

CITY OF ONALASKA MEETING NOTICE

COMMITTEE/BOARD: Board of Public Works
DATE OF MEETING: November 3, 2014 (Tuesday)
PLACE OF MEETING: City Hall – 415 Main Street (Common Council Chambers)
TIME OF MEETING: 6:30 P.M.

PURPOSE OF MEETING

1. Call to Order and roll call.
2. Approval of minutes from the previous meeting.
3. Public Input: (limited to 3 minutes/individual)

Consideration and possible action on the following items:

4. Review and consideration of installing State Trunk Highway 16 left turn lane extension at South Kinney Coulee Road and Pralle Center Drive extension including possible Farm and Fleet access including impacts to commitments to Wisconsin Department of Transportation Economic Assistance grant.
5. Review and consideration of snowmobile trail within the City including crossing at State Trunk Highway 35 and Oak Forest Drive
6. Review and consideration of Omni Center ice system evaluation.
7. Review and consideration of water and sanitary sewer installation as part of Wisconsin Department of Transportation State Trunk Highway 35 project from Poplar Street to Riders Club Road

PLEASE TAKE FURTHER NOTICE that members of the Common Council of the City of Onalaska who do not serve on the Board may attend this meeting to gather information about a subject over which they have decision making responsibility.

Therefore, further notice is hereby given that the above meeting may constitute a meeting of the Common Council and is hereby noticed as such, even though it is not contemplated that the Common Council will take any formal action at this meeting.

Notices Mailed To:

* Mayor Joe Chilsen
Ald. Erik Sjolander
Ald. Jim Olson
* Ald. Jim Bialecki --Vice Chair
*Ald Jack Pogreba - Chair
**Ald. Harvey Bertrand
Ald. Bob Muth
City Attorney Dept Heads
La Crosse Tribune Charter Com.
Onalaska Holmen Courier Life
WIZM WKTY WLXR WKBH
WLSU WKBT WXOW

*Board Members ** Alternate Member

*Jarrod Holter, City Engineer
*Fred Buehler, Financial Services Director/Treasurer
Neal VanLoo
Attorney George Steil
Paul Hansen
Mark Hansen
Dale Ostrich
Arthur Sommerfield
Attorney Jim Hanson
Onalaska Public Library

Date Notices Mailed and Posted: 10-30-14

In compliance with the Americans with Disabilities Act of 1990, the City of Onalaska will provide reasonable accommodations to qualified individuals with a disability to ensure equal access to public meetings provided notification is given to the City Clerk within seventy-two (72) hours prior to the public meeting and that the requested accommodation does not create an undue hardship for the City.

8. Review and consideration of State/Municipal Agreement for Wisconsin Department of Transportation project:
 - A. ID 5991-02-53/54/55 Braund Street and PH
 - B. ID 5991-02-56/57 Riders Club Road
9. Review and consideration of policy on sidewalk replacement costs due to boulevard tree growth
10. Review and consideration of 2015 Capital Improvements budget and establish date and time for public hearing
11. Review and consideration of amendment number two for Professional Engineering services for Interstate 90 sanitary sewer project with Ayres Associates
12. Pay Estimates: Strand Associates, Short Elliot Hendrickson Inc., Coulee Region Mechanical Contractor, Mathy Construction, Winona Mechanical, A-1 Excavating, Chippewa Concrete Services, Wapasha Construction, State of Wisconsin Department of Transportation and any other contractor/developer.

Adjournment

STAFF REVIEW SUMMARY

CITY OF ONALASKA BOARD OF PUBLIC WORKS

November 4, 2014

Agenda Item: #4

Project/Item Name: STH 16 left turn lane & Pralle Center Drive/Farm & Fleet access

Location: Pralle Center Drive & STH 16

Requested Action: Discussion on STH 16 left turn lane extension and associated Pralle Center Drive access

Staff Report/Description: The City of Onalaska received a State of Wisconsin TEA grant over ten years ago for construction of Gundersen Drive. This grant included extension of the existing westbound STH 16 - South Kinney Coulee Road left turn lane. If the left turn lane extension is installed access to the existing Farm & Fleet site will not be possible from eastbound STH 16. Multiple discussions and meetings have been held with interested parties regarding construction of a new Farm & Fleet access point to Pralle Center Drive. Attached is an updated Farm & Fleet Access study from April 25, 2014 outlining possible options. Staff is requesting direction on installation of the left

turn lane to satisfy outstanding grant requirements and if so which, if any, possible access option to pursue as outlined in the report.

Attachments:

Map, access report, Cornwell-Klohs correspondence



Farm & Fleet

Best Buy

Marshview Center

City's

Proff Center

Sunderen Link
Onalaska Campus

Primary
School
BACS

Kwik
Trip

St. Mary's
Hospital

This map is to be used for
reference purposes only.
Every effort has been made to make
this map as accurate as possible.

<p>City of ONALASKA</p>  <p>City Department</p>	<p>Map Update Schedule First Edition: 2012 Last Edition: May 2013 Next Edition: 2017</p>
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Building a Better World
for All of Us®

April 25, 2014

RE: City of Onalaska
Farm and Fleet Study Update
SEH No. 126700 14.00

Jarrod Holter, PE
City Engineer
City of Onalaska
415 Main Street
Onalaska, WI 54650

Dear Mr. Holter:

As requested, we have prepared an update to the original study dated March 19, 2012. The purpose of the update is to further evaluate the impacts eliminating the left-turn in the Farm and Fleet site off WIS 16, keeping the right-in/right-out access on WIS 16 and include an access to the rear parking area on Pralle Center Drive. The project area is shown in Figure 1.

The project area is shown in Figure 1.

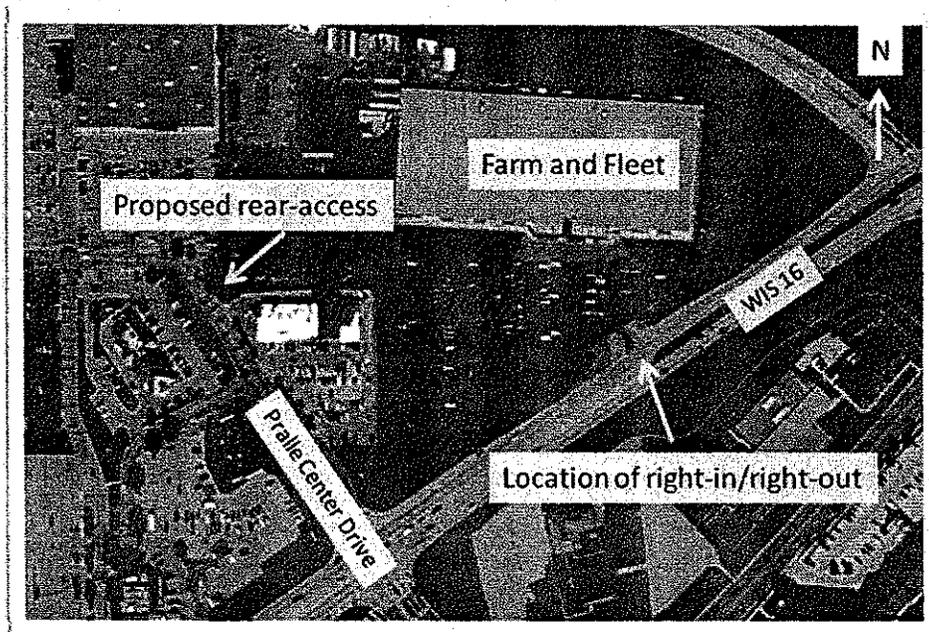


Figure 1

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 6808 Odana Road, Suite 200, Madison, WI 53719-1137

SEH is 100% employee-owned | sehinc.com | 608.620.6199 | 800.732.4362 | 888.908.8166 fax

Traffic Analysis of Access Use Scenarios

The Synchro/SimTraffic model of the surrounding arterial system was updated for several traffic volume scenarios (year 2021 PM Peak Hour). The following conditions were modeled:

- Existing with left-turn in
- Right-in/right-out only (100% out)
- Right-in/right-out with 75% out and 25% out at new rear access
- Right-in/right-out with 50% out and 50% out at new rear access
- Right-in/right-out with 25% out and 75% out at new rear access

Each of the scenarios with the new rear access was run with sub-scenarios. The turn distribution of the traffic exiting the rear access was run for 25%, 50%, and 75% left turns onto Pralle Center Drive. The other traffic was assumed to turn right to head towards Theater Road.

Based on the findings, the queue on Pralle Center Road at WIS16 should not grow beyond the driveways of Burrachos and Culver's (500 feet) unless 75% of the Farm and Fleet traffic exits the new Farm and Fleet driveway on Pralle Center Road and if more than 50% of traffic exiting Farm and Fleet via Pralle Center Road turns left to access WIS16. The analysis also assumes that the current Farm and Fleet development does not grow significantly producing additional traffic demand. Table 1 shows the results of the analysis. The scenario on the left (50% out of the new access) shows reasonable levels of service and 95th percentile queues within the 500 feet to the first driveway. The scenario on the right (75% out of the new access) shows a 95th percentile queue beyond the driveway (total queue of 644 feet). The entire output is attached to the end of the memorandum.

Intersections	Approach	Scenario									
		Right in/ Right out - 50% Out of New Access					Right in/ Right out - 75% Out of New Access				
		LOS	Delay	95 th % Queue			LOS	Delay	95 th % Queue		
				LT	Thru	RT			LT	Thru	RT
I-90 EB Ramps & STH 16	L-90 EB Ramps	21.8	C	163	179	78	21.5	C	160	174	64
	STH 16 EB	7.9	A	0	205	29	7.7	A	0	208	30
	STH 16 WB	8.1	A	64	162	0	8.4	A	61	159	0
	Intersection	10.8	B				10.8	B			
Farm Fleet & STH 16	Driveway SB	1.0	A	0	0	47	0.8	A	0	0	27
	STH 16 EB	2.7	A	0	0	0	2.7	A	0	88	0
	STH 16 WB	7.5	A	0	0	0	7.7	A	0	0	0
	Intersection	4.7	A				4.9	A			
Pralle/Kinney Coulee & STH 16	Kinney Coulee NB	22.0	C	207	82	164	24.6	C	224	81	174
	Pralle SB	38.1	D	233	277	0	76.9	E	254	644	0
	STH 16 EB	21.4	C	238	232	66	20.1	C	222	224	84
	STH 16 WB	19.2	B	158	216	62	19.3	B	166	207	73
	Intersection	23.2	C				29.8	C			

Table 1

While impossible to tell until after the driveway is constructed, due to the parking lot configuration, it is unlikely that more than 50% would use the rear access to exit the Farm and Fleet property. It is more likely that more motorists would use the exit during heavy congestion periods such as the pre-holiday season. In those cases, traffic would likely choose to use the exit to avoid WIS 16 turn right travel west through the parking areas to Theater Road. Therefore, it isn't likely that Farm and Fleet traffic exiting from the rear access would be the cause of a significant increase in delay or queue length. Based on this, I

can conclude the new access will not have significant adverse effects on the operation of the traffic signal at WIS 16 and Pralle Center Drive.

Analysis of Re-use of Farm and Fleet Property

An analysis was performed on the area if the Farm and Fleet property was sold and/or re-developed. The methodology from the latest version ITE's Trip Generation Manual was used to determine the traffic volumes generated by assumed likely re-use of the property. While the specific new uses of the property are unknown, it was assumed for this analysis to include a supermarket, a high turnover restaurant, and a fast food restaurant with a drive-thru. Table 2 below includes the values from the Trip Generation Manual. In addition, the table includes the current traffic demand from the existing Farm and Fleet property. The net PM Peak Hour demand is shown with the latest traffic counts at the left-in, right-in/right-out access onto WIS 16. Also, the current use was projected using the Trip Generation Manual to compare projected with the actual traffic volumes generated by the site.

Year 2014 PM Peak Hour								
Replacement Development	ITE Land Use	ITE Code	Units	Quantity	Rate	Total	Enter	Exit
Projected Re-use of Farm and Fleet Property								
Supermarket	Supermarket	850	1000 SF GFA	100	11.85	1185	628	556
Restaurant	High Turnover Restaurant	932	1000 SF GFA	5	18.49	92	50	42
Restaurant	Fast Food with Drive-thru	934	1000 SF GFA	4	46.14	84	44	40
Total	-	-	-	-	-	1361	772	638
Current Conditions								
Farm and Fleet - actual	Actual Values	-	1000 SF GFA	121	3.34	404	183	221
Farm and Fleet - projected	Specialty Retail	814	1000 SF GFA	121	6.84	828	464	364

Table 2

The current generated demand is approximately half of what ITE projected for a similar use (Specialty Retail). The reason is likely a combination of the limited access to the property and possibly competition from other similar retailers such as the Home Depot on Midwest Drive and Menards on Sand Lake Road. If the property would be sold and/or re-developed, it's likely that the developer would find tenants that would have less competition in the area. However, the access would still be limited to the proposed right-in/right-out driveway onto WIS 16 and the access onto Pralle Center Drive.

The Synchro/SimTraffic model was revised to account for the new traffic demand generated by the assumed re-use of the property. The traffic was factored by 0.75 to account for pass-by and internal site trips. The additional traffic results in increased delay and extends the queue beyond the driveways to Burrachos and Culver's (500 feet) (assuming 50% of the exiting traffic uses the rear access and 50% turns left onto Pralle Center Drive). Table 2 shows the results of the analysis. In addition to increased delay and unreasonable level of service, the 95th percentile queues resulting from the additional traffic extend beyond the driveways to Burrachos/Culvers. If the assumptions used in the analysis are close to what actually develops, you can expect there to be operational problems at the intersection.

Intersections	Approach	Right in/ Right out - 50% Out				
		LOS	Delay	95 th % Queue		
				LT	Thru	RT
I-90 EB Ramps & STH 16	I-90 EB Ramps	22.0	C	159	165	117
	STH 16 EB	6.3	A	0	150	23
	STH 16 WB	9.3	A	70	184	0
Intersection		10.6	B			
Farm Fleet & STH 16	Driveway SB	2.4	A	0	0	96
	STH 16 EB	2.5	A	0	0	0
	STH 16 WB	8.8	A	0	0	0
Intersection		5.4	A			
Pralle/Kinney Coulee & STH 16	Kinney Coulee NB	32.5	C	252	117	217
	Pralle SB	680.8		217	625	0
	STH 16 EB	39.7	D	651	622	61
	STH 16 WB	27.9	C	159	319	207
Intersection		118.6				

Table 2

It's possible that any redevelopment of the site may include the current strip mall with Burrachos and Starbucks. If so, the entire parking area could be reconfigured to provide improved circulation and driveway spacing. However, increasing the development intensity would result in problems with the traffic signal operations (increased delay, unacceptable levels of service, etc). While the intersection of WIS 16 and Pralle Center Drive operates acceptably today and through 2021 without increases in traffic, it is expected to fail beyond 2012 with normal traffic growth. Without expansion of WIS 16, it would be difficult to increase the capacity enough to result in acceptable operations.

Alternative Driveways into Farm and Fleet Parking Area

Three different alternatives were developed to provide additional access into the Farm and Fleet development from Pralle Center Drive. The alternatives were developed as part of a previous design contract. This study provides comments on the pro's and cons of each alternative.

Alternative 1

The concept for Alternative 1 is shown on Figure 2. It provides a two-way driveway just northwest of the driveway into Burrachos. This alternative provides the best sight lines of the three. The driveway is located close to horizontal curve on Pralle Center Drive which enables traffic approaching the intersection to view oncoming traffic from the west. The driveway is somewhat on a skew but was designed that way to run parallel with the parking lanes. One issue is the close proximity to the driveway to Burrachos immediately to the east which could cause operational problems.

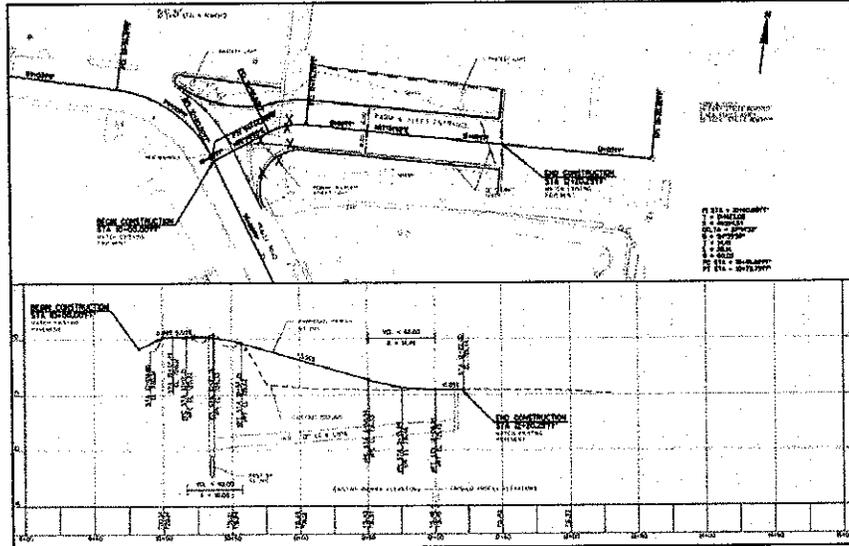


Figure 2

Alternative 2

The concept for Alternative 3 is shown in Figure 3. It provides a two-way driveway just northwest of the driveway into Burrachos. This option squares up the approach to Pralle Center Drive and eliminates the driveway to Burrachos. Alternative 2 also includes an additional one-way access into the Farm and Fleet parking area behind the Burrachos building.

The one-way access into the Farm and Fleet parking area appears to be tight. It is intended for both drive-thru patrons as well as service vehicles (trucks). Both the trucks and service vehicles could make a left turn onto the two-way driveway onto Pralle Center Drive however, this would add some confusion to motorists, increase the volume of the driveway, and increase vehicle conflicts. Snow removal may also be a problem as well as conflicts with dumpsters and unloading of supplies.

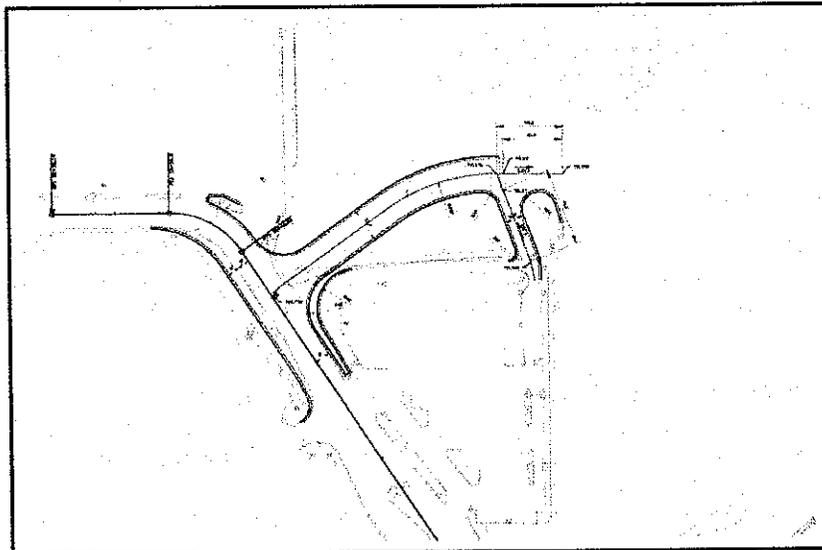


Figure 3

Alternative 3

The concept for Alternative 3 is shown in Figure 4. It provides a right turn-in prior to the Burrachos property and one-way exit just beyond Burrachos. Like Alternative 2, this concept eliminates the driveway to Burrachos on the northwest end of their property and includes a one-way driveway along the north end of the building onto the exit driveway to be used for service vehicles (trucks) and drive thru patrons.

This option squares up the approach to Pralle Center Drive and eliminates the driveway to Burrachos. While the traffic flow concept would work well, the location of the one-way in is too close to WIS 16. While in the same location as the current one-way in to the Burrachos parking area, this new driveway would likely have much higher traffic volumes. In addition, both driveways would be a challenge for snow removal.

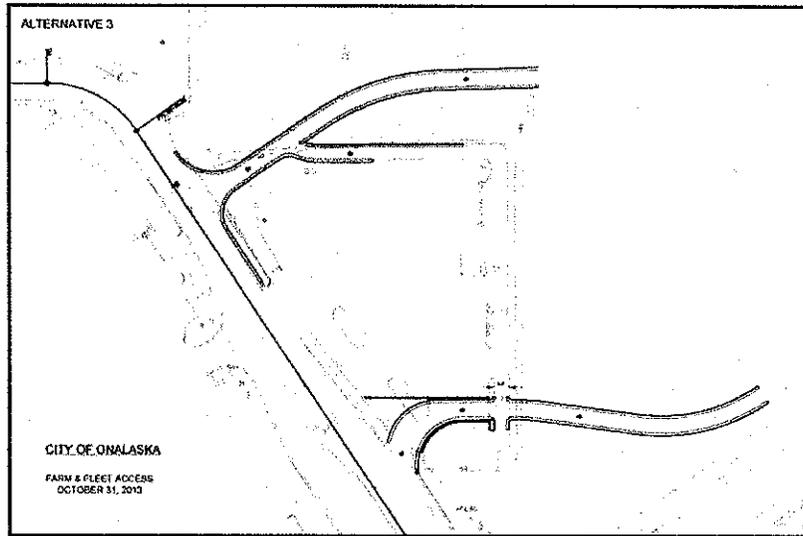


Figure 4

Alternative 4 - Entrance Only

We looked at a 4th alternative that includes an entrance only to the Farm and Fleet property. Alternative 4 is shown in Figure 5. The location would need to be in the same location as Alternative 1 to avoid the need for an additional access into parking area behind Burrachos as well as to provide enough distance downstream from WIS 16 so not to disrupt the operations of the traffic signal. The driveway would be accessible for westbound Pralle Center Drive traffic and designed to prohibit traffic from exiting the Farm and Fleet parking area.

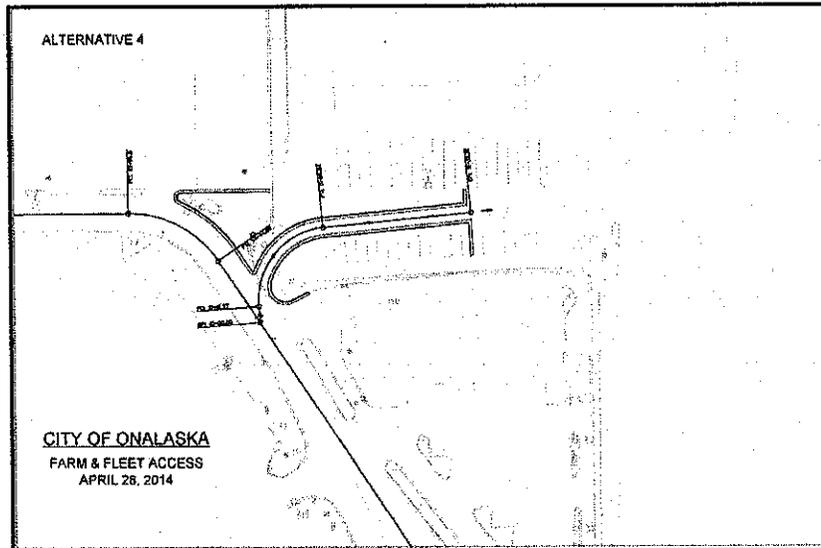


Figure 5

Conclusions and Recommendations

The proposed Alternative 1 (see Figure 1) with right-in/right-out access to Farm and Fleet on WIS 16 and a new full access driveway into their back lot will operate acceptably through 2021 for the weekday PM peak hour. Based on the findings, the queue on Pralle Center Road at WIS16 should not grow beyond the driveways of Burrachos and Culver's (500 feet) unless 75% of the Farm and Fleet traffic exits the new Farm and Fleet driveway on Pralle Center Road and if more than 50% of traffic exiting Farm and Fleet via Pralle Center Road turns left to access WIS16. The analysis also assumes that the current Farm and Fleet development does not grow significantly producing additional traffic demand.

Redevelopment of the current Farm and Fleet site or adding other uses to the site will result in increased delays and poor levels of service at the intersection of WIS 16 and Pralle Center Drive. While the intersection operates acceptably today and through 2021 without increases in traffic, it is expected to fail beyond 2021 with normal traffic growth. Without expansion of WIS 16, it would be difficult to increase the capacity enough to result in acceptable operations.

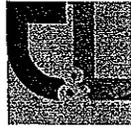
Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

James D. Hanson, PE
Transportation Director

jdh

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**CHRISTENSEN
& LAUE P.A.**
ATTORNEYS AT LAW

JOSEPH J. CHRISTENSEN*
ROBERT P. LAUE
CHARLES A. DELBRIDGE
LUCAS J. FRASZ
CHRISTOPHER J. MCNULTY

SUITE 400
5101 VERNON AVENUE SOUTH
MINNEAPOLIS, MINNESOTA 55436

TELEPHONE (952) 927-8855
FACSIMILE (952) 927-5427

†REAL PROPERTY LAW SPECIALIST
CERTIFIED BY MINNESOTA STATE
BAR ASSOCIATION
*ALSO ADMITTED IN WISCONSIN

October 16, 2014

VIA E-MAIL: jholter@cityofonalaska.com

Jarrold Holter, City Engineer
City of Onalaska
415 Main Street
Onalaska, WI 54650

RE: Pralle Center Drive – November Meetings

Dear Mr. Holter:

As you may know, our office represents Cornwell-Klohs Company which developed and operates the Pralle Center on Highway 16 adjoining the Farm and Fleet site. Sean O'Flaherty's October 14, 2014 letter which was e-mailed to Dennis Klohs has been referred to me for response.

On March 10 of this year I sent a letter to Mr. O'Flaherty discussing some of the background information and stating Cornwell Klohs Company's position on this matter. A copy of my March 10, 2014 letter is attached. Please make certain that both this letter and my March 10th letter are made a part of the public record of the Board of Public Works meeting scheduled for November 4, 2014, and the Common Council meeting scheduled for November 11, 2014.

In addition, I note that no notice of these meetings appears to have been given to any of the owners of the properties in Pralle Center other than Cornwell Klohs Company and Hanson Ventures. As stated in my March 10th letter, all of the property owners in Pralle Center are benefited by recorded easements and hold other rights of record in the real property which would be affected by any extension of Pralle Center Drive. All of these other property owners have a legal right to receive notice and to participate in any deliberations, decisions or proceedings relating to the extension of Pralle Center Drive.

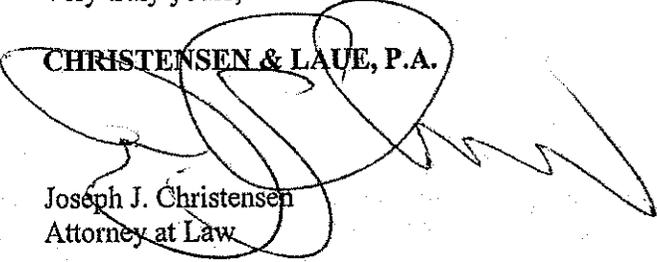
Mr. O'Flaherty's October 14th letter indicates that two matters will be considered by the Board of Public Works and the Common Council at the meetings scheduled respectively for November 4 and November 11, those matters being: (1) the closure of the left turn lane into the Farm & Fleet site; and (2) any extension of Pralle Center Drive. These two matters are distinct and we see no reason why the approvals and construction relating to the closure of the left turn into Fleet Farm cannot proceed without an extension of Pralle Center Drive.

Jarrold Holter
October 15, 2014
Page 2

As discussed in my March 14th letter, Farm & Fleet has no legal right to require or insist upon any new or additional access into its site as the result of the left turn lane closure in Highway 16, nor does the City of Onalaska or State of Wisconsin have any legal obligation to furnish any such additional access to the Farm & Fleet site because of the left turn lane closure. Thus, it appears that the only reason for granting an extension of Pralle Center Drive under these circumstances would be to provide a voluntary accommodation to Farm & Fleet with related costs apparently to be borne by taxpayers or other parties. As stated in my March 10th letter, this is not the type of thing for which eminent domain proceedings should legitimately be used.

We appreciate the opportunity to provide these comments to the Board of Public Works and the Common Council in regard to this matter. If there are any questions, please let me know.

Very truly yours,


CHRISTENSEN & LAUE, P.A.

Joseph J. Christensen
Attorney at Law

JJC/cb
Encl.

cc: Mr. Dennis Klohs (via e-mail)
Mr. Sean O'Flaherty (via e-mail)

CHRISTENSEN & LAUE, P.A.

JOSEPH J. CHRISTENSEN†*
ROBERT P. LAUE
CHARLES A. DELBRIDGE
LUCAS J. FRASZ
CHRISTOPHER J. MCNULTY

ATTORNEYS AT LAW
SUITE 400
5101 VERNON AVENUE SOUTH
MINNEAPOLIS, MINNESOTA 55436

TELEPHONE (952) 927-8855
FACSIMILE (952) 927-5427

WALTER C. GUSTAFSON
OF COUNSEL (1981 - 2004)

†REAL PROPERTY LAW SPECIALIST
CERTIFIED BY MINNESOTA STATE
BAR ASSOCIATION

*ALSO ADMITTED IN WISCONSIN

March 10, 2014

VIA E-MAIL

Mr. Sean O'Flaherty
O'Flaherty Heim Egan & Birnbaum Ltd.
U.S. Bank Place, Tenth Floor
201 Main Street, Suite 1000
LaCrosse, Wisconsin 54601

RE: City of Onalaska/Extension of Pralle Drive

Dear Mr. O'Flaherty:

As you know, our office represents Cornwell-Klohs Company which initially developed, and continues to operate, the Pralle Center on Highway 16 in Onalaska. I understand you are representing the City of Onalaska. By letter dated March 3rd, 2014, you have furnished me with a Relocation Order dated February 12, 2014, and a right-of-way plat which, according to your letter, has been approved by the Onalaska City Council.

In our telephone conversation on the afternoon of Friday, February 28, 2014, you informed me that:

1. The underlying reason the City is considering proceeding with this Relocation Order and right-of-way plat is because the median on Highway 16 opposite the entrance to the Farm & Fleet parcel must be closed to accommodate an extension of the left turn lane on westbound Highway 16 for cars turning left onto South Kinney Coulee Road.
2. The City is required to so extend the left turn lane on westbound Highway 16 due to an Agreement between the City and the State Department of Transportation which has been in place for several years, under which the City is required to extend the left turn lane once the traffic volumes on Highway 16 reach a certain level set in the Agreement.
3. The traffic volume threshold set in the Agreement between the City and the State was reached some time ago, and the City has already received several time extensions from the State for the left turn lane work, but the State is no longer willing to grant further extensions.

4. Neither the City of Onalaska nor the State Department of Transportation has any legal obligation that you are aware of to provide any additional access to the Farm & Fleet site as the result of the closure of the median on Highway 16 opposite the entrance into the Farm & Fleet site, or otherwise.
5. The City has not made a final determination as to whether it will proceed with the right-of-way plat and Relocation Order. That decision will be made once the City obtains appraisals of the property interests affected by the proposed right-of-way plat.
6. You will see that both Mr. Klohs and I are notified in advance of any further actions taken by the City in connection with this matter on an on-going basis.

From the Schedule of Lands & Interests Required listed on the right-of-way plat, it is apparent that all of the interests affected by this proceeding have not been included. As I mentioned in our telephone conversation, all of the other property owners in Pralle Center hold recorded interests including recorded access easements, over portions of the area which is the subject of the right-of-way plat. The parties in interest include, but are not limited to, Cornwell-Klohs Company and the owners of the properties currently occupied by Target, Kohl's, Hobby Lobby, Office Max and Best Buy, in addition to those listed on the proposed right-of-way plat. Cornwell-Klohs Company also holds all rights relating to access to the Farm & Fleet site over the Three Rivers parcel pursuant to an Agreement for Exclusive Right to Grant Access dated June 5, 2005 and filed June 16, 2005 with the LaCrosse County Register of Deeds as Doc. No. 1424218.

As I mentioned in our telephone conversation, if the Farm & Fleet access were approved as proposed, it would heavily affect the traffic flow, and could negatively impact the operations of Pralle Center, if not done properly. As I also mentioned in our telephone conversation, this proposed access would be likely used for significant semi and other heavy truck traffic accessing the Farm & Fleet site, in addition to many passenger vehicles, and would create a short cut route through Pralle Center from the Farm & Fleet site to Theater Road to the West. Cornwell-Klohs Company is concerned that the proposed design will not function properly and will cause traffic congestion at the intersection of Pralle Center Drive and Highway 16, as well as in the shopping center itself. Cornwell-Klohs Company has also recently heard that Farm & Fleet is looking for a new location at this time. Consequently, it appears this plan will open the door for the redevelopment and intensification of uses on, the Farm & Fleet site.

If the decision to proceed is made before it can be demonstrated that the proposed plan will function satisfactorily, the consequences to the City and the private stakeholders will be serious and long lasting. Accordingly, if the City does decide to proceed further with this proposal, Cornwell-Klohs Company requests that the City obtain a professionally prepared traffic report which includes an analysis of (a) all A.M. and P.M. peak time movements, (b) assumed redevelopment and intensification of the Farm & Fleet site, and (c) concept proposals for alternate designs to address and relieve the traffic issues identified in the report. Cornwell-

Shawn O'Flaherty
March 10, 2014
Page 3

Klohs Company also requests that no further decision by the City be made to move forward with this proposal until Cornwell-Klohs Company has had an opportunity to review the traffic study and provide additional input to the City.

Under Wisconsin law, it appears clear that Farm & Fleet is not entitled to receive a secondary access because of the Highway 16 median closure, nor does it appear the City nor any other unit of government is legally obligated to provide any such access or otherwise compensate Farm & Fleet as a result of the median closure. See for example *Geyso v. Daly*, 691 N.W.2d 915, 919 (Ct. App. 2004), *Howell Plaza, Inc. v. State Highway Commission*, 284 N.W.2d 877, 890 (1979), and *Wisc. Power & Light Co. v. Columbia County*, 87 N.W.2d 979, 281-82 (1958). As referenced above, you have also told me you are aware of nothing requiring either the City or the State to furnish the Farm & Fleet site with additional access as a result of the median closure.

Thus, under the circumstances, it seems the City is voluntarily engaging in this process as an accommodation to Farm & Fleet. The U.S. Supreme Court has, however, held that a taking does not satisfy the "public use" clause if it is made "for the purpose of conferring a private benefit on a particular private party", or if it is made "under the mere pretext of public purpose, when it's actual purpose is to bestow a private benefit" *Kelo v. City of New London*, 545 U.S. 469, 477-78 (2005). Also see *Porter v. DiBlasio*, 93 F.3d 301, 310 (7th Cir. 1996) where the Court held "the Constitution forbids a taking executed for no other reason than to confer a private benefit on a particular private party, even when the taking is compensated." This, then, is a private property matter which should be addressed between the adjoining private property owners, and does not constitute the type of "public purpose" which eminent domain proceedings are intended to serve.

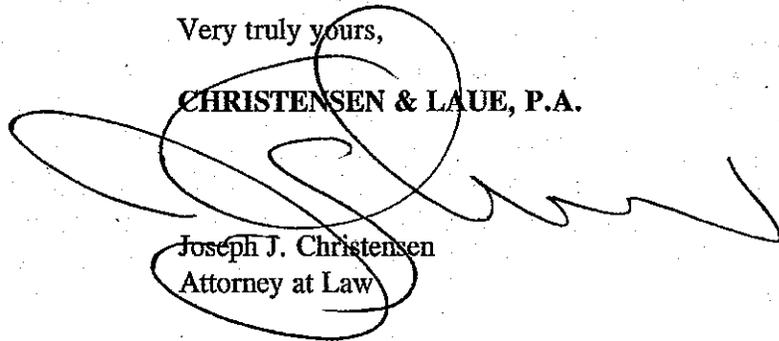
Cornwell-Klohs Company has developed an alternate design and plan for tying access to the Farm & Fleet site into the Pralle Center, which it believes will work far more efficiently than the plan contemplated by the proposed right-of-way plat. The alternate plan will more heavily involve the Three Rivers parcel and, under the Agreement for Exclusive Right to Grant Access referenced above, Cornwell-Klohs Company has the ability and right to implement this alternate access. The cooperation of Farm & Fleet will be required for the alternate plan to work, however. The City's further pursuit of the right-of-way plan will not only unnecessarily cause significant damages to be incurred by the various interested parties in Pralle Center, it will also undermine the motivation of Farm & Fleet to cooperate with Cornwell-Klohs Company in reaching a comprehensive and workable solution, particularly for the scenario which will exist after Farm & Fleet relocates elsewhere and this site is redeveloped. Cornwell-Klohs Company, therefore, respectfully requests that the City not move forward with the Relocation Order and Right of Way Plan beyond obtaining the traffic study referenced above.

Shawn O'Flaherty
March 10, 2014
Page 4

Once you have had an opportunity to review this letter with the City, please contact me so we can further discuss this matter. Please also make certain that this letter is circulated to the Common Council members in advance of tomorrow's meeting and that it is made a part of the record of this proceeding. I look forward to hearing from you shortly.

Very truly yours,

CHRISTENSEN & LAUE, P.A.

A large, stylized handwritten signature in black ink, appearing to read 'J. Christensen', is written over the typed name and firm name.

Joseph J. Christensen
Attorney at Law

JJC/cb

cc: Mr. Dennis Klohs (via e-mail)

STAFF REVIEW SUMMARY

CITY OF ONALASKA BOARD OF PUBLIC WORKS

November 4, 2014

Agenda Item:

#5

Project/Item Name:

Snowmobile trail

Location:

Citywide

Requested Action:

Approval of snowmobile trail

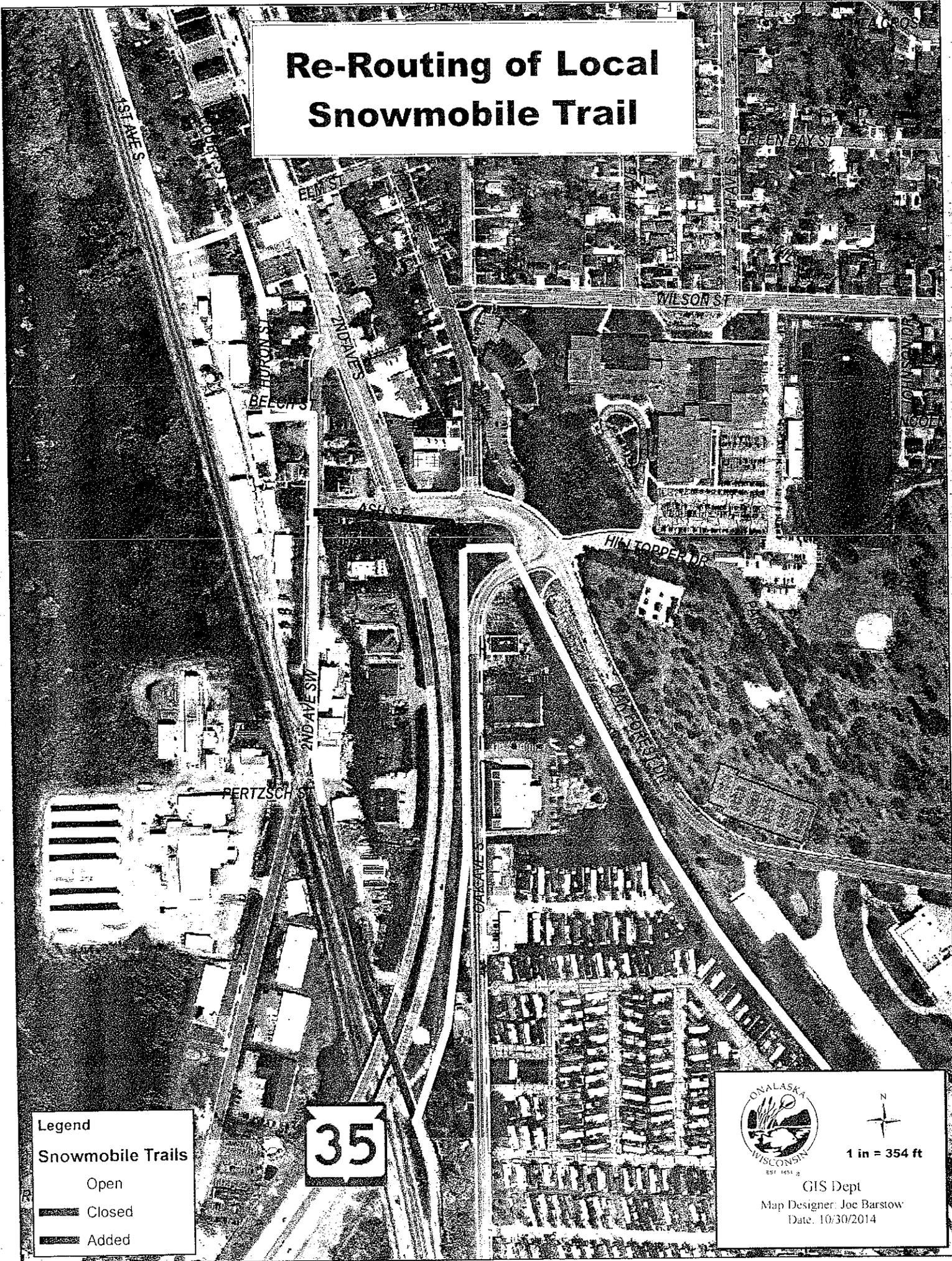
Staff Report/Description:

The Coulee Sno-drifters snowmobile club is requesting the renewal of snowmobile trail through the City of Onalaska. Trail would follow the 2014 route which includes crossing STH 35 at Oak Forest Drive

Attachments:

Map, e-mail from Wis. DOT

Re-Routing of Local Snowmobile Trail



Legend

Snowmobile Trails

- Open
- Closed
- Added



1 in = 354 ft

GIS Dept
Map Designer: Joe Barstow
Date: 10/30/2014

Holter, Jarrod

From: Gary Hanson <ghanson@midwesttoyota.com>
Sent: Wednesday, September 10, 2014 1:55 PM
To: Holter, Jarrod
Subject: FW: Snowmobile Crossing

Just got this from Andy Winga.

Thanks

Gary

From: Winga, Andrew - DOT [<mailto:Andrew.Winga@dot.wi.gov>]
Sent: Wednesday, September 10, 2014 12:19 PM
To: Gary Hanson
Subject: RE: Snowmobile Crossing

Gary,

The Department did not receive any negative reports or feed back at the snowmobile crossing at the signalized intersection of STH 35 and Oak Forest. Based on this it is permissible to continue using the signal to connect the trails through Onalaska, as long as the City of Onalaska is in favor of this operation.

Andy

From: Gary Hanson [<mailto:ghanson@midwesttoyota.com>]
Sent: Wednesday, September 10, 2014 11:51 AM
To: Winga, Andrew - DOT
Cc: Holter, Jarrod
Subject: Snowmobile Crossing

Hi Andy. I just talked to you about the snowmobile crossing at Hwy 35 and Oak Forest/Ash Streets intersection in Onalaska Wi. Can I get an e-mail with your approval for the upcoming season so when I go to the city of Onalaska Council Meeting I have more than a verbal approval.

Thank you for your help and support.

Gary P Hanson
President
Coulee Sno-Drifters

STAFF REVIEW SUMMARY

CITY OF ONALASKA BOARD OF PUBLIC WORKS

November 4, 2014

Agenda Item: #6

Project/Item Name: Omni Center Chillers

Location: Omni Center

Requested Action: Discussion on Omni Center Ice Evaluation

Staff Report/Description: The Omni Center Ice Evaluation report outlines options for chiller replacement at the Omni Center. Currently the arena one chiller is beyond operational life span and is in need of repairs. Various options for chiller replacement are outlined in the report

Attachments: Omni Center Ice Evaluation



Ice System Evaluation

Omni Center

For:

City of Onalaska
415 Main Street
Onalaska, WI 54650

April 23, 2014

Submitted By:

Stevens Engineers, Inc.
2211 O'Neil Road
Hudson, WI 54016
800.822.7670



File No. 900.14.203

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Section 1
Project Information

Contact Information

Facility Addresses:

Omni Center
255 Riders Club Road
Onalaska, WI 54650

City of Onalaska:

Daniel Wick
Director of Parks and Recreation Department
415 Main Street
Onalaska, WI 54650
P. 608.781.9560
E. dwick@cityofonalaska.com

C. Jarrod Holter, P.E.

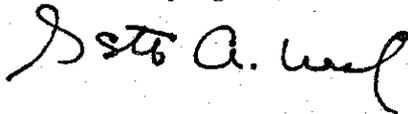
City Engineer
415 Main Street
Onalaska, WI 54650
P. 608.781.9537
C. 608.780.2167
E. jholter@cityofonalaska.com

Consulting Engineering Firms:

Stevens
2211 O'Neil Road
Hudson, WI 54016
P. 715.386.5819
F. 715.386.5879
Scott A. Ward, P.E.
sward@stevensengineers.com

Certification

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly registered Professional Engineer under the laws of the State of Wisconsin.



Scott A. Ward, P.E.

34714-006
Registration Number

4.23.14
Date

Section 2
Project Overview

PROJECT OVERVIEW

Background

The Omni Center is a multi-purpose complex operated by the City of Onalaska that includes two ice arenas. Arena 1 is the original facility and is served by a 20-year old, 50 ton Trane refrigeration system. The original design of the Arena 1 facility was based on an operating season of November through mid-March. The facility is currently operating an extended season October through April. The refrigeration system has difficulty maintaining the ice to the desired quality for the facility's programming. Arena 2 is served by two a 100 ton Trane refrigeration system.

Purpose

As part of a continued effort to: improve operation and efficiency at the Omni Center; to plan for future improvements to ice systems; and to continue to provide high quality ice for its user groups; Stevens was retained by the City to prepare a letter report evaluation of the ice system. The primary objectives of this study are as follows:

- Identify the life expectancy of the existing refrigeration systems.
- Evaluate the feasibility of connecting the rink floor in Arena 1 with the refrigeration system in Arena 2.
- Identify replacement options for the existing refrigeration system.
- To provide accurate cost and project scheduling information to assist the City in making informed decisions on future projects.
- To recommend improvements that maximize energy efficiency while incorporating sustainable design practices that reduce the use of fossil fuels, the production of greenhouse gas emissions, total energy use, wherever possible, and overall, lower the carbon footprint of each facility.

Overall the facility is in great condition and very well maintain. It is among the higher quality community skating facilities in the state of Wisconsin. It is recommended that the findings presented in this report be used to improve the operations and maintenance of the facility and to assist in planning and budgeting of the recommended improvements in order to maintain this tremendous community asset.

Investigation Methods and Documents

Various methods were used to evaluate the existing facility including:

Visual Observations: Site visits were conducted on January 17 and April 5, 2014 to observe the condition and operation of the facilities and their ice systems.

Interviews: During the on-site visits, in-depth discussions were conducted with the facility's management and operational staff to document existing issues with the facility and discuss historical problems with its systems.

Research: Where applicable, additional research was conducted to provide accurate and detailed information regarding improvements or systems recommendations.

Documents and Timeline: The following documents were received and reviewed for the facility survey which also chronicles construction and improvements at each facility:

Estimated Project Costs

The proposed cost estimates presented throughout this report were developed by estimating the probable construction costs based on similar types of construction projects and work performed and bid in 2008-2013 and updated for 2014 costs unless otherwise noted. The estimated costs include all materials and labor for a complete installation unless otherwise noted. Costs will vary depending on the time of year the projects are bid, the current economic climate and the size and scope of project. The costs are based on a standard project and construction schedule. If a reduced construction schedule is desired, additional costs for overtime pay, etc. should be applied to the specific project.

The cost estimates also account for, or are based on, the following references:

- Prevailing Wage requirements that may be required by the State of Wisconsin.
- Engineering News Report Cost Index

In addition to the probable construction costs of the proposed work, other associated project costs are included to provide a total estimate cost for the project. The Estimate, Design and Construction Contingency line item in each cost table is included during the preliminary phase of design projects because the exact scope of the project has not yet been determined. This percentage is typically reduced from 20% to 5% during the final design phase of the project.

The Engineering, Legal, Financial and Administrative line item in each cost table is provided to cover all work performed by the design team, geotechnical services and other material testing services, and all legal, financial and administrative responsibilities required by the City for projects of this type. These costs will vary based on project scope. A proposal will be provided to the City for all engineering design services.

Escalation Factor and Method for Application

Where costs are projected beyond the current year, an escalation factor of 4% per year is applied. The escalation factor is based on current economical conditions and location, and is applied to midpoint of construction which is estimated to be July 1st of the applicable year.

Applicable Codes and Standards

The following codes generally apply to projects of this type and scope and may or may not be enforced by the City of Onalaska:

- 2009 International Building Code (IBC), as amended
- 2009 International Mechanical Code (IMC), as amended.
- 2009 International Residential Code, as amended
- 2009 International Fire Code, as amended.
- 2011 National Electric Code, as amended
- 2009 International Energy Code
- 2009 Uniform Plumbing Code

OMNI CENTER – ICE SYSTEM EVALUATION

- 2006 Energy Conservation Code
- NFPA 70 (NEC), 2008
- ANSI/ASHRAE Standard 15-2007
- ANSI/IIAR 2-2008 (Includes Addendum A1)
- The City's CODE OF ORDINANCES or ADMINISTRATIVE CODES were not reviewed or reference for this survey or study.

Section 3
Ice Systems

ICE SYSTEMS

General

Both existing ice arenas are served by an *indirect-type* ice system that includes a refrigeration system, NHL sized ice sheet and dasher board system. R-22 refrigerant is used as the primary refrigerant and a glycol-water solution is the secondary refrigerant that is circulated through the ice rink floors. The existing ice system in Arena 1 is 22-years old and has exceeded its expected life. The existing ice system in Arena 2 is 10 years old. The main focus of this study is to evaluate the option for improvements to the existing refrigeration systems. This section of the study discusses the existing ice systems, general design parameters to consider and options available and recommendations for improving or replacing the existing refrigeration systems. Estimated costs for each recommendation are also provided in this section.

Definitions for the two types of ice systems used in ice rink facilities and several other common terms discussed throughout the study are provided below:

Ice System: A term that collectively refers to the refrigeration system, ice rink floor system, waste heat recovery systems and dasher board systems. **This is the type of system that serves both arenas at the Omni Center.**

Direct System: A *direct* refrigeration system circulates the primary refrigerant (e.g. R-22) directly through the ice rink floor. There is no secondary solution or refrigerant.

Indirect-type System: In an *indirect* system the primary refrigerant (e.g. R-22) stays in the refrigeration room. Heat is removed from the ice rink floor through a secondary refrigerant or glycol solution that is circulated in the floor. The heat exchange between the glycol solution and the primary refrigerant takes place in the refrigeration room.

HCFC: Hydrochlorofluorocarbon (e.g. R-22, etc.)

HFC: Hydrofluorocarbon (e.g. R404A, R407C, R-507, etc.)

Natural Refrigerants: Naturally occurring refrigerants such as ammonia (R717), carbon dioxide (CO₂) and hydrocarbons.

Observations of Existing Conditions – Omni Center

General

Stevens toured the Omni Center with the City personnel and the facility's management and operating and maintenance staff on February 3, 2014 and have the following observations and comments.

Arena 1 (Original Facility) - Ice System

- This facility was constructed in 1992.
- Ice operational season: The original design of the Arena 1 facility was based on an operating season of November through mid-March. The facility is currently operating an extended season October through April (7 months). The ice sheet was in place during our site visit.
- Overall, the ice system has been well maintained by the facility's operational and maintenance personnel. An operation log is maintained by the facility's staff. There is no dehumidification in this arena and the facility struggles with high humidity during the first several weeks of the season.

Refrigeration System. The arena is served by an *indirect* refrigeration system manufactured by Systematic Refrigeration (Model SRM21002, Serial No. A0423R-1092) and installed by Rink Tec International in 1992 (22 years-old). This is a commercial grade, R-22 direct expansion type system with two (2) Trane semi-hermetic compressors (113 RLA, LRA 396x2) and an air cooled condenser. It was confirmed with Rink Tec that the compressors were not new at time of installation and were donated by Trane as used equipment. At least one compressor has been replaced over the years. The glycol return temperature was recorded at 18-20F and can typical get as high as 26 F by the end of a busy weekend or junior hockey game.

The nominal tonnage on the system is 50 tons (typically recommend 90-100 tons for year round operation) as confirmed by Rink Tec. It was reported that this arena was originally going to be maintained as a seasonal rink with a shorter operating season. The system struggles with maintaining a good quality ice sheet especially during heaving loading periods such as tournaments, etc. It cannot maintain ice during the summer months. The 22-year old refrigeration system has exceeded its expected life of 15-20 years and is in fair condition for its age. There was no information available on this system from the local Trane dealer.

- *Waste heat recovery system.* There is no waste heat recovered from this refrigeration system. There is no subfloor heating system beneath the rink floor in this arena because it was designed a seasonal rink and there is no snow melt pit. All ice shavings are dumped outside the building.
- *Ice Rink Floor.* The rink floor is standard NHL size of 200 feet by 85 feet by 28 foot radii. Rink Tec confirmed the floor was installed with 6 inch mains and 6 inch reverse return headers and 1 inch poly pipe at 4 inches on center. The rink floor is reported to be in good

condition. However, it has been difficult to maintain a hard sheet of ice in this arena especially around the outside edges of the rink floor.

- *Refrigeration room.* The existing refrigeration room is located on the north end of the arena and is approximately 300 square feet in size. There is one exterior wall which will be beneficial when considering alternative refrigerants. See Figures 1 and 2.
- *Life safety systems.* The refrigeration room is not equipped with an R-22 leak detection system. We did not recall seeing an emergency power shunt trip for the refrigeration system or an energizer switch for the emergency ventilation system on the exterior of the mechanical room door(s) as required per code. It was not noted when pressure relief valves on the systems were last replaced. Replacement is required every 5 years.
- *Ventilation system.* There is no existing ventilation system in the refrigeration room and therefore does not meet current code requirements.

Arena 2 - Ice System

- This facility was constructed as an addition to the original facility in 2006-2007.
- Ice operational season: May 1 to Mar 1 (10 months) plus 2 weeks in April. The facility was reportedly designed to operate year round (12 months). The ice sheet was in place during our site visit.
- Overall, the ice system has been well maintained by the facility's operational and maintenance personnel. An operation log is maintained by the facility's staff. There is a dehumidification in this arena manufactured by BryAir. The air temperature in the facility is reportedly maintain around 45 to 50 F.

Refrigeration System. The arena is served by an *indirect* refrigeration system manufactured by Trane (R-Series Model RTAA2004XKO1B1D2BGKM, Serial No. U96C22643) and installed by Rink Tec International in 2006 (8 years-old, but package may be 10 years old). This is a commercial grade, R-22 direct expansion type system with two (2) Trane screw type compressors (113 RLA, LRA 396x2) and an air cooled condenser with fourteen (14) fans. The facility reportedly has a nominal capacity of 200 tons at air conditioning temperatures but would likely be closer to 100 tons at ice making temperatures of 17F. We have made attempts to verify the system information through the local Trane Company but have been unsuccessful so far. The unit is located outside the building and has been a noise concern at during the evening hours. The glycol temperatures are reportedly 15 F supply and 16 F return.

Rink Tec provided a separate pump package (0497-1100) and waste heat recovery package (0497-1100) for this system which is installed inside the adjacent mechanical room. The large circulation pump is manufactured by Aurora (06-209287, 341A BF 4x5x9B, 740 gpm@ 45 feet)

Cold glycol from the system is used for cooling the ice arena. The valve is typically only opened one click or setting during the season and more during the off season or for dry

floor events. Currently have problems with AC fans freezing up with the cold glycol. Boilers manufactured by Thermal Solutions are used for hot water and are not part of the refrigeration system.

The nominal tonnage on the system is 100 tons as confirmed by Rink Tec. The system reportedly operates one compressor most of the time. The second compressor is only needed during higher temperatures in the summer months. The copper refrigerant piping has been repaired several times on the outdoor refrigeration package. There was no information available on this system from the local Trane dealer.

- *Waste heat recovery system.* A waste heat recovery package was installed with this system for the subfloor heating system in Arena 2. There is no snow melt pit. All ice shavings are dumped outside the building.
- *Ice Rink Floor.* The rink floor is standard NHL size of 200 feet by 85 feet by 28 foot radii. Rink Tec confirmed the floor was installed with 6 inch mains and 6 inch reverse return headers and 1 inch poly pipe at 4 inches on center. The rink floor is reported to be in good condition.
- *Refrigeration room.* The refrigeration package is located outside the building. The existing mechanical room houses the pump and waste heat recovery packages. See Figures 1 and 2.
- *Life safety systems.* Because the refrigeration package is located outside, there is no leak detection system. We did not recall seeing an emergency power shunt trip for the refrigeration system as required per code. It was not noted when pressure relief valves on the systems were last replaced. Replacement is required every 5 years.
- *Ventilation system.* Not applicable since the unit is located outside.

Recommendations – Ice System

General

We recommend the City of Onalaska plan and budget for the capital improvements for the existing ice system in Omni Center as outlined in this section. Cost estimates are provided for each recommendation in the table at the end of this section.

The following options will be discussed in this section:

- Option 1:** Do nothing. Continue to maintain existing systems.
- Option 2:** New *indirect*, commercial grade, HFC based system.
- Option 3:** New *indirect*, industrial grade, HFC based system.
- Option 4:** New *indirect*, industrial grade, ammonia based system.
- Option 5a:** New *indirect*, carbon dioxide (CO₂) based system.
- Option 5b:** New *direct*, carbon dioxide (CO₂) based system.
- Option 6:** Combined, *indirect*, commercial grade HFC system to serve 2 ice rinks.
- Option 7:** Combined, *indirect*, industrial grade HFC system to serve 2 ice rinks.
- Option 8:** Combined, *indirect*, industrial ammonia system to serve 2 ice rinks.
- Option 9:** Combined, *indirect*, carbon dioxide (CO₂) system to serve 2 ice rinks.

Before the system options are discussed in more detail, a general discussion of seven (7) major factors or design considerations that the design team feels are most important to consider when evaluating ice system options is presented below. A general understanding of these factors, we believe, will aid the City in making the best possible selection for improving or replacing the existing ice systems. In a historically slow-changing industry, the somewhat recent updated environmental regulations and increasing energy costs have brought new innovations and technology to the ice rink industry.

1. **Selection of Primary Refrigerant:** R-22 has been the most popular refrigerant used in ice rink applications in recent history. However, with the signing of the Montreal Protocol, the United States Environmental Protection Agency (EPA) implemented the final rule of Section 604 of the Clean Air Act in July 1992, limiting the production and consumption of a set of chemicals known to deplete the stratospheric ozone layer as measured by their ozone depleting potential (ODP). R-22, which also has a high global warming potential (GWP), is one of these targeted chemicals.

Regulations on R-22 started taking effect in 2010 and will continue to significantly reduce the allowances to produce and import R-22 through 2020 when production and importation

in the U.S. will be halted all together. The U.S. EPA has proposed to significantly reduce allowances by 11-17% per year through 2014.

In addition to the current regulations on refrigerants that affect the ozone, there is now pressure to consider phasing-out refrigerants that contribute to global warming, as measured by their global warming potential (GWP). This affects mainly hydrofluorocarbons (HFCs) like those used in blended refrigerants such as R-507A, R407C, R-404A etc. The European Union has been on the leading edge of this change. The European Parliament passed legislation called the “F Gas Directive” that became effective in 2007, that requires very strict inspection of systems for leakage, rigorous record keeping, and mandatory training and certification on systems using HFCs. Most recently, the European Union has tighten these restrictions with an informal agreement in December, 2013. The changes include increasing taxes on HFC’s and providing incentives for using natural refrigerants.

Currently, the ice rink industry is caught in a transition period for refrigerants as new environmental regulations are implemented. Careful consideration and evaluation of the current refrigerant options should be made. The replacement refrigerants for HCFC refrigerants (i.e. R-22, etc.) are fairly new with a limited history and performance data in this application. The almost certain future regulations of HFC refrigerants (i.e. R-507, R407C, etc.), which are used in many of the R-22 replacement refrigerants, should be considered.

Large global companies, such as Coca Cola, are leading the charge to ban HFCs and use natural refrigerants such as CO₂, hydrocarbons and ammonia. Between 2004 and 2012, twenty four ice skating facilities in Europe have switched over to using CO₂ as the secondary refrigerant with ammonia as the primary. The first CO₂-based ice system in North America, and the first *direct* CO₂-based system in the world, opened in 2011 in Quebec, Canada with a second rink opening in Montreal in 2012.

Some other factors that should be considered when comparing primary refrigerants are listed below.

Location: it is important to consider local temperatures and weather patterns when selecting refrigerants. For example, CO₂ is more likely to be affected by ambient conditions than other refrigerants. CO₂ is most efficient in colder climates. The following is a partial list of CO₂ ice rinks that are currently in operation or under construction world-wide. Note that most if not all are located north of Montreal or Quebec, Canada:

Indirect CO₂ Systems

- Dollard-des-Ormeaux Civic Centre, Canada, 2012
- Stade de la Cite des Jeunes – Riviere-du-Loup, Qc, Canada. Complete Nov. 2013
- Lacroix-Dutil Sport Complex – St-Georges, Qc, Canada. Complete Nov. 2013
- Curling Roberval – Roberval, Qc, Canada. 3 sheets. Complete Nov. 2013
- Rosaire-Belanger Sports Center – Riviere-Bleue, Qc, Canada. Complete Nov 2013
- Cynthia-Coull Arena – Longueuil, Qc, Canada. Complete Nov. 2013

Direct CO₂ Systems

- Arena Marcel Dutil, Les Costeaux, Qc, Canada. 1 Sheet. 2010.
- Concordia College, Montreal, Canada. 1 sheet, 600 seats. Recently completed.
- St-Gedeon-de-Beauce Arena, Canada.

Isatis Sport Chambly, Chambly, Qc, Canada. 3 sheets, Completed July 2012.
 30+ direct CO2 or Ammonia/CO2 systems in Europe
 CO2 ice rink systems started in the year 2000 in Europe.

Efficiency: Compared to HFCs, ammonia and CO2 refrigerants are significantly more efficient, providing greater capacity at less horsepower. The winner between ammonia and CO2 is less clear. It has been shown that CO2 is most efficient in colder climates. As the ambient temperature rises above CO2's critical temperature of 86 F, the capacity and performance of the system drops.

A technical paper presented at the 2013 Industrial Refrigeration Conference and Exhibition presented by the International Institute of Ammonia Refrigeration (IIR) concluded that an indirect ammonia/glycol ice system with waste heat recovery is the best solution from an energy perspective when compared to a transcritical CO2 system and an ammonia/glycol system without waste heat recovery systems.

In contrast, a September 2012 Master of Science Thesis paper on "Carbon Dioxide in Ice Rink Refrigeration" by Tuyet Nguyen at the KTH School of Industrial Engineering and Management, Stockholm, Sweden showed through simulation that *direct* CO2 systems in ice rink applications is 30% lower in energy consumption than an *indirect* ammonia/brine system and 46% lower than and *indirect* CO2/brine system. CO2 systems also had the highest energy savings in regards to waste heat recovery potential. The study also concluded that the overall life cycle of a direct CO2 system is approximately 13% lower than an *indirect* ammonia/brine system. Finally, it was noted that a direct CO2 system has the high potential to be the next generation refrigeration system in ice rink applications but the transcritical working may restrict it to cooler climates.

In both cases, significant modeling was performed with numerous scenarios. It is likely that, as the rapid development of CO2 in the supermarket industry continues and further development of CO2 transcritical (both subcritical and supercritical states of operation) technology progress, greater system efficiencies will be realized in the near future.

Environment: Both ammonia and CO2 are naturally occurring refrigerants with zero ozone depleting potentials (ODP). The global warming potential (GWP) is zero for ammonia and one for CO2.

System Charge: The following table lists approximate system charges for the proposed ice systems with various refrigerants.

Table 1. Typical System Charge for Single Ice Sheet

Refrigerant	Charge (pounds)
Ammonia (indirect)	400-600
HFC (indirect)**	600-1,200
CO2 (indirect)	500-600
CO2 (direct)	5,000-7,500

** Omni Center systems

Composition: While ammonia and CO2 are natural or “pure” refrigerants, the HFC refrigerants replacing R-22 are “blended” refrigerants, meaning they are a mixture of several different, individual refrigerants. Since refrigerants have different properties, each one reacts differently to changes in its properties, such as pressure and velocity. When a leak occurs, varying amounts of each refrigerant may leak out, throwing the original mixture out of balance and potentially forcing the replacement of the entire charge, rather than simply adding the amount that was lost.

Safety: HFC refrigerants have the least safety concerns of the refrigerants that are discussed in this report, although they can be difficult to detect without a leak detection system. Ammonia on the other hand, is considered a high health hazard because it is corrosive to the skin, eyes and lungs. Exposure of 300 parts per million (ppm) is immediately dangerous to life and health. It can be explosive if released in an enclosed space with a source of ignition or if the vessel is exposed to fire. It is fortunate that ammonia has a low odor threshold (20 ppm) forcing people to seek relief at much lower concentrations, and because of its efficient composition, the system charge can be significantly reduced. Ammonia has mild flammability. There are also safety devices and systems available to help detect, signal, and prevent dangerous situations.

CO2 is a non-toxic, non-flammable and non-explosive gas. The one disadvantage of using CO2 in ice rink applications is the operating pressures are between pressures of 300 and 1800 psi compared to ammonia and HFC-based systems that operate at maximum pressures of 300-350 psi. The following is table comparing CO2 and ammonia safety limitations.

Table 2. Refrigerant Safety Limitations

Parameter	Ammonia	CO2
TLV (Threshold Limit Value)	25 ppm	5,000 ppm
STEL (Short Term Exposure Limit)	35 ppm	30,000 ppm
Revised IDLH (Immediate Dangerous to Life and Health)	500 ppm	40,000 ppm
LFL (Lower Flammability Limits)	15%	Non-flammable
GROUP (ASHRAE, 1992)	B2 Toxic	A1 Non-Toxic

Cost: The increasing environmental regulations are certainly impacting the price of R-22. As the industry experienced in March of 2012 when the price suddenly jumped overnight from \$7 per pound to \$13 per pound. The cost is currently \$18 to \$22 per pound in the Anchorage area. Replacement or “drop-in” refrigerants for R-22 are currently on the market and becoming more available at a cost of approximately \$15 to \$18 per pound. Ammonia and CO2 are currently \$1.50 per pound.

Additional Regulations:

Regulations on HFC refrigerants would be similar to the existing R-22 system. Ammonia is probably among the most regulated refrigerants. For example:

- Facilities containing 500 pounds of ammonia or more must be reported to the local emergency planning committee.
- Facilities containing over a threshold quantity (TQ) must submit a risk management plan to the U.S. Environmental Protection Agency. Typically TQ around 10,000 pounds.
- Losses of over 100 pounds must be reported to the National Response Center within 15 minutes.

Since CO2 is very new to the ice rink industry in North America, it will likely be regulated similar to an ammonia-based system. This assumption was used in this evaluation and in determining cost estimates.

Reporting a Release of R-22

With the existing aging R-22 direct refrigeration system at the facility it is important to understand the reporting requirement if a release occurs. There are requirements for governments, local authorities and facilities to report hazardous and toxic chemicals. For accidental releases of refrigerant a report must be filed under the Emergency Planning and Community Right-To-Know Act (EPCRA). For an ice system, the reporting trigger leak for CFC (e.g. R-12) or HCFC (e.g. R-22) type refrigerant is 35 percent annually. The Environmental Protection Agency, under the Clean Air Act (Section 608), also requires a report for the release of HCFC type refrigerants.

There are government regulations for repairing leaks in a refrigeration system. If during the course of a 12-month period, an appliance is leaking refrigerants beyond the trigger rate, the owner must take action to repair it. In general, the owner needs to make suitable repairs to the appliance within 30 days of finding out about the leak. Or, make plans to retrofit or retire the appliance within 30 days, and act on the plan within a year of the plan date.

Other Considerations

It is recommended that prior to making a change in the type of refrigerant that is used, that the proposed changes be reviewed in detail with the Owner's insurance carrier, the fire marshal, fire department and other interested parties.

2. Selection of Secondary Refrigerants: There are two main secondary refrigerants that are used for ice arena applications, **calcium chloride** (often referred to as "brine") and **ethylene glycol**. In some cases, although fairly rare, **propylene glycol** is used. A diluted ammonia solution is being used in Europe with increased frequency. A comparison of the secondary refrigerants provided below.

Efficiency: The efficiency of the secondary refrigerant is determined by a number of factors including thermal conductivity, specific heat, fluid flow characteristics, surface area, etc. Calcium chloride is a salt and water mixture. The chemical properties of the calcium chloride solution allow it to be pumped easier and to transfer heat at a higher rate than glycol. Therefore, the refrigeration equipment can be reduced in size. This leads to an overall system efficiency of 8% of 12% greater than ethylene glycol. Propylene glycol is less efficient than ethylene.

Environment: Since calcium chloride is a mixture of salt and water it poses little harm to the environment if a leak or spill occurs.

Ethylene glycol on the other hand will remain in high concentrations in the soils for long periods of time. Propylene glycol is less toxic than ethylene glycol. It is a food-based glycol that is much more environmentally friendly than ethylene glycol.

Corrosiveness: The disadvantage of using calcium chloride is that it can become corrosive when exposed to air. Systems using calcium chloride require more monitoring and maintenance. Once mixed with ammonia refrigerant, the corrosiveness increases substantially and potentially turns into a hazardous chemical. There are inhibitors that are mixed with the solution to aid in corrosion prevention and many rinks in North America have used this solution for 50+ years. Glycol on the other hand is not corrosive.

Typically, the types of heat exchangers available for use with CO2 systems are limited because of the higher operating pressures and usually require a glycol solution.

Cost: At a mixture of 21% concentration, calcium chloride is approximately \$1.00 per gallon compared to glycol, 35% concentration at \$9.00 per gallon. A new indirect ice system for this facility will require approximately 4,000 gallons of a secondary refrigerant.

Monitoring: A more extensive monitoring program will be required with calcium chloride than with glycol and generally requires sampling and testing once or twice a year.

3. Quality of Materials and Equipment: Balancing the initial cost of materials and equipment with energy savings can be difficult during the budgeting process of the project. For example, the phrases “commercial grade” and “industrial grade” systems, used throughout the report, refer to quality and operational efficiency differences in the refrigeration system.

Commercial grade systems are similar to supermarket type refrigeration systems, built on a rack package, and have a lower life expectancy (15-20 years). These systems typically use copper and PVC pipe in place of steel; disposable type compressors in place of rebuildable ones; direct expansion type heat exchangers in place of flooded type systems; etc.

Industrial grade systems are typically stick built on site, have a longer life expectancy (25-35 years), and are generally more efficient to operate.

For the **ice rink floor**, there are several different types of piping arrangements and designs to consider. For example, the traditional design of rink floor piping systems used clamped connections using hose clamps to connect the poly rink piping to a steel header system. Around 1995, the industry replaced the hose clamp connections with heat fused connections, similar to what the natural gas companies’ use for their pipelines. Fusion weld technology has eliminated the need or use of corrosive materials in the rink floor and provided the opportunity for a virtually seamless piping system that can extend the life of the rink floor from 25 years to over 40 years.

Another important choice is the selection between the use of steel pipe or polyethylene pipe. Polyethylene pipe is significantly less cost but does not transfer heat as efficiently. For most community based rinks, polyethylene pipe is the most cost effective pipe material. For larger venues, steel pipe systems are preferred.

4. **System Design:** A thorough design of the ice system is critical in maximizing its efficiency. Examples of design elements that should be thoroughly evaluated during the design phase include:

- *Lowering condensing temperatures.* Lowering the condensing temperature of the refrigeration system increases its efficiency but decreases the amount of waste heat that is generated.
- *Liquid cooler.* A liquid cooler is a large cooling system that is installed outside the ice arena and takes advantage of cold air temperatures and is most applicable in colder climates. Brine is circulated through the unit when the air temperature is lower than the ice temperature set point.
- *Compressor options.* Depending on the refrigerant selection, there is typically more than one option for the type of compressor that could be used including semi-hermetic, open drive or reciprocating, screw, etc. Continuous advances in technology are increasing the number of options available for ice rink applications.
- *Floating head pressure.* Allowing the head pressure of the system to vary based on ambient temperatures can provide a significant energy savings over a fixed setting. However, this results in less waste heat being available from the system and, in one recent study, has been shown to have an overall negative effect on energy savings.
- *Variable frequency drives.* The use of variable frequency drives on pumps and compressors can be beneficial not only for energy savings but control of ice temperatures as well.
- *Controls.* System control options range from very basic to a complete integrated building or energy management system.

Finding the balance between system and equipment options is key to a successful and efficient design.

5. *Energy Source:* As energy costs rise, alternative sources of energy, such as geothermal, natural gas, or co-generation, may look more attractive. Electricity still remains the most practical energy source for these types of systems. Stevens has designed several geothermal systems and can provide information on these systems if desired.

6. *Waste Heat Recovery:* Refrigeration systems generate a large amount of heat that is typically wasted into the atmosphere. A refrigeration system for a single ice sheet can typically generate enough waste heat to serve the subfloor heating system, snowmelt pit, the dehumidification system, and potentially preheat domestic water source or in-coming air. Historically, ice rink facilities have only captured and reused approximately 25% of the waste heat generated. It has now become normal design practice in the ice rink industry to capture 90% or more of the waste heat and reuse this "free energy" throughout the facility. While all ice rinks have a demand for heat during most, if not all of the season; the heat recovery systems are especially beneficial for arenas where the greatest heat is required for the longest period of time (e.g. northern U.S. and Canada). At least one recent major study shows that systems that recover waste heat and use it throughout the facility will operate much more efficiently than systems that do not.

Table 2. Estimated of Total Waste Heat Available

Units - MBH	Winter	Spring/Fall	Summer
1 sheet	410	550	700
2 sheets	800	1100	1500

Some uses for waste heat include:

Snow Melt Pit Operations (basic heat recovery): This is a very common use of the waste heat. In this option, waste heat is captured from the refrigeration process through the use of a heat exchanger which will reject the heat into a solution of glycol and water. The glycol solution is then pumped to a coil located in the snow melt pit. This process will eliminate or greatly reduce the use of other sources of heat such as natural gas or electric boiler systems.

This system will also eliminate the need to melt snow with hot water from the domestic water system which is often installed as a band-aid for a underperforming or broken system. A boiler can be connected to the waste heat system to provide snow melting when the ice plant is turned off.

Subfloor Heating System (basic heat recovery - frost prevention system): This is another very common use of waste heat. In this option, waste heat is captured from the refrigeration process through the use of a heat exchanger which will reject the heat into a solution of glycol and water. The glycol solution is then pumped through a system of pipes located beneath the ice sheet and insulation system. The subfloor heating system prevents the ground from freezing below the ice rink floor. Frost heave is a common problem with the *direct* Holmsten Ice Rink systems, especially for the earlier installations where the piping systems used thin walled pipe and hose clamps and had a high failure rate.

Domestic Hot Water Preheat (enhanced heat recovery): In this option high temperature waste heat is captured from the refrigeration process through the use of heat recovery water heaters. The water heaters are specifically designed to capture heat from the refrigeration systems. The system has proven to greatly reduce the domestic water heating needs of the facility.

Resurfacers Water Preheat (enhanced heat recovery): Most ice arena facilities have water heaters dedicated to providing the ice resurfacers with hot water for flooding and resurfacing the ice sheet. A waste heat recovery system could be installed that is similar to the domestic hot water preheat system described above.

Building Heat (enhanced heat recovery): Waste heat can be used to offset the heating needs of the building. Ice arenas require heat on nearly a constant basis. In this option waste heat is captured from the refrigeration process through the use of a heat exchanger which will reject the heat into a solution of glycol and water. The glycol solution is then pumped over to a heating coil located in an air handler unit. The air handler can run whenever the refrigeration system is operational. This process is attractive because it presents a nearly constant use for the waste heat.

This option is viable for most refrigerant systems and becomes even more viable for the CO2-based refrigeration system. The CO2-based refrigeration system operates at very high

pressures and the heat rejected from the system will be at correspondingly higher temperatures. It is much less expensive to use the waste heat when it is at the higher temperatures provided by the CO₂-based refrigeration system. However, waste heat from CO₂ systems can be limiting when ambient air temperatures are higher.

Exterior Snow Melting System: Waste heat can also be used for exterior snow melting use. Piping can be installed in sidewalks or ramps and waste heat from the ice plant can be used to keep the surfaces clean of snow and dry. This can be a good use of the waste heat but its use is limited to a small percentage of the total hours available in a year. Sullivan Arena originally had a similar system but it is no longer functional.

During the design phases of each project; the facility's layout and potential use for waste heat from the refrigeration system should be evaluated in depth to determine the benefit of each system.

7. **Sustainability:** Sustainability goes hand-in-hand with all the items in this list of considerations. Energy savings, through smart design practices, translates directly into the reduction of green house gas emissions such as carbon dioxide. There is an opportunity for the Borough to lower the carbon footprint of the ice arena by reducing or eliminating the use of HCFC refrigerants and increasing the use of waste heat from the refrigeration system.

Ice System Replacement Options - Recommendations

The following improvement options were evaluated in this study with the following recommendations:

- **Connect Arena 1 rink floor to Arena 2 refrigeration system:** Based on the limited information available and our experience with these systems, it appears that the existing refrigeration package was not designed to operate at the higher glycol flowrates required to serve to two ice sheets. The system currently serves Arena 2 with a flowrate of 740 gpm which is already on the low end of our recommendations for one sheet of ice. The system would need to be completely modified and equipment added to make accommodations to serve Arena 1. The pump package and piping would also need to be completely changed. It is not economically feasible to modify the existing Arena 2 refrigeration package to serve Arena 1.
- **Replace existing refrigeration systems.** Refrigerant and system improvement and replacement options are outlined in the sections below and apply to both Arena 1 and Arena 2. Each option should be carefully considered. The scope of work associated with each option and related costs are presented in the tables at the end of this section. We recommend a system capacity of approximately 100 tons if separate refrigeration systems are used and 160 tons if a common refrigeration system is used to serve both arenas. This is based on year round operation and maintaining consistent air quality and conditions.
 - The new refrigeration system should be designed to include these basic features; Flooded chiller-type system to maximize efficiency. However, plate-and-frame or plate-and-shell type chillers/heat exchangers may be desired or required depending on the availability of space and to reduce the refrigerant charge. The commercial grade options presented are based on direct expansion type chiller vessel.
 - Compressor of equal size to provide ease of rotation and staging.

- Rink pumps of equal size. One pump for backup.
- New evaporative type condensing system. The commercial grade options presented are based on air-cooled type condensing systems.
- Variable frequency drives (VFDs) on condenser fans.
- Premium efficiency motors.
- Control system to fully operate and monitor system remotely.
- All safety devices, systems, reliefs, controls and alarms.
- Basic heat recovery systems for subfloor and potential for future snow melt pit systems.
- Enhanced heat recovery systems if determined feasible during the design phase.

Option 1: Do Nothing – Maintain Existing System. The City may elect to keep operating the existing refrigeration systems. However, given the age of the system for Arena 1, size and life expectancy of these systems, several concerns should be evaluated:

- **On-going Maintenance and Equipment Costs:** The equipment and parts on the refrigeration system will continue to require replacement in the near term for both systems. It's similar to driving a vehicle with high miles; the longer it runs, the more costly it becomes to repair and the lower the return on investment. Major improvements, (e.g. compressor and condenser replacement, etc.) to the Arena 1 refrigeration system will continue to be required to extend its useful life.
- **Dependability:** The risk of problems occurring with the refrigeration system, and therefore, the risk of losing the ice sheet, increases as the system ages.
- **Cost and future availability of refrigerant:** As the system ages, the risk of a release of refrigerant increases. A single *indirect* commercial grade system, like the two at the Omni Center contain approximately 300-800 pounds of R-22 refrigerant with a replacement costs (refrigerant only) ranging from \$5,400 to \$17,000. As the phase-out date for R-22 approaches, the cost will continue to increase. Since 2005, the cost of R-22 refrigerant has risen 850%. Depending on the availability of R-22 when this occurs, the City may be forced to install a new blended refrigerant which will require additional modifications to the system.
- **Environmental:** The existing system uses R-22 refrigerant with a high global warming potential (GWP) rating. R-22 refrigerant is scheduled to be phased out of production in 2020.

Recommended improvements to the existing ice and refrigeration system under Option 1 include:

- **Replace relief valves on all vessels:** Relief valves are required on all high pressure vessels and should be replaced every five years. These are important safety devices and should be maintained on a regular basis. This work will include installing pressure reliefs on the pumper drums which were not typically installed.
- **Replace and install monitoring devices on the refrigeration system:** Quality monitoring devices such as pressure, temperature and pressure gauges are extremely important in monitoring and troubleshooting the system. These devices will allow the facility's staff to more accurately assess and adjust the performance of various systems and to pinpoint problem areas.
- **Replace dry cores.** These parts should be routinely replaced to maintain quality refrigerants in the system.

- **Life safety systems.** Life safety systems and devices such as refrigerant leak detection, signage, emergency deactivation devices for refrigeration system, emergency activation switches for ventilation systems, and signage are required by current codes.

Other recommended improvements to the existing ice and refrigeration system under Option 1 include:

- **Install waste heat recovery systems.** It is recommended that modifications be made to install a snow melt pit in one or both of the arenas. See previous discussion on options.
- **Snow melting pits.** Currently the ice shavings are dumped outside which creates maintenance and ice quality problems as dirt and other debris is tracked on to the ice sheets. Indoor snow melt pits solve this problem and other potential environmental concerns.
- **Flood water systems for resurfacing:**
 - **Water Quality.** Water quality has a direct relationship with energy use, performance and aesthetics. Purer water takes less energy to freeze, is more dense and therefore, provides greater structural integrity. The denser the ice, the faster it plays. The players want to be on the surface and not in the ice so ice density is very important. It's possible to lessen the thickness of the ice by a quarter inch or more with using clean water. This in turn saves energy. The Department of Energy found that for every 1-inch of ice thickness required, the refrigeration system demand increases by 8 to 15 percent. Typical ice thickness is 1.5 inches.
 - **Water Temperature.** There is a general rule of thumb that states a for every one degree (F) rise in ice surface temperature, there is an energy savings of 4 to 6 percent on the refrigeration system. Ice temperatures can typically be raised by 2 to 4:F higher using treated water over untreated water for a total over all energy savings of 8 to 12 percent depending on programming, weather, length of season, etc. The traditional standard temperature for flood water is 120-165 F. However, some facilities use temperatures as low as 80-90 F.
 - **Water Treatment.** A common water treatment system that is used in ice arena facilities today (mainly collegiate and NHL facilities) is based on a reverse osmosis (RO) process. Typical water hardness readings between 50-80 ppm (3 to 5 grains) are desired. For water with readings higher than this, treatment is recommended. The Brett Memorial Ice Arena currently uses an RO treatment system.

Option 2: New indirect, commercial grade system. This option includes replacing each refrigeration system with a new commercial grade, direct expansion chiller, blended HFC refrigerant, semi-hermetic compressors, and pumps, similar to the existing refrigeration systems at the Omni Center.

Option 3: New indirect industrial grade system. This option includes replacing each refrigeration system with a new industrial grade flooded chiller, new blended HFC refrigerant, reciprocating compressors, and pumps.

Option 4: Same as Option 3 but replace HFC with ammonia. This option is the same as Option 3 but replaces the use of a new blended HFC type refrigerant with ammonia refrigerant. This option typically requires more extensive modifications to the refrigeration room to meet safety and code requirements.

Option 5: Carbon Dioxide (CO₂) Refrigeration System. Continuing the discussion from the refrigerant discussion earlier in the report, the use of CO₂ refrigerant will likely be the next substantial “innovation” in the ice rink industry. Currently European countries are using CO₂ as a secondary refrigerant in more than thirty ice rink applications. Several rinks in Canada just recently installed *direct* CO₂ system. CO₂ applications in the U.S are rapidly increasing mainly in the supermarket industry. However the selection of equipment is limited and the regulatory codes are still under development.

The use of carbon dioxide as the primary refrigerant changes the type of refrigeration equipment presented previous options. CO₂ systems will be provided on equipment or skid packages as shown in the photographs in this section. The existing ice equipment room will likely be able to accommodate a system with the required capacity for this facility but space requirements need to be confirmed. Because this is a new technology and application, there is fairly limited operation and cost information on CO₂ based ice systems.

The most efficient CO₂ system is the *direct* system where CO₂ is circulated throughout the rink floor. This type of system has been successfully installed, in the past year, in a facility in Montreal, Canada. A *direct* system was not considered feasible for the Omni Center since it would require replacing both ice rink floors, is very new technology applied to ice rinks, and has limitations on the amount of refrigerant that can be located in occupied spaces (i.e. arena space) as regulated by ASHRAE 15 and IMC 2009.

It is recommended that a CO₂ refrigerant based ice systems be thoroughly evaluated. If the City is interested in pursuing the use of CO₂ refrigerant, we encourage a site visit to at least one facility that is currently using this type of system along with in-depth discussion with the facility’s management and operation personnel and manufacturer’s representatives. Possible locations include:

- Quebec and Montreal Canada – CO₂ based ice systems
- Sweden – direct Ammonia/CO₂ ice systems and CO₂ equipment manufacturers.

A *direct* CO₂ would provide maximum energy efficiency while an *indirect* CO₂ system would be lower in capital costs but would operate less efficiently.

Option 5a: Carbon Dioxide (CO₂), Indirect Refrigeration System.

Option 5b: Carbon Dioxide (CO₂), direct Refrigeration System. This option was not considered since it would require replacing the existing ice rink floors.

It is strongly recommended that representatives from the CO₂ manufacturers/suppliers be invited to City to present on their systems and that visits be scheduled to facilities that are operating CO₂ systems as previously. Cost estimates for CO₂ based ice systems are not included in this report and is not a recommended option for the City at this time.

Option 6: New Combined Commercial Grade Refrigeration System using HFC Refrigerant. This system option includes replacing both refrigeration systems with a new common refrigeration system that serves both ice sheets.

Option 7: New Combined Industrial Grade Refrigeration System using HFC Refrigerant. This system option includes replacing both refrigeration systems with a new common refrigeration system that serves both ice sheets.

Option 8: New Combined Industrial Grade Refrigeration System using Ammonia. This system option includes replacing both refrigeration systems with a new common refrigeration system that serves both ice sheets.

A common refrigeration system that includes both ice sheets offers advantages such as lower life cycle costs, higher efficiency, and lower operation and maintenance costs compared to two separate single ice systems. A recent detailed energy study for the renovation of a two-sheet ice arena in the Twin Cities area identified the following:

- A new combined *indirect* ammonia/brine system replacing the two existing individual systems (R-22 *direct* and R-22 *indirect* systems) results in 12% decrease in electrical energy use.
- New combined ammonia system in-place-of two new individual *indirect* R-22 *indirect* industrial grade systems results in 27% decrease in electrical energy use.
- New combined *indirect* ammonia/brine system in-place-of two new individual *indirect* R-507 commercial grade systems results in 58% decrease in electrical energy use.

While the major advantage of a combined or common refrigeration system serving multiple ice sheets is an increase in efficiencies; a disadvantage is that a major problem with the refrigeration system could cause both ice sheets to be out of service. However, this can be addressed by designing back-up systems where deemed cost effective.

Another advantage is that a common ice system could be installed in phases. For example, if the new refrigeration room would be located in Arena 1, that system could be taken down while the new refrigeration system was installed. Once Arena 1 was placed on-line, Arena 2 could be taken down and connected to the new refrigeration system.

Option 9: New Combined Indirect Refrigeration System using CO2. This system option includes replacing both refrigeration systems with a new common refrigeration system that serves both ice sheets. Cost estimates for CO2 based ice systems are not included in this report and is not a recommended option for the City at this time.

Ice Rink Floor - Recommendations

Both of the existing ice rink floors are indirect type systems and can be used with any of the refrigeration system replacement options described above. There are reportedly concerns with the ice quality in Arena 1. Increased refrigeration capacity and flow rates may improve these conditions. As-built information was not available so an evaluation of the existing ice rink floors and installation was not performed. Otherwise, an evaluation of the rink floor may be required.

Refrigeration Room – Recommendations

The following are recommended improvements:

- *Arena 1 Refrigeration room.* With an area of approximately 300 square feet, the existing refrigeration room is not large enough to house a new refrigeration system. Additional space will be required. Reconfiguration of the existing drive isle or current Avalanche locker room should be evaluated to provide the space required for a new refrigeration system. See Figures 1 and 2.
- *Arena 2 Refrigeration room.* The existing refrigeration system is located outside the building. It is strongly recommended that the facility be expanded to provide a refrigeration room for this equipment, if the system will remain in this location.
- *Ventilation system for refrigeration room.* Provide new ventilation system for the refrigeration room (existing Arena 1, new Arena 2 room or new Arena 1 room) in compliance with IMC 2009. The new ventilation system will include two (2) exhaust fans. One exhaust fan will operate continuously to provide general exhaust and cooling for the refrigeration equipment. The second exhaust fan will operate upon detection of refrigerant leak by the refrigerant leak detector. An outside air intake duct with filters will be installed to provide make-up air for the exhaust system.
- *Waste heat recovery systems.* Heat recovery should be incorporated in the design of the new system. In addition to the standard heat reclaim systems for the subfloor heating and snow-melt pit systems, the waste heat should be used for preheating resurfacer water and can be incorporated in the hydronic heating system to provide supplemental heating and reduce boiler system downtime. The amount of waste heat available will depend on what type of refrigeration system is selected.
- *Miscellaneous plumbing improvements.* It is likely that the existing floor drain(s), water lines, etc. in the existing refrigeration system will need to be modified to accommodate the new refrigeration system. A new eye wash and shower station will likely be required as well if ammonia refrigerant is selected.

Electrical Systems – Recommendations

The following are recommended improvements:

- *Arenas 1 and 2 electrical services:* The existing electrical services may need to be increased in size to serve a new, larger refrigeration system either a new single system or new common system. The electrical systems were not evaluated in this study.
- *Lighting modifications and miscellaneous electrical.* The existing lighting systems in the refrigeration room(s) will likely require modifications or upgrades as well as adjusting or adding new receptacles, etc. to accommodate the new refrigeration system(s). Lighting and electrical would be required for a new refrigeration room in Arena 2.

Cost Estimates – Omni Center

The following tables outline cost estimates for each ice system improvement option and other recommended improvements.

- Option 1 – Do-Nothing and maintain the existing ice system.

Table 3. Arena 1 Option 2–Minimum Improvements to Ex. System

Item	Cost
Replace refrigerant relief valves	\$7,000
Replace monitoring devices (temp. and press.)	\$4,000
Replace dryer cores – typical maintenance	\$3,000
Replace 2 compressors	\$55,000
Replace air-cooled condenser system(integrated w/system)	\$0
New life safety systems.	\$5,000
Subtotal of estimated construction costs	\$74,000
Estimate, design and constr. contingency (20%) ¹	\$14,800
Total estimated construction costs	\$88,800
Engineering, legal, and administrative (15%) ¹	\$13,400
Total estimated project costs	\$102,200

1. 1. See explanation in Section 2 of this report

Table 4. Arena 2 Option 2–Minimum Improvements to Ex. System

Item	Cost
Replace refrigerant relief valves	\$7,000
Replace monitoring devices (temp. and press.)	\$4,000
Replace dryer cores – typical maintenance	\$3,000
Replace 2 compressors	\$50,000
Replace air-cooled condenser system	\$30,000
Subtotal of estimated construction costs	\$94,000
Estimate, design and constr. contingency (20%) ¹	\$18,800
Total estimated construction costs	\$112,800
Engineering, legal, and administrative (15%) ¹	\$16,900
Total estimated project costs	\$129,700

1. 1. See explanation in Section 2 of this report

Table 5. Other Improvements

Item	Cost
New snow melt pit (excavation, concrete, coil, equipment, etc.) Location to be determined (cost per pit)	\$35,000
Water treatment system (cost per system)	\$25,000
Basic heat recovery systems (cost per system)	\$30,000
Subtotal of estimated construction costs	\$90,000
Estimate, design and constr. contingency (20%) ¹	\$18,000
Total estimated construction costs	\$108,000
Engineering, legal, and administrative (15%) ¹	\$16,000
Total estimated project costs	\$124,000

1. 1. See explanation in Section 2 of this report

- Options 2 through 8. Cost estimates for improvement Options 2 through 6 are presented in the following table. Cost estimates for a CO2-based ice system, Options 5a, 5b, and 9, are not included in this section. A CO2 based option is not recommended for this facility at this time due to the cost and new technology. Note that Options 2, 3, and 4 are for single refrigeration systems so the cost should be multiplied by two if both refrigeration systems were replaced.

Table 6. Omni Center Ice System Options - Cost Estimate Summary

Item	Cost Estimate ¹					
	Single System (Multiple by 2 rinks for total cost)			Combined System		
	Option 2 New	Option 3 New	Option 4 New	Option 6 New	Option 7 New	Option 8 New
Refrigerant type	New HFC	New HFC	Ammonia	New HFC	New HFC	Ammonia
Grade of System	Commercial	Industrial	Industrial	Commercial	Industrial	Industrial
Demo of existing Refrig. system	\$8,000	\$8,000	\$8,000	\$15,000	\$15,000	\$15,000
New refrigeration system	\$350,000	\$475,000	\$575,000	\$575,000	\$750,000	\$850,000
Basic waste heat recovery system for subfloor system.	\$20,000	\$20,000	\$25,000	\$30,000	\$35,000	\$35,000
Enhanced waste heat recovery – preheat water ⁴	Not available	\$70,000	\$70,000	\$60,000 Limited	\$125,000	\$125,000
Arena 1 – New refrigeration room (600 SF x \$125/SF) including plumbing, lights, etc. ³	N/A	N/A	N/A	\$75,000	\$75,000	\$75,000
Arena 1 – 300 SF expansion of existing refrigeration room (basic) or Arena 2 – add weatherproof structure for new refrigeration system	\$25,000	\$25,000	\$25,000	N/A	N/A	N/A
New transmission mains from Arena 1 to rink floor 2	N/A	N/A	N/A	\$25,000	\$25,000	\$25,000
New ventilation system in Arena 1 refrig. room	\$25,000	\$25,000	\$25,000	\$35,000	\$35,000	\$35,000
Improvements to existing electrical service	N/A	TBD	TBD	TBD	TBD	TBD
Subtotal of estimated construction costs	\$428,000	\$623,000	\$728,000	\$740,000	\$1,060,000	\$1,160,000
Estimate, design and constr. contingency (20%) ¹	\$85,600	\$124,600	\$145,600	\$148,000	\$212,000	\$232,000
Total estimated construction costs	\$513,600	\$747,600	\$873,600	\$888,000	\$1,272,000	\$1,392,000
Engineering, legal, admin., finance (15%) ¹	\$77,000	\$112,000	\$131,000	\$133,200	\$190,800	\$208,800
Total estimated project cost	\$590,600	\$859,600	\$1,004,600	\$1,021,200	\$1,462,800	\$1,600,800
Expected Useful Life – Refrigeration System (yrs)	15-20	25-30	25-30	15-20	25-30	25-30
Adjusted Costs for 2015²	\$614,200	\$894,000	\$1,044,800	\$1,062,000	\$1,521,300	\$1,664,800

1. See general explanation of costs in report. 2. Applied escalation costs of 4% per year. 3. A new refrigeration room for Arena 2 was not included in the cost estimates. 4. Under Option 6, the enhanced heat recovery is "limited" because it is a commercial based system that generates less waste heat. For the same reason, no additional waste heat would be available under Option 2.

Section 4
Project Schedule

PROJECT SCHEDULE

General

The improvements should be planned well in advance of the desired construction time so equipment and materials can be ordered and delivered to the site. Minimizing disruption to each of the facilities' busy event schedules and user groups will be a key element to the success of this project.

We understand the City will use the information in this study to determine the scope of the project(s). Once the project scope and funding sources have been identified, a detailed schedule can be developed.

Section 5
Financial Assistance Programs

FINACIAL ASSISTANCE PROGRAMS

There are several financial programs that have traditional been used on ice rink renovation projects. The local utility companies should be consulted to determine what programs are available and apply to this project(s). They may include:

1. Engineering Assistance Study Program.
2. Rebate Programs. Rebate programs are often available through utilities for many energy improvement measures that can be performed such as lighting replacement, motor replacement, installation of variable frequency drives, improving insulation systems, etc. Custom rebate programs are also available and may apply to the refrigeration system replacement depending on the type of system selected. The utilities should be contacted to identify possible rebates prior to starting any improvement project relating to energy savings. Some rebates require preapproval prior to purchasing and installation.

Alternate Project Delivery Method

Another delivery and funding option the City may consider for this project is through guaranteed-savings contracts. Stevens has teamed with several Energy Service Organizations to successfully complete ice rink projects for other municipalities.

If the City is interested in learning more about this delivery method we would be happy to discuss it in more detail with you.

Appendix

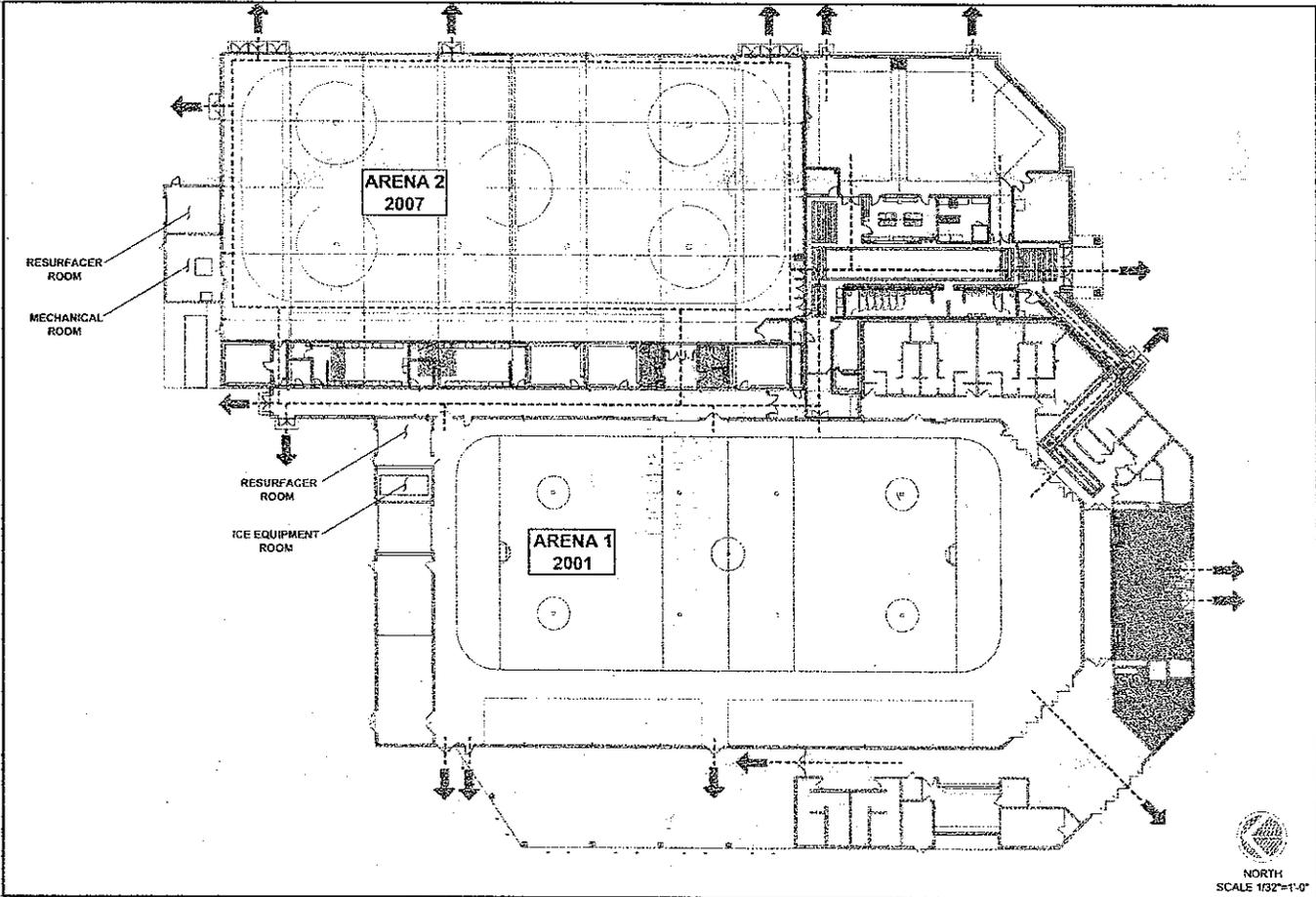
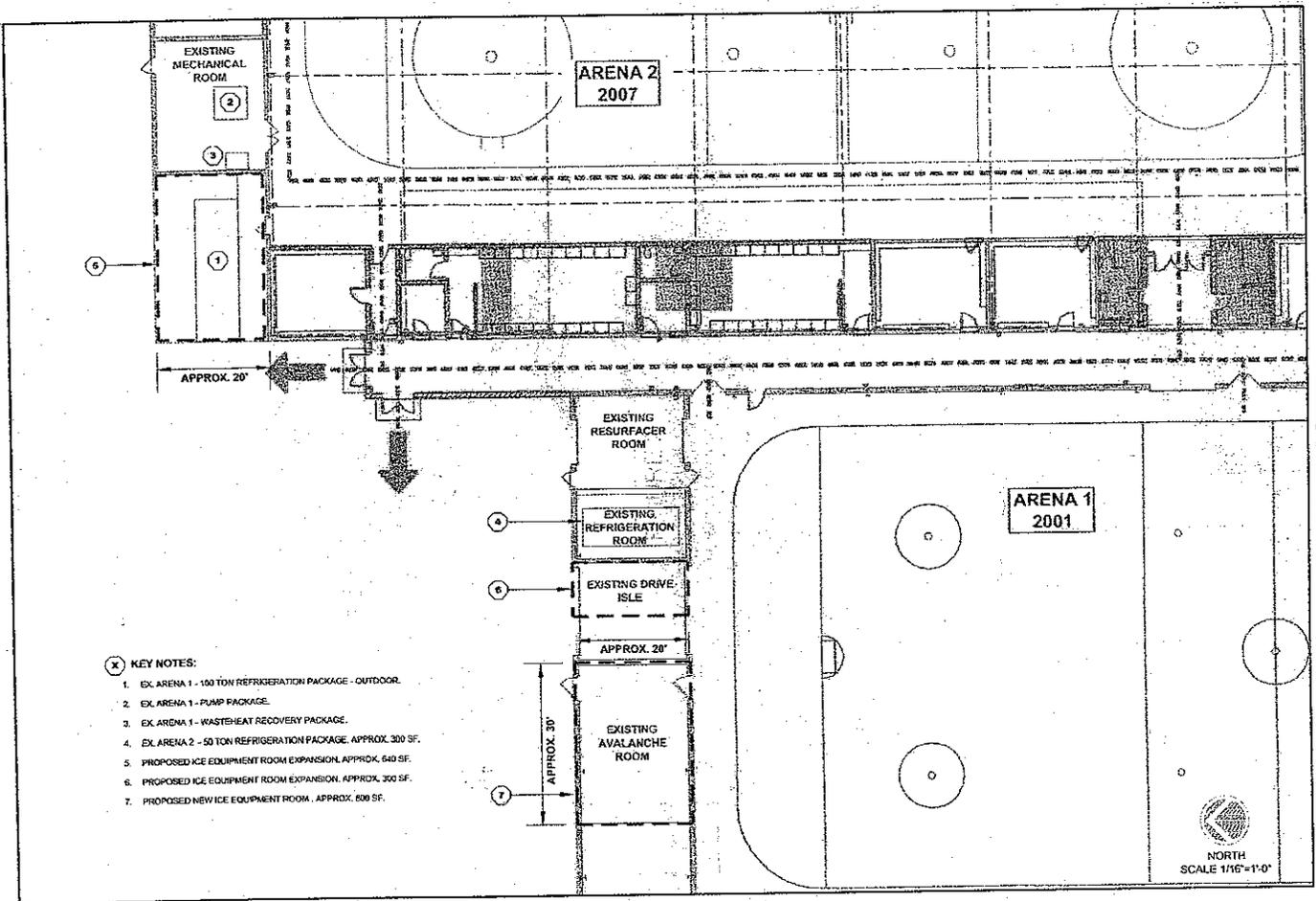


FIGURE 1
ONALASKA OMNI CENTER, ONALASKA, WI
ICE SYSTEM EVALUATION
FACILITY OVERVIEW



- (X) KEY NOTES:
1. EX. ARENA 1 - 100 TON REFRIGERATION PACKAGE - OUTDOOR.
 2. EX. ARENA 1 - PUMP PACKAGE.
 3. EX. ARENA 1 - WASTEHEAT RECOVERY PACKAGE.
 4. EX. ARENA 2 - 50 TON REFRIGERATION PACKAGE, APPROX. 300 SF.
 5. PROPOSED ICE EQUIPMENT ROOM EXPANSION, APPROX. 640 SF.
 6. PROPOSED ICE EQUIPMENT ROOM EXPANSION, APPROX. 300 SF.
 7. PROPOSED NEW ICE EQUIPMENT ROOM, APPROX. 600 SF.

FIGURE 2
 ONALASKA OMNI CENTER, ONALASKA, WI
 ICE SYSTEM EVALUATION
 REFRIGERATION SYSTEM



NORTH
 SCALE 1/16"=1'-0"

STAFF REVIEW SUMMARY

CITY OF ONALASKA BOARD OF PUBLIC WORKS

November 4, 2014

Agenda Item: #7

Project/Item Name: STH 35 Utility installation

Location: STH 35 – Poplar Street to Riders Club Road

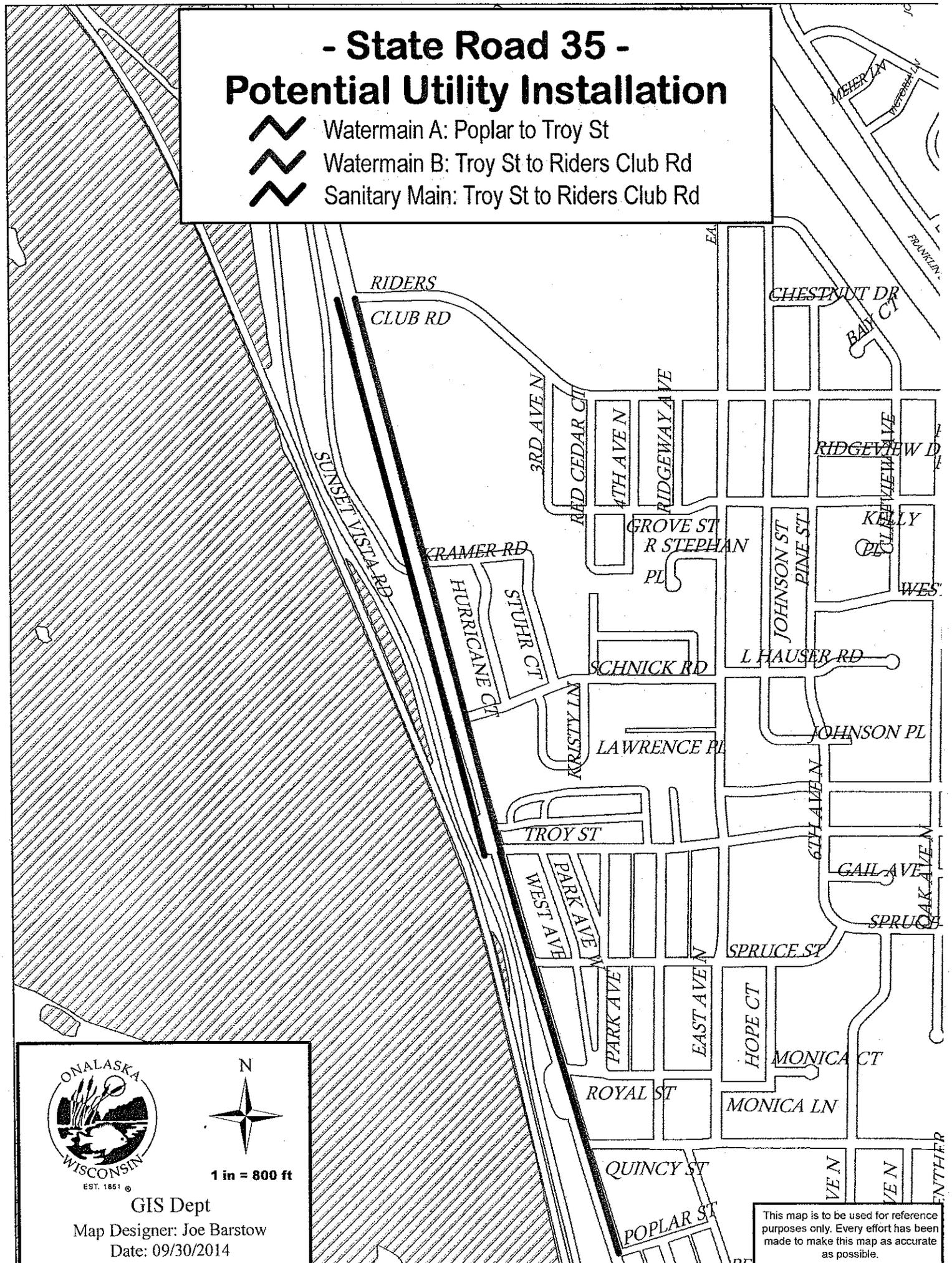
Requested Action: Discussion on possible Utility installation

Staff Report/Description: The Wisconsin Department of Transportation will be reconstructing STH 35 from Poplar Street to CTH OT in 2016. Extension of City water and sanitary sewer could be included within this project.

Attachments: Map, possible assessment areas and project estimate

- State Road 35 - Potential Utility Installation

-  Watermain A: Poplar to Troy St
-  Watermain B: Troy St to Riders Club Rd
-  Sanitary Main: Troy St to Riders Club Rd



1 in = 800 ft

GIS Dept
Map Designer: Joe Barstow
Date: 09/30/2014

This map is to be used for reference purposes only. Every effort has been made to make this map as accurate as possible.



ENGINEERING
DEPARTMENT
City of Onalaska

415 Main Street
Onalaska, Wisconsin 54650
(608) 781-9537
Fax (608) 781-9506

JOB _____ JOB # _____
SHEET NO. 1 OF 3
CALCULATED BY CJH DATE 7-21-14
CHECKED BY _____ DATE _____
SUBJECT _____

STH 35 ESTIMATE - TROY TO RIDERS CLUB

SANITARY SEWER - TROY TO RIDERS CLUB

2,000 LF 10" ϕ A.D. 12'-18' @ \$50 = \$100,000.-

1,700 LF 8" ϕ A.D. 12'-18' @ \$40 = \$68,000.-

12 MH'S EA A.D. 12'-18' @ \$5,000 = \$60,000.-

25 WYES EA @ \$150 EA = \$3,750.-

2,500 LF 4" LATERAL @ \$30/LF = \$75,000

\$366,750

+ 20% CONTINGENCY

\$368,000



ENGINEERING
DEPARTMENT
City of Onalaska

415 Main Street
Onalaska, Wisconsin 54650
(608) 781-9537
Fax (608) 781-9506

JOB _____ JOB # _____
SHEET NO. 2 OF 3
CALCULATED BY CJH DATE 7-21-14
CHECKED BY _____ DATE _____
SUBJECT _____

STH 35 ESTIMATE

WATER

PART 'A' → 8" Ø WATER - POPLAR TO TROY

2,800 LF 8" Ø D.I.P. @ \$55/LF. \$154,000.-

5 EA CONNECTIONS (INCLUDES \$5,000/EA = \$25,000
= SUB, TEE, PIPE, ETC.)

8 EA VALVES w/ BOX 8" Ø @ \$3,000/EA = \$24,000

9 EA FIRE HYDRANTS w/ VALVE & LEAD
@ 7,000/EA = \$63,000

\$248,000.-

*20% CONTINGENCY

\$298,000.-



ENGINEERING
DEPARTMENT
City of Onalaska

415 Main Street
Onalaska, Wisconsin 54650
(608) 781-9537
Fax (608) 781-9506

JOB _____ JOB # _____
SHEET NO. 3 OF 3
CALCULATED BY CJH DATE 7-21-14
CHECKED BY _____ DATE _____
SUBJECT _____

STH 35 ESTIMATE

WATER

PART B → 10" ϕ WATER - TROY TO RIDERS CLUB

3,800 LF 10" ϕ D.I.P. @ \$68/LF \$258,400.-

4 EA CONNECTIONS @ \$5,000/EA = \$20,000.-

10 EA VALVES w/BOX 10" ϕ @ \$4,000/EA = \$40,000.-

12 EA FIRE HYDRANT @ 7,000/EA = \$84,000.-

\$402,400

+ 20% CONZ. NGENCY

\$483,000.-

STAFF REVIEW SUMMARY

CITY OF ONALASKA BOARD OF PUBLIC WORKS

November 4, 2014

Agenda Item: #8

Project/Item Name: Riders Club Road, Braund Street and PH
pavement replacement

Location: Riders Club Road, Braund Street & PH

Requested Action: Approval of State/Municipal agreements

Staff Report/Description: The City of Onalaska received STP-U
funding for these projects. Project design is
anticipated in 2015/2016 with construction in
2017

Attachments: State/Municipal agreements



Division of Transportation System Development
Southwest Region
2101 Wright Street
Madison, WI 53704-2583

Scott Walker, Governor
Mark Gottlieb, P.E., Secretary
Internet: www.dot.wisconsin.gov

Telephone: (608) 246-5361
Facsimile (FAX): (608) 246-3819

E-mail: michael.erickson@dot.wi.gov

October 14, 2014

JARROD HOLTER
CITY OF ONALASKA - CITY ENGINEER
415 MAIN STREET
ONALASKA, WI 54650

Mr. Holter:

Enclosed for signature are the project agreements for the following projects in 2013 – 2018 approved STP-Urban (50-200K) program.

ID: 5991-02-53/54/55

City of Onalaska, Braund Street & CTH PH
Limits: STH 16 to CTH PH
Limits: Braund Street to CTH PH
City of Onalaska, La Crosse County

ID: 5991-02-56/57

City of Onalaska, Riders Club Road
STH 35 to Sand Lake Road (CTH S)
City of Onalaska, La Crosse County

Please print and sign four (4) copies of the agreement. Please return four (4) copies of the agreement with original signatures to me by December 5, 2014 or earlier.

Note the cost ratios for each project phase and any federal/state funding caps which may exist. The Municipality is responsible for the entire cost of non-participating items as well as any costs which exceed the funding caps, if applicable.

An agreement is not considered fully approved unless it has been approved by both the Municipality and the State, and it is not considered fully executed unless a fully approved copy has been returned to the Municipality.

The Municipality and its consultants (or any other parties hired by the Municipality) ***MUST NOT*** begin work on a federal/state-funded project phase until the State has provided notice of project authorization. Any such work would be ineligible for federal/state funding. Authorization will coincide with the currently scheduled year that is stated in the agreement.

If you have any questions regarding the agreement or need an extension to the submittal date, please call me at (608) 246-5361 or e-mail michael.erickson@dot.wi.gov.

Sincerely,

Michael Erickson

Michael Erickson
Local Programs Manager – SW Region



**STATE/MUNICIPAL AGREEMENT
FOR A STATE- LET URBANIZED
AREA STP-URBAN PROJECT**

Program Name: STP-Urban

Population Group: 50,000-200,000

Sub-program #: 206

Date: October 10, 2014

I.D.: 5991-02-53/54/55

Road Name: Braund Street & CTH PH

Limits: STH 16 to CTH PH

Limits: Braund Street to Theater Road

County: La Crosse

Roadway Length: .39 miles

Functional Classification: Urban Collector

Project Sponsor: City of Onalaska

Urbanized Area: La Crosse MPO

The signatory, City of Onalaska, hereinafter called the Municipality, through its undersigned duly authorized officers or officials, hereby requests the State of Wisconsin Department of Transportation, hereinafter called the State, to initiate and effect the highway or street improvement hereinafter described.

The authority for the Municipality to enter into this agreement with the State is provided by Sections 86.25(1), (2), and (3) and Section 66.0301 of the Statutes.

NEEDS AND ESTIMATE SUMMARY:

All components of the project must be defined in the environmental document if any portion of the project is federally funded. The Municipality agrees to complete all participating and any non-participating work included in this improvement consistent with the environmental document. No work on final engineering and design may occur prior to approval of the environmental document.

Existing Facility - Describe and give reason for request: The existing Braund Street roadway is 2 lanes with 12' wide urban cross section constructed of asphalt pavement with curb and gutter. The pavement is in poor condition and was last improved in 1983. The existing CTH PH roadway is 2 lanes with 12' wide urban cross section constructed of asphalt pavement with curb and gutter. The pavement is in poor condition and was last improved in 1983. There are no federal-aid eligible structures within the project limits of either facility. There are existing sidewalks, but no existing bicycle accommodations. Requesting a reconstruction project to improve aging asphalt roadway, including spot replacement of various areas of curb and gutter, and ADA compliant sidewalk ramps.

Proposed Improvement - Nature of work: A Reconstruction project is proposed. The project will be 2,600' in length with an urban cross section consisting of an asphalt roadway of variable width. On street bike accommodations are included with this project. Approximately 300' of sidewalk would be installed on the CTH PH section of the project to complete sidewalk connectivity, including retaining walls which are needed for sidewalk installation.

Describe non-participating work included in the project and other work necessary to completely finish the project that will be undertaken independently by the Municipality. Please note that non-participating components of a project/contract are considered part of the overall project and will be subject to applicable Federal requirements: Water and Sanitary sewer adjustments.

The Municipality agrees to the following 2013 - 2018 Urbanized Area STP-Urban project funding conditions:

Project design and design oversight costs are funded with 100% Municipal funds. Federal funding for participating construction costs are funded with 56% federal funding, up to a maximum of \$356,652 for all federally-funded project phases when the municipality agrees to provide the remaining 44% for participating construction, and all funds in excess of the \$356,652 federal funding maximum will be 100% Municipal, in accordance with the STP-Urban program guidelines for projects in urbanized areas. Non-participating costs are 100% the responsibility of the municipality. Any work performed by the Municipality prior to federal authorization is not eligible for federal funding. The Municipality will be notified by the State that the project is authorized and available for charging.

This project is currently scheduled in State Fiscal Year 2018. In accordance with the State's sunset policy for Urbanized Area STP Urban projects, the subject 2013-2018 Urbanized Area STP-Urban improvement must be constructed and in final acceptance within six years from the start of State Fiscal Year 2015, or by June 30, 2020. Extensions may be available upon approval of a written request by or on behalf of the Municipality to WisDOT. The written request shall explain the reasons for project implementation delay and revised timeline for project completion.

The dollar amounts shown in the Summary Funding Table below are federal maximum amounts unless explicitly identified otherwise. The final Municipal share is dependent on the final Federal participation, and actual costs will be used in the final division of cost for billing and reimbursement.

PHASE	SUMMARY OF COSTS				
	Total Est. Cost	Federal Funds	%	Municipal Funds	%
ID 5991-02-53					
State Review - Design	\$50,000		0%	\$50,000	100%
ID 5991-02-54		\$171,250 Max			
Participating Construction	\$265,361	\$148,850	56%	\$116,511	44% + BAL
Non-Participating	\$0	\$0	0%	\$0	100%
State Review - Delivery	\$40,000	\$22,400	56%	\$17,600	44% + BAL
ID 5991-02-55		\$185,402 Max			
Participating Construction	\$289,000	\$161,840	56%	\$127,160	44% + BAL
Non-Participating	\$0	\$0	0%	\$0	100%
State Review - Delivery	\$43,722	\$23,562	56%	\$20,160	44% + BAL
Total Est. Cost Distribution	\$688,083	\$356,652	MAX	\$331,431	N/A

Current federal funding cap is \$356,652 for all federally-funded project phases, the participation percentage may change over the life of the project.

This request is subject to the terms and conditions that follow (pages 3 – 7) and is made by the undersigned under proper authority to make such request for the designated Municipality and upon signature by the State and delivery to the Municipality shall constitute agreement between the Municipality and the State. No term or provision of neither the State/Municipal Agreement nor any of its attachments may be changed, waived or terminated orally but only by an instrument in writing executed by both parties to the State/Municipal Agreement.

Signed for and in behalf of the City of Onalaska: (please sign in blue ink.)

Name	Title	Date
------	-------	------

Signed for and in behalf of the State:

Name	Title	Date
------	-------	------

GENERAL TERMS AND CONDITIONS:

1. All projects must be in an approved Transportation Improvement Program (TIP) or State Transportation Improvement Program (STIP) prior to requesting authorization.
2. Work prior to federal authorization is ineligible for federal funding.
3. The Municipality, throughout the entire project, commits to comply with and promote all applicable federal and state laws and regulations that include, but are not limited to, the following:
 - a. Environmental requirements, including but not limited to those set forth in the 23 U.S.C. 139 and National Environmental Policy Act (42 U.S.C. 4321 et seq.)
 - b. Equal protection guaranteed under the U.S. Constitution, WI Constitution, Title VI of the Civil Rights Act and Wis. Stat. 16.765. The municipality agrees to comply with and promote applicable Federal and State laws, Executive Orders, regulations, and implementing requirements intended to provide for the fair and equitable treatment of individuals and the fair and equitable delivery of services to the public. In addition the Municipality agrees not to engage in any illegal discrimination in violation of applicable Federal or State laws and regulations. This includes but is not limited to Title VI of the Civil Rights Act of 1964 which provides that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." The Municipality agrees that public funds, which are collected in a nondiscriminatory manner, should not be used in ways that subsidize, promote, or perpetuate illegal discrimination based on prohibited factors such as race, color, national origin, sex, age, physical or mental disability, sexual orientation, or retaliation.
 - c. Prevailing wage requirements, including but not limited to 23 U.S.C 113 and Wis. Stat. 103.50.
 - d. Buy America Provision and its equivalent state statutes, set forth in 23 U.S.C. 313 and Wis. Stat. 16.754.
 - e. Competitive bidding requirements set forth in 23 U.S.C 112 and Wis. Stat. 84.06.
 - f. All DBE requirements that the State specifies.
 - g. Federal Statutes that govern the Surface Transportation Program, including but not limited to 23 U.S.C. 133.
 - h. General requirements for administering federal and state aid set forth in Wis. Stat. 84.03.

STATE RESPONSIBILITIES AND REQUIREMENTS:

4. Funding of each project phase is subject to inclusion in Wisconsin's approved 2013-2018 Urbanized Area STP-Urban program. Federal funding will be limited to participation in the costs of the following items, as applicable to the project:
 - a. The grading, base, pavement, and curb and gutter, sidewalk, and replacement of disturbed driveways in kind.
 - b. The substructure, superstructure, grading, base, pavement, and other related bridge and approach items.
 - c. Storm sewer mains necessary for the surface water drainage.
 - d. Catch basins and inlets for surface water drainage of the improvement, with connections to the storm sewer main.
 - e. Construction engineering incident to inspection and supervision of actual construction work (except for inspection, staking, and testing of sanitary sewer and water main).

- f. Signing and pavement marking.
 - g. New installations or alteration of street lighting and traffic signals or devices.
 - h. Landscaping.
 - i. Management consultant and state review services for construction projects I.D. 5991-02-54/55.
5. The work will be administered by the State and may include items not eligible for Federal participation.
 6. As the work progresses, the State will bill the Municipality for work completed which is not chargeable to Federal funds. Upon completion of the project, a final audit will be made to determine the final division of costs. If reviews or audits show any of the work to be ineligible for Federal funding, the Municipality will be responsible for any withdrawn costs associated with the ineligible work.

MUNICIPAL RESPONSIBILITIES AND REQUIREMENTS:

7. Work necessary to complete the 2013-2018 Urbanized Area STP-Urban improvement project to be financed entirely by the Municipality or other utility or facility owner includes the items listed below.
 - a. New installations of or alteration of sanitary sewers and connections, water, gas, electric, telephone, telegraph, fire or police alarm facilities, parking meters, and similar utilities.
 - b. Damages to abutting property after project completion due to change in street or sidewalk widths, grades or drainage.
 - c. Detour routes and haul roads. The municipality is responsible for determining the detour route.
 - d. Conditioning, if required and maintenance of detour routes.
 - e. Repair of damages to roads or streets caused by reason of their use in hauling materials incident to the improvement.
 - f. All work related to underground storage tanks and contaminated soils.
 - g. Street and bridge width in excess of standards, in accordance with the current WisDOT Facilities Development Manual (FDM).
 - h. Real estate for the improvement.
 - i. Preliminary engineering.
 - j. Management consultant and state review services for design project I.D. 5991-02-53.
8. The construction of the subject improvement will be in accordance with the appropriate standards unless an exception to standards is granted by WisDOT prior to construction. The entire cost of the construction project, not constructed to standards, will be the responsibility of the Municipality unless such exception is granted.
9. Work to be performed by the Municipality without Federal funding participation necessary to ensure a complete improvement acceptable to the Federal Highway Administration and/or the State may be done in a manner at the election of the Municipality but must be coordinated with all other work undertaken during construction.
10. The Municipality is responsible for financing administrative expenses related to Municipal project responsibilities.

11. The Municipality will include in all contracts executed by them a provision obligating the contractor not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in s. 51.01 (5), sexual orientation as defined in s. 111.32 (13m), or national origin.
12. The Municipality will pay to the State all costs incurred by the State in connection with the improvement that exceed Federal financing commitments or are ineligible for Federal financing. In order to guarantee the Municipality's foregoing agreements to pay the State, the Municipality, through its above duly authorized officers or officials, agrees and authorizes the State to set off and withhold the required reimbursement amount as determined by the State from any moneys otherwise due and payable by the State to the Municipality.
13. **In accordance with the State's sunset policy for Urbanized Area STP-Urban projects, the subject 2013-2018 Urbanized Area STP-Urban improvement must be constructed and in final acceptance within six years from the start of State Fiscal Year 2015, or by June 30, 2020.** Extensions may be available upon approval of a written request by or on behalf of the Municipality to WisDOT. The written request shall explain the reasons for project implementation delay and revised timeline for project completion.
14. If the Municipality should withdraw the project, it will reimburse the State for any costs incurred by the State on behalf of the project.
15. The Municipality will at its own cost and expense:
 - a. Maintain all portions of the project that lie within its jurisdiction (to include, but not limited to, cleaning storm sewers, removing debris from sumps or inlets, and regular maintenance of the catch basins, curb and gutter, sidewalks and parking lanes [including snow and ice removal]) for such maintenance through statutory requirements in a manner satisfactory to the State, and will make ample provision for such maintenance each year.
 - b. Regulate [or prohibit] parking at all times in the vicinity of the proposed improvements during their construction.
 - c. Regulate [or prohibit] all parking at locations where and when the pavement area usually occupied by parked vehicles will be needed to carry active traffic in the street.
 - d. Assume general responsibility for all public information and public relations for the project and to make fitting announcement to the press and such outlets as would generally alert the affected property owners and the community of the nature, extent, and timing of the project and arrangements for handling traffic within and around the project.
 - e. Provide complete plans, specifications, and estimates.
 - f. Provide relocation orders and real estate plats.
 - g. Use the *WisDOT Utility Accommodation Policy* unless it adopts a policy, which has equal or more restrictive controls.
 - h. Provide maintenance and energy for lighting.
 - i. Provide proper care and maintenance of all landscaping elements of the project including replacement of any plant materials damaged by disease, drought, vandalism or other cause.

16. It is further agreed by the Municipality that:

- a. The Municipality assumes full responsibility for the design, installation, testing and operation of any sanitary sewer and water main infrastructure within the improvement project and relieves the state and all of its employees from liability for all suits, actions, or claims resulting from the sanitary sewer and water main construction under this agreement.
- b. The Municipality assumes full responsibility for the plans and special provisions provided by their designer or anyone hired, contracted or otherwise engaged by the Municipality. The Municipality is responsible for any expense or cost resulting from any error or omission in such plans or special provisions. The Municipality will reimburse WisDOT if WisDOT incurs any cost or expense in order to correct or otherwise remedy such error or omission or consequences of such error or omission.
- c. The Municipality will be 100% responsible for all costs associated with utility issues involving the Contractor, including costs related to utility delays.
- d. All signs and traffic control devices and other protective structures erected on or in connection with the project including such of these as are installed at the sole cost and expense of the Municipality or by others, will be in conformity with such "Manual of Uniform Traffic Control Devices" as may be adopted by the American Association of State Highway and Transportation Officials, approved by the State, and concurred in by the Federal Highway Administration.
- e. The right-of-way available or provided for the project will be held and maintained inviolate for public highway or street purposes. Those signs prohibited under Federal aid highway regulations, posters, billboards, roadside stands, or other private installations prohibited by Federal or State highway regulations will not be permitted within the right-of-way limits of the project. The municipality, within its jurisdictional limits, will remove or cause to be removed from the right-of-way of the project all private installations of whatever nature which may be or cause an obstruction or interfere with the free flow of traffic, or which may be or cause a hazard to traffic, or which impair the usefulness of the project and all other encroachments which may be required to be removed by the State at its own election or at the request of the Federal Highway Administration, and that no such installations will be permitted to be erected or maintained in the future.

LEGAL RELATIONSHIPS:

- 17. The State shall not be liable to the Municipality for damages or delays resulting from work by third parties. The State also shall be exempt from liability to the Municipality for damages or delays resulting from injunctions or other restraining orders obtained by third parties.
- 18. The State will not be liable to any third party for injuries or damages resulting from work under or for the Project. The Municipality and the Municipality's surety shall indemnify and save harmless the State, its officers and employees, from all suits, actions or claims of any character brought because of any injuries or damages received or sustained by any person, persons or property on account of the operations of the Municipality and its sureties; or on account of or in consequence of any neglect in safeguarding the work; or because of any act or omission, neglect or misconduct of the Municipality or its sureties; or because of any claims or amounts recovered for any infringement by the Municipality and its sureties of patent, trademark or copyright; or from any claims or amounts arising or recovered under the Worker's Compensation Act, relating to the employees of the Municipality and its sureties; or any other law, ordinance, order or decree relating to the Municipality's operations.
- 19. Contract Modification: This State/Municipal Agreement can only modified by written instruments duly executed by both parties. No term or provision of neither this State/Municipal Agreement nor any of its attachments may be changed, waived or terminated orally.
- 20. Binding Effects: All terms of this State/Municipal Agreement shall be binding upon and inure to the benefits of the legal representatives, successors and executors. No rights under this State/Municipal Agreement may be transferred to a third party. This State/Municipal Agreement creates no third- party enforcement rights.
- 21. Choice of Law and Forum: This State/Municipal Agreement shall be interpreted and enforced in accordance with the laws of the State of Wisconsin. The Parties hereby expressly agree that the terms contained herein

and in any deed executed pursuant to this State/Municipal Agreement are enforceable by an action in the Circuit Court of Dane County, Wisconsin.

PROJECT FUNDING CONDITIONS

22. The Municipality agrees to the following 2013- 2018 Urbanized Area STP-Urban project funding conditions:

- a. ID 5991-02-53: Design: Design and design oversight is funded with 100% by the Municipality. This phase includes Plan Development, Management Consultant Review, and State Review. The work includes project review, approval of required reports and documents and processing the final PS&E document for award of the contract. Costs for this phase include an estimated amount for state review activities, to be funded 100% by the Municipality.
- b. ID 5991-02-54/55: Construction:
 - i. Costs for participating construction items are funded with 56% federal funding when the municipality agrees to provide the remaining 44%. This portion of the project is subject to the cumulative project federal funding cap (see sub-item c). Any costs over the municipal share and federal maximum capped amount are 100% municipal.
 - ii. Non-participating costs are funded 100% by the Municipality. Costs include construction delivery.
- c. Project Cap: In accordance with STP-Urban program guidelines for projects in urbanized areas, State action and TIP Committee action, these tied construction projects have a federal funding cap of **\$356,652**. This federal funding cap applies to all federally-funded project phases.

[End of Document]



**STATE/MUNICIPAL AGREEMENT
FOR A STATE- LET URBANIZED
AREA STP-URBAN PROJECT**

Program Name: STP-Urban

Population Group: 50,000–200,000

Sub-program #: 206

Date: September 29, 2014

I.D.: 5991-02-56/57

Road Name: Riders Club Road

Limits: STH 35 to Sand Lake Road (CTH S)

County: La Crosse

Roadway Length: 1.15 miles

Functional Classification: Urban Collector

Project Sponsor: City of Onalaska

Urbanized Area: La Crosse MPO

The signatory, City of Onalaska, hereinafter called the Municipality, through its undersigned duly authorized officers or officials, hereby requests the State of Wisconsin Department of Transportation, hereinafter called the State, to initiate and effect the highway or street improvement hereinafter described.

The authority for the Municipality to enter into this agreement with the State is provided by Sections 86.25(1), (2), and (3) and Section 66.0301 of the Statutes.

NEEDS AND ESTIMATE SUMMARY:

All components of the project must be defined in the environmental document if any portion of the project is federally funded. The Municipality agrees to complete all participating and any non-participating work included in this improvement consistent with the environmental document. No work on final engineering and design may occur prior to approval of the environmental document.

Existing Facility - Describe and give reason for request: The existing Riders Club roadway is 2 lanes with 12' wide urban cross section constructed of asphalt pavement with curb and gutter. The pavement is in poor condition and was last improved in 1990. There are no federal-aid eligible structures within the project limits of either facility. There are existing sidewalks, but no existing bicycle accommodations. Requesting a reconstruction project to improve aging asphalt roadway, including spot replacement of various areas of curb and gutter, and ADA compliant sidewalk ramps.

Proposed Improvement - Nature of work: A Reconstruction project is proposed. The project will be 6,000' in length with an urban cross section consisting of an asphalt roadway of variable width. On street bike accommodations are included with this project. Safety improvements include installation of a two way left lane to alleviate issues of left turns into a commercial shopping area, and allow for roadway safety due to future increase in traffic volumes. New pavement, base aggregate and other improvements will provide for a better and safer driving surface.

Describe non-participating work included in the project and other work necessary to completely finish the project that will be undertaken independently by the Municipality. Please note that non-participating components of a project/contract are considered part of the overall project and will be subject to applicable Federal requirements: Water and Sanitary sewer adjustments.

The Municipality agrees to the following 2013 - 2018 Urbanized Area STP-Urban project funding conditions:

Project design and design oversight costs are funded with 100% Municipal funds. Federal funding for participating construction costs are funded with 80% federal funding, up to a maximum of **\$1,179,646** for all federally-funded project phases when the municipality agrees to provide the remaining 20% for participating construction, and all funds in excess of the **\$1,179,646** federal funding maximum will be 100% Municipal, in accordance with the STP-Urban program guidelines for projects in urbanized areas. Non-participating costs are 100% the responsibility of the municipality. Any work performed by the Municipality prior to federal authorization is not eligible for federal funding. The Municipality will be notified by the State that the project is authorized and available for charging.

This project is currently scheduled in State Fiscal Year 2018. **In accordance with the State's sunset policy for Urbanized Area STP Urban projects, the subject 2013-2018 Urbanized Area STP-Urban improvement must be constructed and in final acceptance within six years from the start of State Fiscal Year 2015, or by June 30, 2020.** Extensions may be available upon approval of a written request by or on behalf of the Municipality to WisDOT. The written request shall explain the reasons for project implementation delay and revised timeline for project completion.

The dollar amounts shown in the Summary Funding Table below are federal maximum amounts unless explicitly identified otherwise. The final Municipal share is dependent on the final Federal participation, and actual costs will be used in the final division of cost for billing and reimbursement.

PHASE	SUMMARY OF COSTS				
	Total Est. Cost	Federal Funds	%	Municipal Funds	%
ID 6991-02-66					
State Review - Design	\$60,000		0%	\$60,000	100%
ID 5991-02-57	\$1,179,646 Max				
Participating Construction	\$1,287,000	\$1,029,600	80%	\$257,400	20%+BAL
Non-Participating Construction	\$0	\$0	0%	\$0	100%
State Review - Delivery	\$187,557	\$150,046	80%	\$37,511	20%+BAL
Total Est. Cost Distribution	\$1,534,557	\$1,179,646	MAX	\$354,911	N/A

Current federal funding cap is **\$1,179,646** for all federally-funded project phases, the participation percentage may change over the life of the project.

This request is subject to the terms and conditions that follow (pages 3 – 7) and is made by the undersigned under proper authority to make such request for the designated Municipality and upon signature by the State and delivery to the Municipality shall constitute agreement between the Municipality and the State. No term or provision of neither the State/Municipal Agreement nor any of its attachments may be changed, waived or terminated orally but only by an instrument in writing executed by both parties to the State/Municipal Agreement.

Signed for and in behalf of the City of Onalaska: (please sign in blue ink.)

Name	Title	Date
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Signed for and in behalf of the State:

Name	Title	Date
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GENERAL TERMS AND CONDITIONS:

1. All projects must be in an approved Transportation Improvement Program (TIP) or State Transportation Improvement Program (STIP) prior to requesting authorization.
2. Work prior to federal authorization is ineligible for federal funding.
3. The Municipality, throughout the entire project, commits to comply with and promote all applicable federal and state laws and regulations that include, but are not limited to, the following:
 - a. Environmental requirements, including but not limited to those set forth in the 23 U.S.C. 139 and National Environmental Policy Act (42 U.S.C. 4321 et seq.).
 - b. Equal protection guaranteed under the U.S. Constitution, WI Constitution, Title VI of the Civil Rights Act and Wis. Stat. 16.765. The municipality agrees to comply with and promote applicable Federal and State laws, Executive Orders, regulations, and implementing requirements intended to provide for the fair and equitable treatment of individuals and the fair and equitable delivery of services to the public. In addition the Municipality agrees not to engage in any illegal discrimination in violation of applicable Federal or State laws and regulations. This includes but is not limited to Title VI of the Civil Rights Act of 1964 which provides that "no person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." The Municipality agrees that public funds, which are collected in a nondiscriminatory manner, should not be used in ways that subsidize, promote, or perpetuate illegal discrimination based on prohibited factors such as race, color, national origin, sex, age, physical or mental disability, sexual orientation, or retaliation.
 - c. Prevailing wage requirements, including but not limited to 23 U.S.C 113 and Wis. Stat. 103.50.
 - d. Buy America Provision and its equivalent state statutes, set forth in 23 U.S.C. 313 and Wis. Stat. 16.754.
 - e. Competitive bidding requirements set forth in 23 U.S.C 112 and Wis. Stat. 84.06.
 - f. All DBE requirements that the State specifies.
 - g. Federal Statutes that govern the Surface Transportation Program, including but not limited to 23 U.S.C. 133.
 - h. General requirements for administering federal and state aid set forth in Wis. Stat. 84.03.

STATE RESPONSIBILITIES AND REQUIREMENTS:

4. Funding of each project phase is subject to inclusion in Wisconsin's approved 2013-2018 Urbanized Area STP-Urban program. Federal funding will be limited to participation in the costs of the following items, as applicable to the project:
 - a. The grading, base, pavement, and curb and gutter, sidewalk, and replacement of disturbed driveways in kind.
 - b. The substructure, superstructure, grading, base, pavement, and other related bridge and approach items.
 - c. Storm sewer mains necessary for the surface water drainage.
 - d. Catch basins and inlets for surface water drainage of the improvement, with connections to the storm sewer main.

- e. Construction engineering incident to inspection and supervision of actual construction work (except for inspection, staking, and testing of sanitary sewer and water main).
 - f. Signing and pavement marking.
 - g. New installations or alteration of street lighting and traffic signals or devices.
 - h. Landscaping.
 - i. Management consultant and state review services for construction project I.D. 5991-02-57.
5. The work will be administered by the State and may include items not eligible for Federal participation.
 6. As the work progresses, the State will bill the Municipality for work completed which is not chargeable to Federal funds. Upon completion of the project, a final audit will be made to determine the final division of costs. If reviews or audits show any of the work to be ineligible for Federal funding, the Municipality will be responsible for any withdrawn costs associated with the ineligible work.

MUNICIPAL RESPONSIBILITIES AND REQUIREMENTS:

7. Work necessary to complete the 2013-2018 Urbanized Area STP-Urban improvement project to be financed entirely by the Municipality or other utility or facility owner includes the items listed below.
 - a. New installations of or alteration of sanitary sewers and connections, water, gas, electric, telephone, telegraph, fire or police alarm facilities, parking meters, and similar utilities.
 - b. Damages to abutting property after project completion due to change in street or sidewalk widths, grades or drainage.
 - c. Detour routes and haul roads. The municipality is responsible for determining the detour route.
 - d. Conditioning, if required and maintenance of detour routes.
 - e. Repair of damages to roads or streets caused by reason of their use in hauling materials incident to the improvement.
 - f. All work related to underground storage tanks and contaminated soils.
 - g. Street and bridge width in excess of standards, in accordance with the current WisDOT Facilities Development Manual (FDM).
 - h. Real estate for the improvement.
 - i. Preliminary engineering.
 - j. Management consultant and state review services for design project I.D. 5991-02-56.
8. The construction of the subject improvement will be in accordance with the appropriate standards unless an exception to standards is granted by WisDOT prior to construction. The entire cost of the construction project, not constructed to standards, will be the responsibility of the Municipality unless such exception is granted.
9. Work to be performed by the Municipality without Federal funding participation necessary to ensure a complete improvement acceptable to the Federal Highway Administration and/or the State may be done in a manner at the election of the Municipality but must be coordinated with all other work undertaken during construction.
10. The Municipality is responsible for financing administrative expenses related to Municipal project responsibilities.

11. The Municipality will include in all contracts executed by them a provision obligating the contractor not to discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in s. 51.01 (5), sexual orientation as defined in s. 111.32 (13m), or national origin.
12. The Municipality will pay to the State all costs incurred by the State in connection with the improvement that exceed Federal financing commitments or are ineligible for Federal financing. In order to guarantee the Municipality's foregoing agreements to pay the State, the Municipality, through its above duly authorized officers or officials, agrees and authorizes the State to set off and withhold the required reimbursement amount as determined by the State from any moneys otherwise due and payable by the State to the Municipality.
13. **In accordance with the State's sunset policy for Urbanized Area STP-Urban projects, the subject 2013-2018 Urbanized Area STP-Urban improvement must be constructed and in final acceptance within six years from the start of State Fiscal Year 2015, or by June 30, 2020.** Extensions may be available upon approval of a written request by or on behalf of the Municipality to WisDOT. The written request shall explain the reasons for project implementation delay and revised timeline for project completion.
14. If the Municipality should withdraw the project, it will reimburse the State for any costs incurred by the State on behalf of the project.
15. The Municipality will at its own cost and expense:
 - a. Maintain all portions of the project that lie within its jurisdiction (to include, but not limited to, cleaning storm sewers, removing debris from sumps or inlets, and regular maintenance of the catch basins, curb and gutter, sidewalks and parking lanes [including snow and ice removal]) for such maintenance through statutory requirements in a manner satisfactory to the State, and will make ample provision for such maintenance each year.
 - b. Regulate [or prohibit] parking at all times in the vicinity of the proposed improvements during their construction.
 - c. Regulate [or prohibit] all parking at locations where and when the pavement area usually occupied by parked vehicles will be needed to carry active traffic in the street.
 - d. Assume general responsibility for all public information and public relations for the project and to make fitting announcement to the press and such outlets as would generally alert the affected property owners and the community of the nature, extent, and timing of the project and arrangements for handling traffic within and around the project.
 - e. Provide complete plans, specifications, and estimates.
 - f. Provide relocation orders and real estate plats.
 - g. Use the *WisDOT Utility Accommodation Policy* unless it adopts a policy, which has equal or more restrictive controls.
 - h. Provide maintenance and energy for lighting.
 - i. Provide proper care and maintenance of all landscaping elements of the project including replacement of any plant materials damaged by disease, drought, vandalism or other cause.
16. It is further agreed by the Municipality that:
 - a. The Municipality assumes full responsibility for the design, installation, testing and operation of any sanitary sewer and water main infrastructure within the improvement project and relieves the state and all of its employees from liability for all suits, actions, or claims resulting from the sanitary sewer and water main construction under this agreement.

- b. The Municipality assumes full responsibility for the plans and special provisions provided by their designer or anyone hired, contracted or otherwise engaged by the Municipality. The Municipality is responsible for any expense or cost resulting from any error or omission in such plans or special provisions. The Municipality will reimburse WisDOT if WisDOT incurs any cost or expense in order to correct or otherwise remedy such error or omission or consequences of such error or omission.
- c. The Municipality will be 100% responsible for all costs associated with utility issues involving the Contractor, including costs related to utility delays.
- d. All signs and traffic control devices and other protective structures erected on or in connection with the project including such of these as are installed at the sole cost and expense of the Municipality or by others, will be in conformity with such "Manual of Uniform Traffic Control Devices" as may be adopted by the American Association of State Highway and Transportation Officials, approved by the State, and concurred in by the Federal Highway Administration.
- e. The right-of-way available or provided for the project will be held and maintained inviolate for public highway or street purposes. Those signs prohibited under Federal aid highway regulations, posters, billboards, roadside stands, or other private installations prohibited by Federal or State highway regulations will not be permitted within the right-of-way limits of the project. The municipality, within its jurisdictional limits, will remove or cause to be removed from the right-of-way of the project all private installations of whatever nature which may be or cause an obstruction or interfere with the free flow of traffic, or which may be or cause a hazard to traffic, or which impair the usefulness of the project and all other encroachments which may be required to be removed by the State at its own election or at the request of the Federal Highway Administration, and that no such installations will be permitted to be erected or maintained in the future.

LEGAL RELATIONSHIPS:

- 17. The State shall not be liable to the Municipality for damages or delays resulting from work by third parties. The State also shall be exempt from liability to the Municipality for damages or delays resulting from injunctions or other restraining orders obtained by third parties.
- 18. The State will not be liable to any third party for injuries or damages resulting from work under or for the Project. The Municipality and the Municipality's surety shall indemnify and save harmless the State, its officers and employees, from all suits, actions or claims of any character brought because of any injuries or damages received or sustained by any person, persons or property on account of the operations of the Municipality and its sureties; or on account of or in consequence of any neglect in safeguarding the work; or because of any act or omission, neglect or misconduct of the Municipality or its sureties; or because of any claims or amounts recovered for any infringement by the Municipality and its sureties of patent, trademark or copyright; or from any claims or amounts arising or recovered under the Worker's Compensation Act, relating to the employees of the Municipality and its sureties; or any other law, ordinance, order or decree relating to the Municipality's operations.
- 19. Contract Modification: This State/Municipal Agreement can only modified by written instruments duly executed by both parties. No term or provision of neither this State/Municipal Agreement nor any of its attachments may be changed, waived or terminated orally.
- 20. Binding Effects: All terms of this State/Municipal Agreement shall be binding upon and inure to the benefits of the legal representatives, successors and executors. No rights under this State/Municipal Agreement may be transferred to a third party. This State/Municipal Agreement creates no third- party enforcement rights.
- 21. Choice of Law and Forum: This State/Municipal Agreement shall be interpreted and enforced in accordance with the laws of the State of Wisconsin. The Parties hereby expressly agree that the terms contained herein and in any deed executed pursuant to this State/Municipal Agreement are enforceable by an action in the Circuit Court of Dane County, Wisconsin.

PROJECT FUNDING CONDITIONS

22. The Municipality agrees to the following 2013- 2018 Urbanized Area STP-Urban project funding conditions:

- a. ID 5991-02-56: Design: Design and design oversight is funded with 100% by the Municipality. This phase includes Plan Development, Management Consultant Review, and State Review. The work includes project review, approval of required reports and documents and processing the final PS&E document for award of the contract. Costs for this phase include an estimated amount for state review activities, to be funded 100% by the Municipality.
- b. ID 5991-02-57: Construction:
 - i. Costs for participating construction items are funded with 80% federal funding when the municipality agrees to provide the remaining 20%. This portion of the project is subject to the cumulative project federal funding cap (see sub-item c). Any costs over the municipal share and federal maximum capped amount are 100% municipal.
 - ii. Non-participating costs are funded 100% by the Municipality. Costs include construction delivery.
- c. Project Cap: In accordance with STP-Urban program guidelines for projects in urbanized areas, State action and TIP Committee action, this project has a federal funding cap of **\$1,179,646**. This federal funding cap applies to all federally-funded project phases.

[End of Document]

STAFF REVIEW SUMMARY

CITY OF ONALASKA BOARD OF PUBLIC WORKS

November 4, 2014

Agenda Item: #9

Project/Item Name: Sidewalk replacements

Location: Citywide

Requested Action: Discussion on sidewalk replacements costs

Staff Report/Description: Homeowners within the City have requested the City review its current policy of all costs for sidewalk maintenance be incurred by abutting property owner. Currently if a City owned boulevard tree causes damage to the sidewalk it is the property owners responsibility to pay for repairs.

Attachments: Ordinance

Streets and Sidewalks

6-2-2

Sec. 6-2-2 Construction and Repair of Sidewalks

- (a) **Provision of State Law.** All provisions of Sec. 66.0907 of the Wisconsin Statutes describing and defining regulations with respect to sidewalks are hereby adopted and by reference made a part of this Section as if fully set forth herein. Any act required to be performed or prohibited by Sec. 66.0907 of the Wisconsin Statutes is required or prohibited by this Section.
- (b) **Sidewalk Repair or Construction.**
- (1) Adjacent property owners building, repairing, constructing and perpetually maintaining sidewalks along or upon any street, alley or highway in the City of Onalaska shall pay the cost thereof pursuant to this Section. A sidewalk map as recommended by the Plan Commission and adopted by the Common Council shall be the basis of selecting proposed sidewalk locations throughout the City.
- (2) All sidewalks within the City of Onalaska hereafter shall be repaired, rebuilt and constructed in accordance with the specifications of this Section.
- (c) **Special Assessments for Sidewalks.** Special assessments levied to defray the costs of laying, removing and repairing sidewalks may, when they exceed One Hundred Dollars (\$100.00), be paid in equal installments, over (i) a twenty (20) year period when new sidewalks are installed and (ii) ten (10) years when sidewalks are replaced or repaired. The special assessment shall bear interest at the rate determined by the Common Council, uniform with other City special assessments, at a rate equal to one percent (1 %) over the interest rate for the bond issuance that is issued to pay for the improvement. Engineering and administrative fees of seven and one-half percent (7.5%) shall be added to the special assessment cost.
- (d) **Sidewalk Permit Required.**
- (1) No person shall hereafter lay, remove, replace or repair any public sidewalk within the City unless he is under contract with the City to do such work or has obtained a permit therefore from the Inspection Department at least three (3) days before work is proposed to be undertaken. A fee of Fifteen Dollars (\$15.00) shall be charged for such permit. The permit shall be issued upon application forms provided by the City and shall contain such information as the Inspection Department shall deem necessary.
- (2) Such permit shall be for a continuous sidewalk within or between intersecting streets, in front of the property owned by one (1) person, firm or corporation. No permit shall be necessary for repairs which do not exceed sixty (60) square feet, unless the Board of Public Works Inspector deems it necessary to establish a new grade for such repair.

Streets and Sidewalks

6-2-2

(g) **Objects in Right-of-Way.**

- (1) All trees, shrubs, planters, landscaped flower gardens, flagpoles, fences, light posts, etc., and, in general, other objects placed on a City right-of-way (boulevard) without permission from the City that are in the way of the sidewalk, or pose a problem by being too close to the sidewalk, shall be the removal responsibility of the property owner. Any relocation of said objects shall be done by the property owner before sidewalk contractors start work. A property owner shall have thirty (30) days to remove said objects after the City has ordered the sidewalk in. Objects not removed within the thirty (30) day period shall be removed by the City or the sidewalk contractor at the time of construction. Objects shall be hauled away and disposed of.
- (2) Trees that exist very close to the back of sidewalks [within three (3) feet] may be removed by the City or sidewalk contractor at the City's expense. No replacement costs will be absorbed by the City. Property owners are advised to remove or relocate trees, because in time the roots may heave the walk, resulting in replacement at the cost of the property owner.
- (3) Any objects breaking the vertical plane at the property line, sitting on or over-hanging a sidewalk that may constitute a public danger or safety hazard (be it on City boulevards or private property), shall be cause to be removed by the City with no replacement provided.

(h) **Repair or Replacement of Defective Sidewalks.** Pursuant to Sec. 66.0907, Wis. Stats., the Common Council may order at any time property owners to repair or remove and replace any sidewalk which is unsafe, defective or insufficient. If the property owner shall fail to so repair or remove and replace such sidewalk within sixty (60) days after service of the notice provided in Sec. 66.0907, Wis. Stats., the Common Council shall repair or construct such sidewalk and the City Clerk shall enter the total cost thereof upon the tax roll as a special tax against said lot or parcel of land. If a life-threatening situation exists which is caused by a sidewalk in need of repair, the Board of Public Works or City Engineer shall direct the property owner to make repairs within seven (7) days. If the property owner shall fail to repair such sidewalk within the required period, the Board of Public Works shall make the necessary repairs and the City Clerk shall enter the total cost thereof on the tax roll as a special tax against said parcel.

(i) **Illegal Sidewalks.** No sidewalk which shall be constructed contrary to the provisions of this Section shall be considered a legal sidewalk and the same may be ordered to be replaced with a legal sidewalk and with one that is in conformity with this Section, the same as if no sidewalk whatever had been built or constructed in the place where any such sidewalk is located.

(j) **Retaining Walls.** The cost of the initial flagstone or retaining wall, as determined by the Board of Public Works, shall be paid for by the City. After completion of the construction, the wall shall become property of the property owner. The property owner shall pay for any and all maintenance and upkeep.

State Law Reference: Sec. 66.615, Wis. Stats.

Cross Reference: Section 6-2-9.

STAFF REVIEW SUMMARY

CITY OF ONALASKA BOARD OF PUBLIC WORKS

November 4, 2014

Agenda Item: #10

Project/Item Name: 2015 Capital Improvements budget

Location: Citywide

Requested Action: Discussion on proposed budget

Staff Report/Description: The 2015 Capital Improvements budget is attached for your review. The budget will need discussion and action to provide a budget within City budgetary constraints. Public hearing is proposed to be held at the December meeting.

Attachments: Proposed 2015 Capital Improvements budget

Onalaska Park and Recreation
Omni Center CIP
CIP 2015 to 2019

2015

- | | |
|---|-------------|
| 1. Replace and merge both Chiller Systems | \$1,100,000 |
|---|-------------|

OR

- | | |
|--------------------------------------|-----------------|
| 1. New Boards for Arena 1 | \$150,000 |
| 2. Water Heater for Zamboni Room | \$7,000 |
| 3. Countdown Timer for Arenas | \$2,500 |
| 4. LED Sign Board for Omni Center | \$15,000 |
| 5. Security cameras for arena 1 | \$6,000 |
| 6. Overhaul of Chiller in Arena 2 | \$20,000 |
| 7. Flooring Omni Hallways (rubber) | \$25,000 |
| 8. Carpeting for Meeting rooms 3 & 4 | <u>\$13,000</u> |
| Total | \$238,500 |

2016 Item from above not funded

2017

- | | |
|------------------------------------|----------|
| 1. Replace Bleacher in Arena #1 | \$ |
| 2. Replace Concession equipment | \$5,000 |
| 3. Flooring Omni Hallways (rubber) | \$25,000 |
| 4. Entry flooring for Arena #2 | \$10,000 |

2018

- | | |
|----------------------------------|-----------|
| 1. New Boards for Arena 2 | \$150,000 |
| 2. Replace Omni Roof | \$300,000 |
| 3. Shelving for storage building | \$15,000 |
| 4. | |

2019

- | | |
|----------------|-----------|
| 1. Parking lot | \$200,000 |
| 2. | |

CITY OF ONALASKA
2015 Capital Improvement Projects - Proposed

PASER - 10 = Good & 1 = Bad

I. Public Works Department

	<u>Sanitary Sewer</u>	<u>Water</u>	<u>General</u>	<u>Storm Sewer</u>	<u>Total Cost</u>	<u>Less Amount Already Bonded</u>	<u>Less Amount Other Sources</u>	<u>Amt. Needed by Borrowing</u>
1. Stormwater Quality Management (NEW) Pond #17 (108" outfall) Dredging & expansion	\$ -	\$ -	\$ -	\$ 76,000	\$ 76,000	\$ -	\$ -	\$ 76,000
2. Sidewalk repair program with 1/7 City replacement program (NEW)	\$ -	\$ -	\$ 120,000	\$ -	\$ 120,000	\$ -	\$ -	\$ 120,000
3. Pavement maintenance program w/ La Crosse County Hwy Dept. (NEW)	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ 250,000
4. Well #9 - Filtration Plant (2014 CIP #17)	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000	(2014 CIP #17) \$ 200,000	\$ -	\$ -
a. Design	\$ -	\$ 3,250,000	\$ -	\$ -	\$ 3,250,000	\$ -	(Safe Drinking Wtr Ln) \$ 3,250,000	\$ -
b. Construction	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5. STH 35 reconstruction from Poplar St north to Riders Club Rd - 2016 construction (NEW) WIS DOT project	\$ 368,000	\$ 781,000	\$ 50,000	\$ -	\$ 1,199,000	\$ -	\$ -	\$ 1,199,000
6. Railroad quiet zone study (2013 CIP #24)	\$ -	\$ -	\$ -	\$ -	\$ -	(2006 CIP Gen-\$15,000) \$ 15,000	\$ -	\$ -
2nd Ave SW & Ivrit St	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ -	\$ -	\$ -
a. Design study	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ 250,000
b. Construction (new) (%TH)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7. Riders Club Rd - street renovation (2014 CIP #21)	\$ -	\$ -	\$ 125,000	\$ -	\$ 125,000	(2014 CIP #21) \$ 125,000	\$ -	\$ -
- STH 35 to Sand Lake Rd PASER 2-6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
a. Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
b. Construction (anticipated 2016, \$1,485,000, 80% STP-U Funding)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8. Braund St/PH Design - Braund St to Theater Rd, PH to STH 16 - street reconstruction (2014 CIP #22)	\$ -	\$ -	\$ 55,000	\$ -	\$ 55,000	(2014 CIP #22) \$ 55,000	\$ -	\$ -
a. Design PASER 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
b. Construction (anticipated 2016, \$638,000 - 80% STP-U Funding)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

CITY OF ONALASKA
2015 Capital Improvement Projects - Proposed

PASER - 10 = Good & 1 = Bad

I. Public Works Department (Cont'd)

	<u>Sanitary Sewer</u>	<u>Water</u>	<u>General</u>	<u>Storm Sewer</u>	<u>Total Cost</u>	<u>Less Amount Already Bonded</u>	<u>Less Amount Other Sources</u>	<u>Amt. Needed by Borrowing</u>
9. Street Repaving (NEW) Wilson Street between 12th Ave S/13th Ave S PASER 2	\$ -	\$ -	\$ 57,000	\$ -	\$ 57,000	\$ -	\$ -	\$ 57,000
10. Street repaving - Holiday Heights (NEW) East Young Dr from West Young Dr to Medary Lne PASER 5	\$ -	\$ -	\$ 34,000	\$ -	\$ 34,000	\$ -	\$ -	\$ 34,000
11. East Main St - Theater Rd Dr to Marcou Rd mill and overlay (2014 Proposed #28) PASER 3-4	\$ -	\$ -	\$ 723,000	\$ -	\$ 723,000	\$ -	\$ -	\$ 723,000
12. Sandlake Road/CTH SN - Design (2014 CIP #29) CTH S to CTH OT - administered by La Crosse County	\$ -	\$ -	\$ 18,000	\$ -	\$ 18,000	\$ 18,000	\$ -	\$ -
13. Compact track loader (2014 Proposed #30)	\$ 19,250	\$ 19,250	\$ 19,250	\$ 19,250	\$ 77,000	\$ -	\$ -	\$ 77,000
14. Sanitary sewer combination cleaning truck (NEW)	\$ 300,000	\$ -	\$ -	\$ -	\$ 300,000	\$ -	\$ -	\$ 300,000
15. I-90 sanitary sewer - WIS DOT project (NEW) (see 2013 CIP #23)	\$ 500,000	\$ -	\$ -	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000
16. Green Coulee intersection improvements (NEW) a. Design	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1) Preliminary	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ 100,000
2) Final	\$ -	\$ -	\$ 200,000	\$ -	\$ 200,000	\$ -	\$ -	\$ 200,000
b. Construction	\$ -	\$ -	\$ 3,000,000	\$ 1,200,000	\$ 4,200,000	\$ -	\$ -	\$ 4,200,000
17. 3rd Ave S - Main St to Green St (2014 Proposed #18) PASER 2	\$ 78,000	\$ 36,000	\$ 199,000	\$ 12,500	\$ 325,500	\$ -	\$ -	\$ 325,500
18. Crossing Meadows Dr - pavement replacement - 12th Ave S to 1,200 feet east (2014 Proposed #20) PASER 5	\$ -	\$ -	\$ 182,000	\$ -	\$ 182,000	\$ -	\$ -	\$ 182,000
19. Green St - reconstruction - (NEW) 9th Ave to 10th Ave & Horman Blvd PASER 3	\$ 74,000	\$ 98,000	\$ 230,000	\$ 50,000	\$ 452,000	\$ -	\$ -	\$ 452,000

CITY OF ONALASKA
2015 Capital Improvement Projects - Proposed

PASER - 10 = Good & 1 = Bad

I. Public Works Department (Cont'd)

	<u>Sanitary Sewer</u>	<u>Water</u>	<u>General</u>	<u>Storm Sewer</u>	<u>Total Cost</u>	<u>Less Amount Already Bonded</u>	<u>Less Amount Other Sources</u>	<u>Ant. Needed by Borrowing</u>
20. Street Repaving (NEW) 14th Ave N, 15th Ave N, 16th Ave N, 17th Ave N, Monroe St, Madison St & 13th Ct PASER 3-4 (3.8)	\$ -	\$ -	\$ 340,000	\$ -	\$ 340,000	\$ -	\$ -	\$ 340,000
21. Public Works Facility - epoxy floor coating (NEW) heated storage & mechanics bays	\$ 20,000	\$ 20,000	\$ 20,000	\$ 20,000	\$ 80,000	\$ -	\$ -	\$ 80,000
22. Coachlite-Subdivision-repaving (NEW) GrandView Blvd, Fairway Ct, Coachlite Ct N, & Coachlite Ct S PASER 3	\$ -	\$ -	\$ 325,000	\$ -	\$ 325,000	\$ -	\$ -	\$ 325,000
23. Street repaving - 8th Ave N, Quincy St to (NEW) to Redwood St, Robert Pl between 8th Ave & 9th ave, Rachel Pl between 8th Ave & 9th Ave, Redwood St between 9th & 10th Ave PASER 3-4 (3.8)	\$ -	\$ -	\$ 179,000	\$ -	\$ 179,000	\$ -	\$ -	\$ 179,000
24. Sand Lake Rd reconstruction (NEW) Redwood St to Riders Club Rd Design (construction 2016)	\$ -	\$ -	\$ 50,000	\$ -	\$ 50,000	\$ -	\$ -	\$ 50,000
25. King St reconstruction - 5th Ave N to 6th Ave N (NEW) 6th Ave N reconstruction - Main St to Monroe St	\$ 22,000	\$ 46,000	\$ 196,000	\$ -	\$ 264,000	\$ -	\$ -	\$ 264,000
26. Alley Paving projects (NEW) PASER 3-5 (4.3) a: Alley construction between Irwin St/Main St & 3rd Ave S/4th Ave S b: Alley paving between Irwin/Hickory St & 3rd Ave S/4th Ave S	\$ -	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ -	\$ 30,000
27. Green Coulee booster station (2014 Proposed #25) - rehabilitation - install Variable Frequency Drive	\$ -	\$ 75,000	\$ -	\$ -	\$ 75,000	\$ -	\$ -	\$ 75,000
28. South Kinney Coulee liftstation (NEW) - reconstruction	\$ 302,000	\$ -	\$ -	\$ -	\$ 302,000	\$ -	\$ -	\$ 302,000

CITY OF ONALASKA
2015 Capital Improvement Projects - Proposed

PASER - 10 = Good & 1 = Bad

I. Public Works Department (Cont'd)

	<u>Sanitary Sewer</u>	<u>Water</u>	<u>General</u>	<u>Storm Sewer</u>	<u>Total Cost</u>	<u>Less Amount Already Bonded</u>	<u>Less Amount Other Sources</u>	<u>Amt Needed by Borrowing</u>
29. Pearl St reconstruction - 4th Ave. to 6th Ave (NEW) 6th Ave N PASER 3-4 (3.7)	\$ 42,000	\$ 65,000	\$ 135,000	\$ 35,000	\$ 277,000	\$ -	\$ -	\$ 277,000
30. Stormwater Drainage Project (NEW) 1200-block Lake Street	\$ -	\$ -	\$ -	\$ 10,000	\$ 10,000	\$ -	\$ -	\$ 10,000
31. French Rd - (2011 Proposed #18) a- Booster Station b- Watermain	\$ -	\$ 600,000	\$ -	\$ -	\$ 600,000	\$ -	\$ -	\$ 600,000
	\$ -	\$ 150,000	\$ -	\$ -	\$ 150,000	\$ -	\$ -	\$ 150,000
32. Aerial photography (NEW)	\$ 3,500	\$ 3,500	\$ 3,500	\$ 3,500	\$ 14,000	\$ -	\$ -	\$ 14,000
33. Fruit Acres Addn - watermain tie in, Oak Ave S - SS (NEW)	\$ -	\$ 65,000	\$ -	\$ -	\$ 65,000	\$ -	\$ -	\$ 65,000
34. Wilson Street pedestrian improvements at Onalaska High School (NEW)	\$ -	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ 15,000 (O.S.D)	\$ 15,000

II. Planning Department

35. Waterfront Property acquisition Phase 1 TIF (2010 CIP #34) (2011 CIP #27) (2012 CIP #23) (2013 CIP #33) (2014 CIP #39)	\$ -	\$ -	\$ 300,000	\$ -	\$ 300,000	\$ 300,000	\$ -	\$ -
						(2010 CIP #34) (2013 CIP #33)		
36. Viewshed enhancements at waterfront (2013 CIP #27) (2014 CIP #34)	\$ -	\$ -	\$ 15,000	\$ -	\$ 15,000	\$ 15,000	\$ -	\$ -
37. Urban Forestry - General (NEW) Non-EAB	\$ -	\$ -	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ 7,000 (Spec Proj. Fund)	\$ 18,000
38. Braund Lumber demolition - TIF (NEW)	\$ -	\$ -	\$ 125,000	\$ -	\$ 125,000	\$ -	\$ -	\$ 125,000
39. Emerald Ash Borer - tree planting & stump removal. Tree removal by City staff. Year 1 of 3 year program.	\$ -	\$ -	\$ 220,000	\$ -	\$ 220,000	\$ -	\$ -	\$ 220,000

CITY OF ONALASKA
2015 Capital Improvement Projects - Proposed

PASER - 10 = Good & 1 = Bad

II. Planning Department (Cont'd)

	<u>Sanitary Sewer</u>	<u>Water</u>	<u>General</u>	<u>Storm Sewer</u>	<u>Total Cost</u>	<u>Less Amount Already Bonded</u>	<u>Less Amount Other Sources</u>	<u>Amount Needed by Borrowing</u>
40 City wayfinding/entrance signage prelim design (2014 Proposed #32)	\$ -	\$ -	\$ 20,000	\$ -	\$ 20,000	\$ -	(Tourism Funds) \$ 20,000	\$ -
41 Waterfront improvements (NEW) TIF	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000
a. Boating improvements	\$ -	\$ -	\$ 500,000	\$ -	\$ 500,000	\$ -	\$ -	\$ 500,000
b. Riverwalk	\$ -	\$ -	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000
42 Bluff land protection program (NEW) (MVC/La Crosse County Consortium)	\$ -	\$ -	\$ 235,000	\$ -	\$ 235,000	\$ -	\$ -	\$ 235,000

III. Fire Department

44 Self-contained Breathing Apparatus (SCBA) replacement quantity = 40 (NEW)	\$ -	\$ -	\$ 210,000	\$ -	\$ 210,000	\$ -	\$ -	\$ 210,000
45 Land & Facilities (Proposed 2009 #37) a. Purchase land (3 acres @ \$3,000/sq ft) Fire Station #2 - STH 16 & I-90 vicinity	\$ -	\$ -	\$ 396,000	\$ -	\$ 396,000	\$ -	\$ -	\$ 396,000

IV. Parks & Recreation Department

46 Nathan-Hills area playground (NEW)	\$ -	\$ -	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000
47 Van Riper Park playground replacement (NEW)	\$ -	\$ -	\$ 75,000	\$ -	\$ 75,000	\$ -	\$ -	\$ 75,000
48 Van Riper Park outfield fencing (2014 Proposed #49)	\$ -	\$ -	\$ 25,000	\$ -	\$ 25,000	\$ -	\$ -	\$ 25,000
49 Hittopper Heights Park basketball court overlay (2014 Proposed #47)	\$ -	\$ -	\$ 18,500	\$ -	\$ 18,500	\$ -	\$ -	\$ 18,500
50 Pierce Park shade structure (2014 Proposed #48)	\$ -	\$ -	\$ 30,000	\$ -	\$ 30,000	\$ -	\$ -	\$ 30,000

CITY OF ONALASKA
2015 Capital Improvement Projects - Proposed

PASER - 10 = Good & 1 = Bad

IV. Parks & Recreation Department (Cont'd)

	<u>Sanitary Sewer</u>	<u>Water</u>	<u>General</u>	<u>Storm Sewer</u>	<u>Total Cost</u>	<u>Less Amount Already Bonded</u>	<u>Less Amount Other Sources</u>	<u>Amt. Needed by Borrowing</u>
51 Natural areas management plan - (2014 Proposed #52)	\$ -	\$ -	\$ 12,000	\$ -	\$ 12,000	\$ -	\$ -	\$ 12,000
V. Police								
52 Replace 2 squad cars (NEW)	\$ -	\$ -	\$ 88,000	\$ -	\$ 88,000	\$ -	\$ -	\$ 88,000
VI. Omni Center								
53 Arena 1 & 2 - chiller replacement (NEW)	\$ -	\$ -	\$ 1,100,000	\$ -	\$ 1,100,000	\$ -	\$ -	\$ 1,100,000
54 Equipment replacement fund (NEW) *see listing	\$ -	\$ -	\$ 250,000	\$ -	\$ 250,000	\$ -	\$ -	\$ 250,000
VII. Library								
55 NONE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
VIII. Clerk								
56 NONE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
IX. City Hall								
57 Office suite carpeting (2014 Proposed #57)	\$ -	\$ -	\$ 10,000	\$ -	\$ 10,000	\$ -	\$ -	\$ 10,000
58 Council Chambers audio/video equipment (NEW)	\$ -	\$ -	\$ 100,000	\$ -	\$ 100,000	\$ -	\$ -	\$ 100,000
	\$ 1,703,250	\$ 4,609,250	\$ 5,484,250	\$ 212,750	\$ 12,009,500	\$ 713,000	\$ 3,292,000	\$ 8,004,500

STAFF REVIEW SUMMARY

CITY OF ONALASKA BOARD OF PUBLIC WORKS

November 4, 2014

Agenda Item: #11

Project/Item Name: I-90 sanitary sewer replacement

Location: I-90/STH 35

Requested Action: Discussion of amendment number #2

Staff Report/Description: The City of Onalaska has hired Ayres Associates to perform design of utility replacements as part of the Wis. DOT I-90 work. The original contract and amendment #1 has been performed for work in the vicinity of the bike trail box culvert installation. Amendment #2 will include the replacement of the sanitary sewer running from 2nd Avenue Southwest to West George Street including reconstruction of existing meter pit. The City is anticipating Wis. DOT participation in 90% of construction costs.

Attachments: Project cost estimates, amendment #2



PUBLIC WORKS IMPROVEMENT
OPINION OF PROBABLE CONSTRUCTION COST

Project Name: Onalaska Sanitary Sewer
Project Number: 23-1485.10
Estimator: TJS / ETL

Date: October 23, 2014

Total Estimate: \$616,646.84

DESCRIPTION	UNITS	APPROX. QUANTITY	UNIT PRICE	TOTAL PRICE
1 Mobilization	Each	1	\$20,000.00	\$20,000.00
2 Silt Fence	L.F.	2,848	\$1.68	\$4,784.64
3 8" PVC Sanitary Sewer	L.F.	50	\$55.00	\$2,750.00
4 30" Sanitary Sewer	L.F.	1,262	\$90.00	\$113,580.00
5 30" Sanitary Sewer Bore & Jack (includes pipe and 48" casing	L.F.	468	\$750.00	\$351,000.00
6 48" Sanitary Manhole	V.F.	80	\$250.00	\$20,000.00
7 Sanitary Manhole Casting	Each	2	\$550.00	\$1,100.00
8 Connect to Existing Sewer	Each	4	\$5,000.00	\$20,000.00
9 Site Resoration	Ac	1.5	\$2,000.00	\$3,000.00
Construction Subtotal				\$536,214.64
15% Contingency				\$ 80,432.20
				\$
PROJECT TOTAL				\$ 616,646.84



PUBLIC WORKS IMPROVEMENT
OPINION OF PROBABLE CONSTRUCTION COST

Project Name: Onalaska Sanitary Sewer Date: October 23, 2014
Project Number: 23-1485.10
Estimator: TJS / ETL Total Estimate: \$70,725.00

DESCRIPTION	UNITS	APPROX. QUANTITY	UNIT PRICE	TOTAL PRICE
1 Mobilization	Each	1	\$2,500.00	\$2,500.00
10 Sewer Meter Vault	LS	1	\$25,000.00	\$25,000.00
11 Sewer Meter and Controls	LS	1	\$18,000.00	\$18,000.00
12 Bypass Pumping	Days	5	\$3,000.00	\$15,000.00
13 Site Resoration	Ac	0.5	\$2,000.00	\$1,000.00
Construction Subtotal				\$61,500.00
15% Contingency				\$ 9,225.00
PROJECT TOTAL				\$ 70,725.00

AMENDMENT TO AGREEMENT

Amendment dated October 27, 2013

The Agreement for Professional Services made as of October 31, 2013 between City of Onalaska, 415 Main Street, Onalaska, WI, 54650 (OWNER) and Ayres Associates Inc, 3433 Oakwood Hills Parkway, Eau Claire, WI 54701 (CONSULTANT) is hereby amended as set forth below.

Per previous agreement, close the open projects, and do not carry over the balance of the money left to this contract.

Please add the following to Scope of Services:

PROJECT A:

The work under this contract includes the design of sanitary sewer under IH 90 and STH 35 interchange from George Street to south of IH 90 at a manhole owned by the City of La Crosse. This will be Project A. Project A is funded by WisDOT, estimated at 90%, and City of Onalaska estimated at 10%.

We will perform the following tasks to provide design services for the sanitary sewer reconstruction across IH 90 interchange with STH 35:

Meet with City on site to review site topography and outline goals of the project. The topography source will be the survey (as completed by others) which included the roadway to 15 foot right of way line and the intersections and proposed roadway alignment, along the project. Verify the existing elevations at all the connection points.

Prepare preliminary design plans and opinion of probable construction cost for the sanitary sewer relocations for review by the City.

Provide preliminary plans for review, receive comments, and make modifications as requested.

Prepare preliminary application for permit to work on STH right of way from WisDOT for review, possible modification, and submittal.

Prepare submittals to the Wisconsin Department of Natural resources pertaining to sanitary sewer.

Coordinate with other consultants, DOT, and utilities in the area. We will attend the PIM, and exchange plans at the 60%, 90%, pre-PS&E, and Final PS&E milestones for all the four lettings. We will meet with the client to review the design documents at 30%, 60%, and 90% plan review as needed. Based on past experience on previous projects we expect the time for these meetings to be limited and have included time for two meetings with the DOT.

Prepare final utility location plans and contract documents for insertion to contract documents prepared by WisDOT. The plan sheets will consist of sanitary sewer profiles, modification to the metering station, details of construction and staging, along with schedule of pipe sizes and manholes. We anticipate one letting with special provisions. All documents will be prepared in

accordance with WisDOT standards. This will be included in DOT Bid package 1071-06-83, anticipated PS and E date of August 2016, letting December of 2016, and Construction year 2017.

Attend pre-construction conference for the project as needed. At that point the project will be considered to have entered the construction project management stage.

PROJECT B:

Also included in this contract are modifications to the metering system and the upgrade to the SCADA system at the George Street Metering Station. This is Project B. Project B is funded 100% by the City of Onalaska.

We will perform the following tasks to provide design services for the George Street Metering Station:

Meet with City on site to review existing station and outline goals of the project. The topography source will be the survey (as completed by others) which included the roadway to 15 foot right of way line and the intersections and proposed roadway alignment, along the project. Verify the existing elevations at all the connection points.

Prepare preliminary design plans and opinion of probable construction cost for the modifications to the metering station for review by the city.

Design modifications to the meter flow station will include a local terminal with electric readout and data collection capability with inclusion to the existing SCADA system via radio. It will also include design of a new metering pit to accommodate a new pipe diameter.

Provide preliminary plans for review, receive comments, and make modifications as requested. Meet with the City of Onalaska, and the City of La Crosse if Onalaska determines they would like a joint meeting.

If needed, prepare preliminary application for permit to work on STH right of way from WisDOT for review, possible modification, and submittal.

Prepare submittals to the Wisconsin Department of Natural Resources pertaining to metering station.

Coordinate with other consultants, DOT, and utilities in the area.

Prepare final plans and contract documents for separate letting from DOT. The plan sheets will consist of modification to the metering station, metering flume, details of construction and staging, including bypass pumping. We anticipate one letting for Project B. All documents will be prepared in accordance with City of Onalaska standards. Anticipated letting date will be late fall of 2016, with construction in 2017.

A complete set of plans and specifications will be prepared, advertised, and let by Ayres Associates. A summary of bids will be supplied to the City for review and selection of award.

Attend pre-construction conference for the project as needed. At that point the project will be considered to have entered the construction project management stage.

Responsibilities of Owner and Others

Provide access to the site. Provide information directly related to the site that would impact the development. The anticipated size of pipe is 30 in. diameter HDHP.

We will obtain all mapping and information pertaining to the projects from our Transportation Group. Coordination with WisDOT will be through the Transportation designer.

Additional Services

Additional services that might be required but are not included in the proposed scope of work may be added if owner deems necessary:

- Topographic and Boundary Survey
- Water main and other private utilities
- Wetland determination and delineation
- Phase I Haz Mat review
- Traffic studies

Time Schedule

Our schedule will follow the schedule as outlined by WisDOT on the IH 90 project agreement with Ayres Associates Transportation. We anticipate we will have plan review with the client approximately 2 weeks before interim submittals to the DOT.

Fee

We will perform the above services for an amount equal to the direct labor hours, plus reimbursable expenses and sub consultant charges. The estimated cost of services for each project is listed below. We will not exceed the estimated cost of services without prior approval.

<u>Summary of Fees</u>		Cost Not to Exceed
Project A		
Sanitary Sewer Replacement		\$48,600.00
Project B		
Metering Station and Flume Replacement		\$10,200.00

In Witness Whereof, the parties hereto have made and executed this Amendment to Agreement as of the day and year first written above.

_____		Ayres Associates Inc
OWNER		CONSULTANT
_____	(Signature)	<u><i>Disa L. Wahlstrand</i></u>
_____	(Typed Name)	Disa L. Wahlstrand, PE
_____	(Title)	Manager, Municipal Services
_____	(Date)	October 28, 2014
_____	(Signature)	<u><i>Lisa A. Fleming</i></u>
_____	(Typed Name)	Lisa A. Fleming, PE
_____	(Title)	Senior Project Manager
_____	(Date)	October 28, 2014

**BOARD OF PUBLIC WORKS
MONTHLY ESTIMATES
November 4, 2014**

<u>Contractor</u>	<u>Original Contract Amount</u>	<u>Change Orders</u>	<u>Paid to Date</u>	<u>Due this Estimate</u>
1. PEMBER COMPANIES Misc. Concrete Project Construction Estimate #4	\$ 94,333.50	\$ -	\$ 70,600.19	\$ 121.38
2. WAPASHA CONSTRUCTION 2013 Reservoir Improvements Construction Estimate #10	\$ 294,991.99	\$ -	\$ 272,294.76	\$ 2,146.75
3. MATHY CONSTRUCTION East Main St Construction Estimate #6 - FINAL	\$ 992,959.90	\$ 4,972.57	\$ 969,516.55	\$ 10,699.79
4. MATHY CONSTRUCTION 2014 Paving Project Construction Estimate #3	\$ 610,900.50	\$ -	\$ 323,803.69	\$ 192,253.74
5. COULEE REGION MECHANICAL Omni Center Boiler Replacement Construction Estimate #2	\$ 189,949.00	\$ -	\$ 13,490.00	\$ 65,316.49
6. STRAND ASSOCIATES Well #9 - Reconstruct/Filter Design Estimate #2	\$ 132,700.00	\$ -	\$ 13,500.00	\$ 35,100.00
7. CHIPPEWA CONCRETE SERVICES Marcou Rd Sidewalk Project Construction Estimate #5 - FINAL	\$ 200,685.00	\$ -	\$ 193,618.05	\$ 7,420.00
8. UNIVERSITY OF WISCONSIN - LA CROSSE Baitshop archaeological monitoring Mississippi Valley Archaeological Center Estimate #1	\$ 6,500.00	\$ -	\$ -	\$ 4,422.24