenson@rfcity.org](mailto:wswenson@rfcity.org)

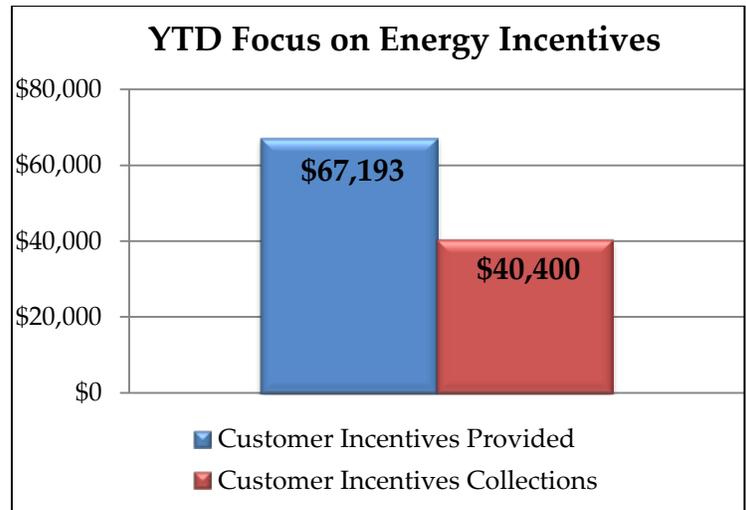
# POWERful Choices! Dashboard

For October 2016

## Focus on Energy Program

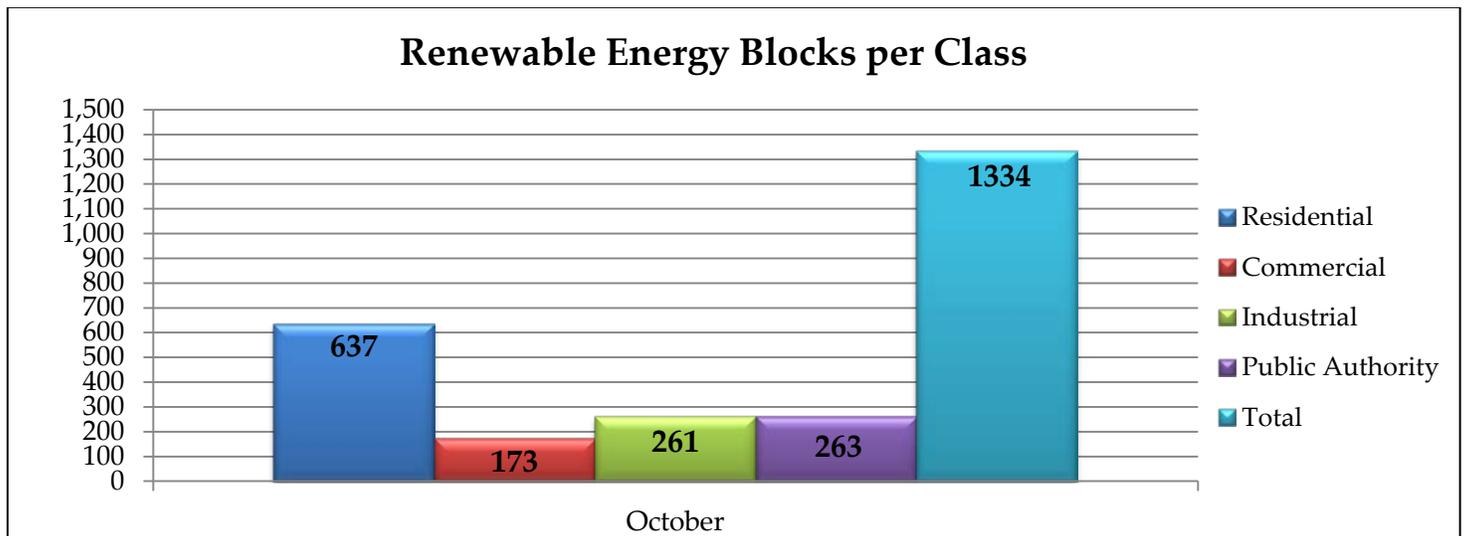


The total customer incentives provided for October compared to the customer incentives collections from Focus on Energy.



The year-to date customer incentives provided compared to the customer incentives collections from Focus on Energy.

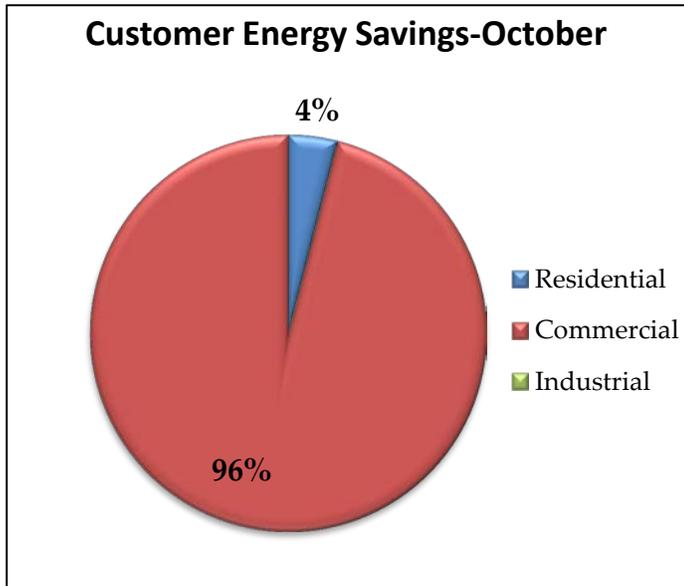
## Renewable Energy Blocks



Renewable energy blocks are sold at \$3 for 300kWh of renewable energy.

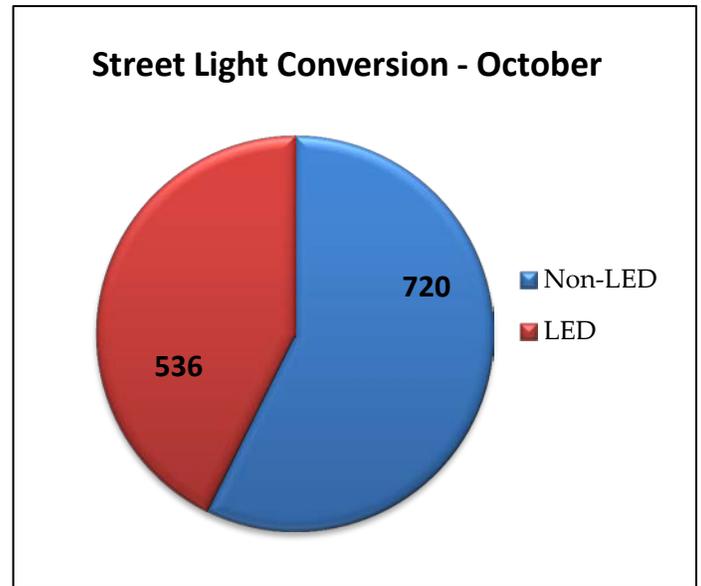
# POWERful Choices! Dashboard

## Energy Savings



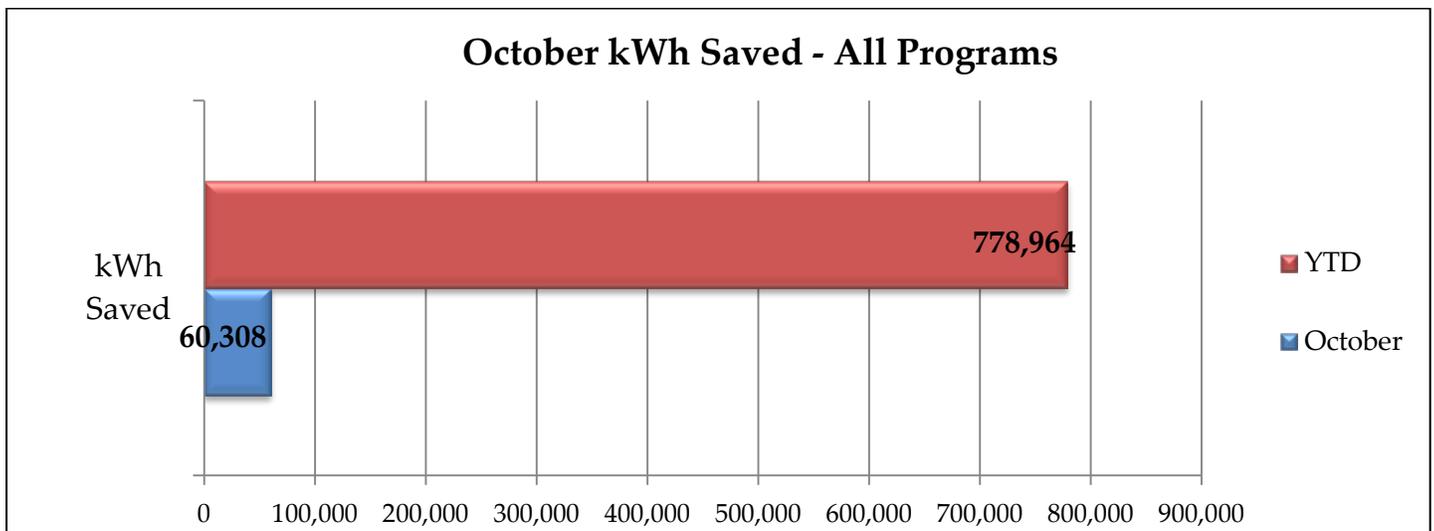
Monthly cumulative percentage of kilowatt hours saved per customer sector.

## Street Light Conversion Program



This change is another example of our City leading by example in energy efficiency and environmental stewardship. The goal is to have 70 percent of the street lights converted to LED by 2018.

## kWh Saved



Energy savings resulting from programs such as upgrades to lighting, motors, HVAC, variable frequency drives, and refrigeration. All customer sectors are included.

# POWERful Choices! Dashboard

## Renewable Energy Block Participation



River Falls currently ranks 5<sup>th</sup> in the nation for customer participation and 1<sup>st</sup> in Wisconsin. The 2016 goal to become first in the state has been achieved! The current level of customer participation in Renewable Energy Blocks is 8.85 percent. The goal is to reach 10 percent customer participation.



# River Falls Municipal Utilities

## Monthly Report

### October 2016

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## ELECTRIC

### Maintenance / Inspections

- Maintenance repairs performed. This is maintenance work found through required system inspections.
- Substation monthly inspections.
- Hydro's checked on daily.
- Made repair to primary - contractor hit the new primary going to TurnKey Corrections primary extension.

### Projects

- Work continues on Radio Road project.
- Chapman Drive street light installation is complete.
- Started moving electric load in the High View and Royal Oaks area. There was an overload situation mid-July. Installed a primary pedestal.
- Sterling Ponds Corporate Park:
  - TurnKey Corrections primary extension - service installed and energized.
  - Temporary power installed to Winfield facility.
  - Installed primary cable in the inner lot.
- Installed conduit for street lights on the Lake George trail (this was done before installing black top).
- Started work on St. Croix radio tower primary extension.

### Misc.

- Underground services continue on a monthly basis.
- Replaced street lights with LED fixtures. Repaired the ones we could replace with bulbs and photo eyes.
- Meter readings continue monthly with meter reads.
- Last disconnects were done this month – winter moratorium.
- MEUW JT&S training.
- A street light pole was hit in front of Family Fresh as a result of a car accident.



## **RIVER FALLS WASTE WATER TREATMENT FACILITY**

### Bio-solids Building Construction Progress

- Installation of RAS lines around clarifier.
- Began painting walls and piping in bio-building.
- Installation of gas service to bio-building.
- Installation of motor control centers in bio-building.
- Power cables were pulled through conduit for new building.
- Energized bio-building.

### WWTP Maintenance / Repair

- Cleaned out chlorine contact tanks.
- Shutdown chlorination for the season.



## **WATER/SEWER**

### Projects

- Repaired curb and patched roads in various locations where water service work was performed.
- Replaced leaking water service on 110 North 4<sup>th</sup> Street (removed lead gooseneck at main). Service for 110 North 4<sup>th</sup> was in the same trench, removed lead gooseneck from that service. Both service lines replaced with 1” copper.
- AT&T and Sprint began antenna reinstallation on Sycamore water tower.
- The mound reservoir was drained and inspected to comply with WDNR five-year inspection requirement.

## **ENGINEERING TECH WORK**

### GPS and Map Work

- Three new home laterals.
- Joint trench – Whitetail tower.
- Electric (plow route) for Winfield (Sterling Ponds) electric loop.
- Radio Road boring work.
- Three water service repairs: two of them on utility side (removed lead goosenecks).

### Plan Reviews and Walk-throughs

- Three plan reviews (Hospital addition, Spring Creek South (revised), and Kinnickinnic River trail plans).
- Pre-construction meeting for Spring Creek South.
- Sterling Ponds phase 2B walk-through.

### Miscellaneous

- Continue work on system age (water and sanitary).
- Temporary water/sanitary service for Winfield (Sterling Ponds).
- Meeting with staff about Water Report Card (infrastructure condition).



## CONSERVATION AND EFFICIENCY

### Community solar

Customers continue to purchase shares for themselves and as gifts  
Banner and landscaping of the site continue at the site  
Pollinator research under the panels has provided good data in this multiyear project

### Renewable Energy blocks

A total of 552 customers are purchasing green blocks and we are at 8.8% customer participation (up from 8.4% last month). We remain #1 in the state for customer participation.

### Electronics and recycling event

A successful lighting and electronics recycling event sponsored by POWERful Choices was held on October 22<sup>nd</sup> at the Public Works garage. Collected over 3,100 (4' and 8' lamps), 43,800 lbs. of electronic scrap, 1200 lbs. of various types of batteries, and 750 lbs. of PCB ballasts. Excellent City employee collaboration was done to make this event successful.

### Large power customers

Met with a customer to enroll them in the New Construction Design Assistance program. Several large lighting projects were completed in October.

### Residential customers

Home Performance testing sign-ups continue to climb as the weather turns colder. The 2016-2017 low income programming was approved by WPPI Energy.

### Blue Bike program

The inaugural year of the program wrapped up on October 22. Working with all City departments to collect bikes and transition to winter bike repair.

### Committees and training

- Attended the Growing Sustainable Communities Conference in Dubuque, IA. An excellent conference highlighting the best management practices in the expansive field of sustainability.
- APPA – Developments in Energy Efficiency Design (DEED)
- Mike Noreen named Director of Region 2 on the DEED Board
- Blue Bike Program
- UW-River Falls, Sustainability Working Group



**For September 1, 2016 – September 30, 2016**

Move in applications = 271  
New Access My Account = 63  
Disconnected Services = 25  
Reconnected Services = 24

As of **10-25-16** we had a total of 6699 Active utility Accounts.

**Explanation**

**Move in applications** - Customers that came into the office to sign up for service or submitted an online application. This information also would include new construction, customers new to River Falls, and customers moving within town. Anytime we need the meters read to end one account and begin a new account.

**Access My Account** - This is customers logging into the utilities E-Care for the first time. E-Care is an online utility dashboard where the customers can access their individual utility account to view information and make payments.

**Disconnected** - These are the number of services (electric or water) disconnected for non-payment and or properties in foreclosure with outstanding balances.

**Reconnected** - These are the number of services (electric or water) reconnected. Customers have paid, landlords have taken over, or new owner on foreclosed properties.