CITY OF WILLMAR, MINNESOTA
REQUEST FOR COMMITTEE ACTION

Agenda Item Number: 4

Meeting Date: September 29, 2015

Attachments: ☒ Yes No

CITY COUNCIL ACTION

Date: October 5, 2015

☐ Approved ☐ Denied
☐ Amended ☐ Tabled
☐ Other

Originating Department: Engineering

Agenda Item: Water View Phase 2 School Project Infrastructure Improvements

Recommended Action: Participate in a 50% cost-sharing agreement of the estimated $1,973,904 project total

Background/Summary: The parcel of land in this location has been identified as a possible site for the new elementary school. Duininck staff presented infrastructure needs to accommodate the school as well as the extension of the street to 28th Avenue at the Public Works/Safety Committee meeting on July 14th, and is asking for the City to participate in a cost-sharing agreement. The City passed a resolution recommending a revised alignment and participating in project financing to the extent the Council recognizes the benefit to the greater community. The revised layout proposed by Duininck would extend 24th Street to connect with an extension of Lakeland Drive and run parallel and adjacent to the 71/23 bypass.

Alternatives: N/A

Financial Considerations: The project cost is estimated at $1,973,904, City share would be $986,952. This does not including the sanitary sewer, which is estimated near $350,000.

Preparer: Sean E. Christensen, P.E.
Public Works Director

Signature:

Comments:

Duininck
Development

September 24, 2015

Sean Christensen
City of Willmar Public Work Director
333 6th St SW
Willmar, MN 56201

Re: Water View Phase 2 School Project Infrastructure Improvements

Dear Mr. Christensen:

As we have discussed, our company owns a parcel of land in the southeast side of Willmar that has been identified as one of two locations being considered for the new elementary school that Willmar Public School will be constructing. In light of this, we are in the process of identifying the infrastructure needed to accommodate the school, as well as understand the potential impacts of this project. As part of this analysis, we have included the City in the discussions surrounding this project. This proposal will give some relevant background information, describe the project along with the anticipated cost, identify project benefits, and suggest a cost-sharing arrangement between Duininck (as the developer) and the City. Please pass this proposal onto the City's public works committee for their review and recommendation.

Background

Over the last 50 years, Duininck has purchased several contiguous parcels in the southeast portion of Willmar, south of 19th Avenue and east of 1st Street. In 2006, Duininck worked cooperatively with the city to combine several of those parcels into a 115-acre commercial development that became known as the Water View Business Park. Development of this land was controlled by a development agreement entered into between the City of Willmar and Duininck Development. As part of this plat, right-of-way was dedicated to the city for 5th Street, 9th Street, and 24th Avenue. 5th Street was then constructed from 19th Avenue to 28th Avenue, 9th Street constructed from 19th Avenue to 24th Avenue, and 24th Avenue constructed from 1st Street to 9th Street. As part of the road construction project, large sanitary sewer interceptor lines were installed throughout the project, in order to serve areas well beyond the limits of the Water View development. One such line, a 21" sanitary sewer, terminates at the intersection of 9th Street and 24th Avenue. Additional right-of-way for 24th Avenue and adjacent lots were also included in the plat going to the east up to the TH 23/71 bypass and terminating roughly parallel to the TH 23/71 bypass at the edge of the "Bryant" parcel (owned by Duininck), which was intended to be a second phase to the Water View Business Park. In this second phase, we had planned to continue 24th Avenue from the end of our plat northeast up to Lakeland Drive, in the area of 15th Street SE. Throughout the last ten years, we have discussed several potential layouts of the infrastructure associated with this potential Phase 2 project with city staff and committees, albeit with the understanding that the ultimate final design would be dictated in large part by the needs of a potential future user of the land.

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Willmar Public School Proposal

As you are aware, the voters of the City of Willmar recently approved a referendum to construct a new elementary school, addressing the overcrowding, accessibility, and functionality issues they currently have. Through that process, a potential site layout was developed by the School's architect to determine the feasibility of the Duininck site (Water View Phase 2 property) and to facilitate associated discussion. Through discussion with the architect and other school representatives, Duininck made some revisions to that layout to incorporate the infrastructure that would be needed to serve not only the School, but also the Water View development that this school property would tie into, and the needs of the public that use the transportation and utility systems in this area of the City. As a result of the initial and revised layouts, an overall site plan was developed and presented to the City public works committee on July 14, 2015 and the City Council on July 20, 2015, along with a proposal identifying potential benefits to the City and suggesting a cost-share arrangement. As a result of this proposition, the City passed a resolution at their August 3, 2015 meeting, recommending a revised alignment and participation in project financing to the extent that the Council recognizes the benefit to the greater community.

The revised layout, as shown in Appendix A, would extend 24th Street to the east and southeast, ending up perpendicular to the TH 23/71 bypass on the east end. Lakeland Drive would be extended to the southwest through the eastern edge of the property, parallel and adjacent to the TH 23/71 bypass, up to its intersection of the 24th Avenue extension. This Lakeland Drive extension will also significantly change the intersection of 15th Street and 19th Avenue with Lakeland Drive, as indicated. The extension of Lakeland Drive will retain the Lakeland Drive name, with the future extension to 28th Avenue (southwest of the 24th Avenue intersection), being named 28th Avenue. Naming the streets in this way would provide for logical traffic patterns and avoid any change to current addresses, simplifying the process. The width of the new Lakeland Drive from the north end down to 24th Street would likely be consistent with the current Lakeland Drive going to the northeast (42 ft). The width of the 24th Street extension would likely be consistent with the width of the current 24th Avenue from 1st Street to 9th Street (60 ft). A center turn lane could be provided along the entire stretch, or dedicated turn lanes could also be developed if more appropriate. Additionally, a right turn lane could be provided into the School property, enhancing safety. A sidewalk would also be provided along the west side of the road. Watermain, storm sewer, and any other utilities necessary would also be installed along with this project. Additionally, the 21" sanitary sewer that currently terminates at the intersection of 24th Avenue and 9th Street, along with the necessary water and other utility lines, could be extended along the entire new alignment to serve the area to the north and northeast, beyond the limits of our property, although sanitary sewer service from the east will not be necessary for the development of the School, as the property can be served from the west along 19th Avenue.

This revised layout is very beneficial for the City as a whole by providing the one missing link to a consistent arterial loop corridor extending from the northeast portion of the City to the southwest portion. However, it will fundamentally change the traffic and development patterns anticipated when the originally Water View Business Park was platted. Instead of routing traffic through Water View as was anticipated, it will eventually divert traffic around the park. It is Duininck's contention that this change is quite detrimental to the Water View Business Park, while at the same time providing great benefits to the City. However, in the spirit of cooperation and because of the need to move the Willmar Schools project forward, we have agreed to concede the issue of the alignment revision provided the City adequately participates in financing of this project.

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Benefits

The opportunity to develop the Willmar School on this property will also benefit the City of Willmar with corresponding infrastructure improvements that will fulfill the City master plan and accelerate growth of the tax base.

1. Enhanced City Master Planning and Traffic Flow
    a. Current Benefit
        i. Provides consistency through Lakeland Drive / 24th Ave Corridor (eliminates the business-residential-business use sequence that currently exists)
        ii. Removes traffic pressure through the Dana Heights / Pleasantview residential area
        iii. Increases safety through the entire corridor (especially through the current residential area)
        iv. Increases safety for students walking to school by diverting traffic to the south and east of the potential School property
        v. Provides good access into the heart of the Water View business district
        vi. City can install the 21" interceptor line to satisfy the overall needs of the City
    b. Future Benefit
        i. Duininck will cooperate to modify the currently approved plat and developer agreement to change the alignment of Lakeland Drive at the intersection of 24th Avenue. The recommended alignment from the City of Willmar fits with the long term vision of the public works program. Not doing so now leaves open the possibility that property will get sold as it is currently platted. The currently platted alignment is preferred by Duininck. See Appendix B *(Note: Duininck cooperation would be contingent on an agreed upon participation level)*
        ii. Selling this large contiguous parcel to the Willmar School District eliminates any uncertainty about the future street layout in that area and simplifies the street naming and traffic issues that existed with the original Water View Phase 2 master plan.

2. Financial Benefit
    a. By establishing improved access and traffic flow to the development, along with the additional traffic generated by the School related activity, we would anticipate that the build out of the existing commercial property will accelerate significantly. However, a significant "anchor" like the School District is needed to make the development feasible at this time. This is an excellent opportunity to take advantage of now to invest for the future.
    b. Full build-out of the commercial real estate in Water View is estimated to increase the City tax base over what is currently collected on the vacant properties by 20-30x. See Appendix C.
    c. Opens up new area for development (east side of Water View Business Park)
    d. Promotes residential development in the area around the school
    e. Continues good access to the 19th Street businesses

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Development

Cost Share Agreement

The cost to construct this project is estimated at $1,973,904 (not including the 21" sanitary interceptor line). As only about 40% of the frontage along Lakeland Drive is assessable (largely because the east side of the road is adjacent to the TH 23/71 Bypass right-of-way), it would be unfeasible to complete the project without significant financial participation from the City, along with reasonable participation from both Duininck and the school, both of whom are willing participants in the financing of these improvements. Fortunately, as previously discussed, this project will provide significant benefits to the greater City, providing ample justification for the investment. Thus, we would respectfully request that the City pay for 50% of the costs of constructing this infrastructure, with Duininck and the school covering the remaining 50%, prorated based on the area of the lots served by this project. While the details of exactly how the work would be completed and the project financed can be worked out through the development agreement, what we are asking for at this time is agreement in principle on a 50% cost-share arrangement. We believe that this is the most fair and equitable way to divide the costs associated with this project.

Summary

The City of Willmar's financial participation in the proposed development is directly related to benefits the city will realize to complete an effective traffic loop on the southeast side of the city, achieve the desired intersection at 24th Ave, enhance access to future loop expansion and to accelerate economic benefits of commercial development.

Thank you for the opportunity to submit this proposal. Please contact me if you have questions.

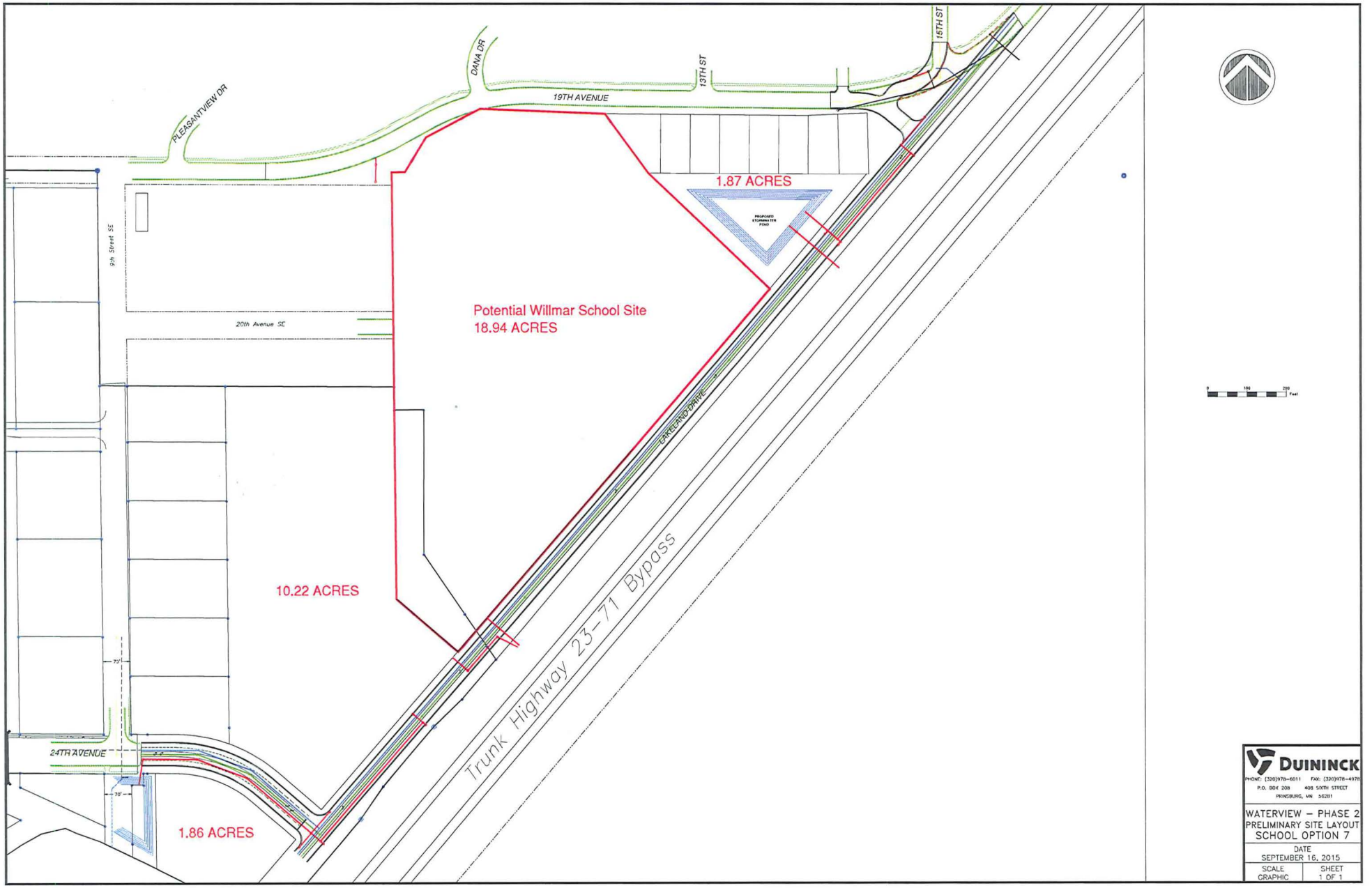
Sincerely,

Jason Ver Steeg, P.E.

P.O. Box 208, 408 6th Street, Prinsburg, Minnesota 56281-0208 (320) 978-6011 FAX (320) 978-4978

Appendix A

Overall Site Layout



DUININCK
PHONE: (320)978-6011 FAX: (320)978-4978
P.O. BOX 208 405 SIXTH STREET
PRINSBURG, MN 56281

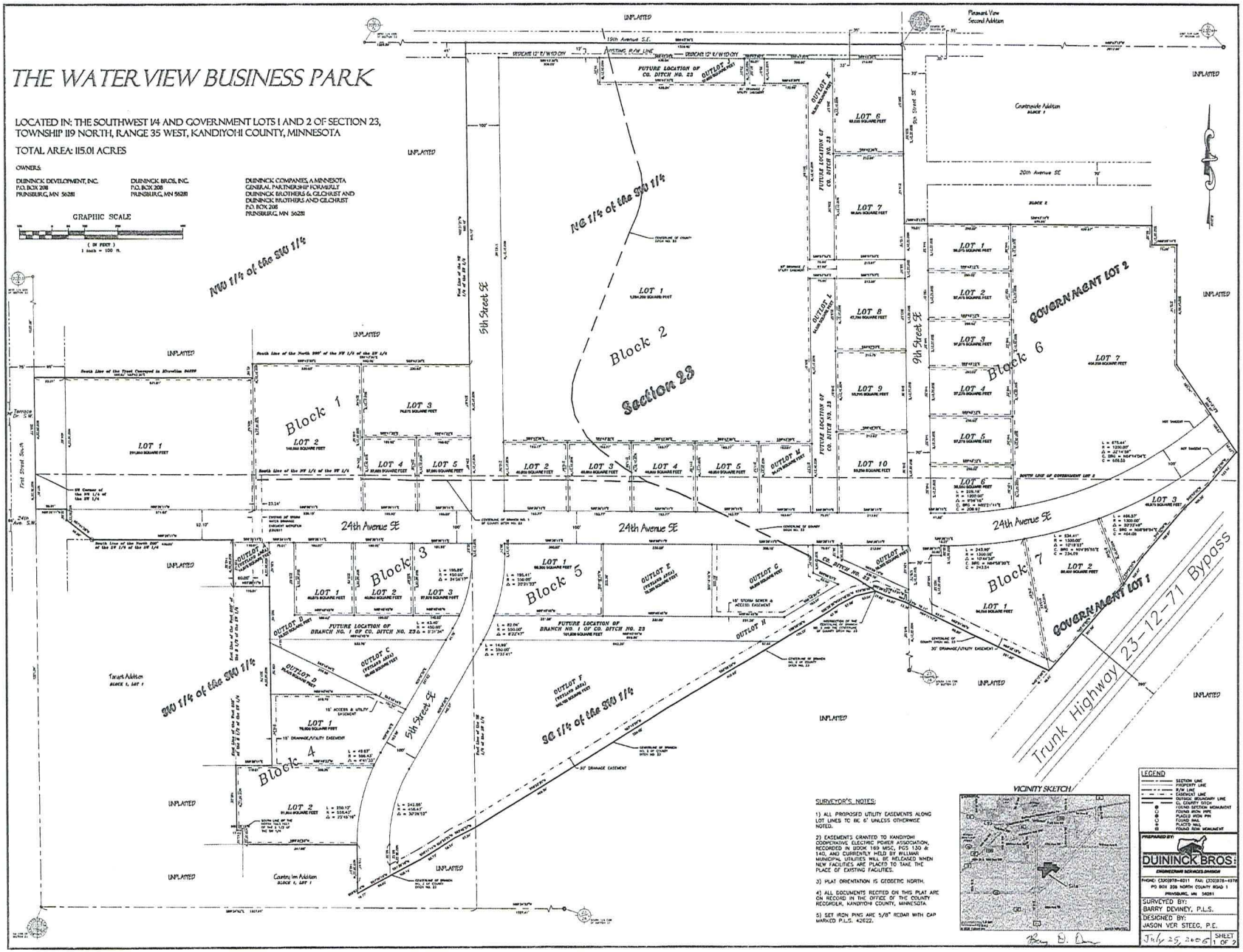
WATERVIEW – PHASE 2
PRELIMINARY SITE LAYOUT
SCHOOL OPTION 7

DATE
SEPTEMBER 16, 2015

SCALE	SHEET
GRAPHIC	1 OF 1

Appendix B

Original Water View Plat


THE WATER VIEW BUSINESS PARK
LOCATED IN: THE SOUTHWEST 1/4 AND GOVERNMENT LOTS 1 AND 2 OF SECTION 23, TOWNSHIP 119 NORTH, RANGE 35 WEST, KANDIYOHI COUNTY, MINNESOTA
TOTAL AREA: 115.01 ACRES
OWNERS:
DUININCK DEVELOPMENT, INC. P.O. BOX 208 PRINSBURG, MN 56281
DUININCK BROS, INC. P.O. BOX 208 PRINSBURG, MN 56281
DUININCK COMPANIES, A MINNESOTA GENERAL PARTNERSHIP FORMERLY DUININCK BROTHERS & GILCHRIST AND DUININCK BROTHERS AND GILCHRIST P.O. BOX 208 PRINSBURG, MN 56281
GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.
UNPLATTED
19th Avenue S.E.
EXISTING R/W LINE
PROPOSED 12' E/W TO CITY
FUTURE LOCATION OF CO. DITCH NO. 23
OUTLOT K
OUTLOT L
OUTLOT M
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
Pleasant View Second Addition
Countryside Addition
BLOCK 1
20th Avenue SE
BLOCK 2
9th Street SE
NW 1/4 of the SW 1/4
NE 1/4 of the SW 1/4
SW 1/4 of the SW 1/4
SE 1/4 of the SW 1/4
Block 1
Block 2
Block 3
Block 4
Block 5
Block 6
Block 7
Section 23
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
GOVERNMENT LOT 2
GOVERNMENT LOT 1
First Street South
24th Ave. S.W.
Terrace Dr. S.W.
24th Avenue SE
FUTURE LOCATION OF BRANCH NO. 1 OF CO. DITCH NO. 23
OUTLOT A
OUTLOT B
OUTLOT C
OUTLOT D
OUTLOT E
OUTLOT F
OUTLOT G
OUTLOT H
Tarart Addition
BLOCK 1, LOT 1
Country Inn Addition
BLOCK 1, LOT 1
Trunk Highway 23-12-71 Bypass
SURVEYOR'S NOTES:
1) ALL PROPOSED UTILITY EASEMENTS ALONG LOT LINES TO BE 6' UNLESS OTHERWISE NOTED.
2) EASEMENTS GRANTED TO KANDIYOHI COOPERATIVE ELECTRIC POWER ASSOCIATION, RECORDED IN BOOK 169 MISC, PGS 120 & 140, AND CURRENTLY HELD BY WILLMAR MUNICIPAL UTILITIES WILL BE RELEASED WHEN NEW FACILITIES ARE PLACED TO TAKE THE PLACE OF EXISTING FACILITIES.
3) PLAT ORIENTATION IS GEODETIC NORTH.
4) ALL DOCUMENTS RECITED ON THIS PLAT ARE ON RECORD IN THE OFFICE OF THE COUNTY RECORDER, KANDIYOHI COUNTY, MINNESOTA.
5) SET IRON PINS ARE 5/8" RCDAR WITH CAP MARKED P.L.S. 42622.
VICINITY SKETCH
LEGEND
SECTION LINE
PROPERTY LINE
R/W LINE
EASEMENT LINE
DISTRICT BOUNDARY LINE
C.L. COUNTY DITCH
FOUND SECTION MONUMENT
FOUND IRON PIPE
FOUND IRON PIN
FOUND MAG
PLACED MAG
FOUND BOW MONUMENT
PREPARED BY:
DUININCK BROS.
ENGINEERING & SURVEYING DIVISION
PHONE: (320)978-8211 FAX: (320)978-8378
PO BOX 208 NORTH COUNTY ROAD 1
PRINSBURG, MN 56281
SURVEYED BY:
BARRY DEVINEY, P.L.S.
DESIGNED BY:
JASON VER STEEG, P.E.
July 25, 2006
SHEET 1 OF 2

Appendix C

Tax Benefit Analysis

Projected City of Willmar tax benefits due to acceleration of WaterView lot sales and development

Lot Name / Owner	Property Id	Tax Valuation	2015 Tax - City Only	Tax Parcel Size (In Acres)	2015 City Tax/Acre
Undeveloped Lots					
WVBP B1 L2	95-841-0020	$ 121,300	$ 647.48	3.40	$ 190.44
WVBP B1 L3	95-841-0030	$ 73,300	$ 391.26	1.70	$ 230.16
WVBP B1 L4	95-841-0040	$ 43,400	$ 231.66	0.85	$ 272.54
WVBP B1 L5	95-841-0050	$ 43,400	$ 231.66	0.85	$ 272.54
WVBP B2 L2	95-841-0110	$ 36,900	$ 197.09	0.94	$ 209.67
WVBP B2 L3	95-841-0120	$ 36,900	$ 197.09	0.94	$ 209.67
WVBP B2 L4	95-841-0130	$ 36,900	$ 197.09	0.94	$ 209.67
WVBP B2 L5	95-841-0140	$ 36,900	$ 197.09	0.94	$ 209.67
WVBP B2 L6	95-841-0150	$ 88,000	$ 469.73	1.42	$ 330.80
WVBP B2 L7	95-841-0160	$ 110,600	$ 590.37	1.60	$ 368.98
WVBP B2 L8	95-841-0170	$ 57,100	$ 304.79	1.10	$ 277.08
WVBP B2 L9	95-841-0180	$ 63,500	$ 338.95	1.22	$ 277.83
WVBP B2 L10	95-841-0190	$ 63,500	$ 254.61	1.22	$ 208.70
WVBP B3 L2	95-841-0210	$ 47,000	$ 250.88	0.92	$ 272.69
WVBP B3 L3	95-841-0220	$ 45,700	$ 243.94	0.87	$ 280.39
WVBP B4 L1	95-841-0300	$ 52,300	$ 279.17	1.80	$ 155.09
WVBP B4 L2	95-841-0310	$ 57,400	$ 306.39	2.10	$ 145.90
WVBP B5 L1	95-841-0400	$ 60,500	$ 322.94	1.57	$ 205.69
WVBP B6 L1	95-841-0500	$ 40,300	$ 215.11	0.83	$ 259.17
WVBP B6 L2	95-841-0510	$ 42,100	$ 224.72	0.79	$ 284.46
WVBP B6 L3	95-841-0520	$ 41,800	$ 223.12	0.86	$ 259.44
WVBP B6 L4	95-841-0530	$ 41,800	$ 223.12	0.86	$ 259.44
WVBP B6 L5	95-841-0540	$ 41,800	$ 223.12	0.86	$ 259.44
WVBP B6 L6	95-841-0550	$ 31,100	$ 166.01	0.83	$ 200.01
WVBP B6 L7	95-841-0560	$ 237,800	$ 1,425.17	9.28	$ 153.57
WVBP B7 L1	95-841-0600	$ 59,000	$ 314.93	2.16	$ 145.80
WVBP B7 L2	95-841-0610	$ 50,600	$ 270.09	1.85	$ 146.00
WVBP B7 L3	95-841-0620	$ 21,600	$ 115.30	1.14	$ 101.14
Total		$ 1,682,500	$ 9,052.90	43.84	$ 206.50 average
Similar Developed Lots					
ML Miller (Qdoba, Papa Murphys)	95-841-1010	$ 774,600	$ 5,244.61	0.85	$ 6,170.13
Shoppes (Best Buy, Caribou)	95-841-0010	$ 3,340,300	$ 23,500.08	5.32	$ 4,419.01
Walgreens	95-923-8550	$ 1,135,800	$ 7,814.62	1.27	$ 6,153.24
Bremer Bank	95-231-0110	$ 2,128,300	$ 14,876.00	3.06	$ 4,861.44
Country Inn	95-139-0010	$ 1,689,600	$ 7,629.31	1.54	$ 4,954.10
Super 8	95-788-0010	$ 704,600	$ 3,459.00	1.37	$ 2,524.82
		$ 9,773,200	$ 62,523.62	13.41	$ 4,663.17 average

Tax increase factor	22.6
Current tax collections on undeveloped lots	$ 9,052.90
Projected Annual City tax once fully developed	$ 204,434
Increased Annual City tax	$ 195,381

The 28 remaining Water View lots currently pay an annual City tax of $9,053. Based on other similar developed lots in the area, this is expected to grow to $204,434 annually after all lots are fully developed, which is an increase of $195,381 per year. This will produce an increased City tax collection fo $977k, assuming the new school and Lakeland Dr extension would accelerate the Water View Phase 1 full build-out by five years.

CITY OF WILLMAR, MINNESOTA
REQUEST FOR COMMITTEE ACTION

Agenda Item Number: 5

Meeting Date: September 23, 2015

Attachments: ☒ Yes No

CITY COUNCIL ACTION

Date: October 5, 2015

☐ Approved ☐ Denied
☐ Amended ☐ Tabled
☐ Other

Originating Department: Wastewater Treatment

Agenda Item: Wastewater Pretreatment Program Consultant Services Proposals

Recommended Action: To award the consultant services of the Pretreatment Program to Bolton & Menk, Inc. and authorize signatures to execute an agreement in the amount of $29,875.

Background/Summary: Staff solicited proposals from engineering firms for the development of an MPCA Delegated Pretreatment Program as required by the Wastewater Treatment NPDES Permit. Staff met and reviewed 2 proposals on September 16th; Bolton & Menk and SEH. Bolton & Menk, Inc. is the recommended firm based on the evaluation.

Alternatives: Reject all proposals

Financial Considerations: The 2015 Wastewater Treatment Budget includes sufficient funds to approve and award the contract to Bolton & Menk.

Preparer: Sean E. Christensen, P.E.
Public Works Director

Signature:

Comments:

WILLMAR

PUBLIC WORKS DEPARTMENT
DIRECTOR/CITY ENGINEER

333 SW 6TH ST
WILLMAR, MN 56201
320-235-4202
FAX 320-235-4917

August 2015

CITY OF WILLMAR

CONSULTANT SERVICES REQUEST FOR PROPOSALS
CITY OF WILLMAR WASTEWATER PRETREATMENT PROGRAM

INTRODUCTION

The City of Willmar is requesting proposals (RFP) from experienced engineering firms interested in performing professional services related to development of a MPCA Delegated Pretreatment Program as required by the City of Willmar Wastewater Treatment NPDES Permit MN0025259.

OBJECTIVES

The objectives of setting up the Delegated Pretreatment Program for the City of Willmar Wastewater Treatment Facility include submittal of the following:

- Complete work necessary to meet the schedule and requirements prescribed in the City's NPDES permit
- Preliminary Delegated Pretreatment Program by December 9, 2015
- Final Delegated Pretreatment Program by June 9, 2016

ENGINEER INFORMATION

Submittal of RFP

All proposals must be received no later than 4:30 p.m. September 15, 2015. All proposals received after that time and date will not be considered.

Consultants are required to submit six (6) copies of their proposal in an envelope labeled "Sealed Proposal: City of Willmar Delegated Pretreatment Program Development 4:30 p.m. September 15, 2015". Proposals are to be mailed or delivered to:

City of Willmar, Minnesota
City Clerk's Office
333 6th St SW
Willmar, MN 56201

For questions regarding the general scope of work or any submittal requirements for the RFP contact Mr. Sean E. Christensen, P.E. at (320) 214-5169 or email schristensen@willmarmn.gov

Format for RFP

The proposal submitted should follow the outline below and provide the following information:

A cover letter shall be included, signed and dated by an authorized representative of the firm submitting the proposal, presenting the firm to the City of Willmar. This letter may

describe the firm's applicable background and experience, including size, history, personnel and special expertise (maximum of three pages).

Provide qualifications of the project team and technical personnel that will be assigned to work on this project (maximum of three pages).

A. Provide an organizational chart depicting the personnel to be used on the project, their area of expertise, registration, special training, chain of command, and office(s) location. Identify how much of each person's time will be spent on the project (maximum of three pages).
   SPECIAL NOTE: AT LEAST ONE MEMBER OF THE DESIGN TEAM SHALL HAVE A RECORD OF MPCA DELEGATED PRETREATMENT PROGRAM DEVELOPMENT.
B. Provide resume of the above personnel, including specifics related project experience and references (put in proposal Appendix).
C. Provide a description of in house facilities and resources (i.e. hardware, design software, etc.) and support services that may contribute to the firm's ability to provide requested services.
D. Provide a brief but specific outline of the firm's previous projects that included similar projects. Identify the time frame (beginning and completion date), cost estimate, and completed project costs for each project (maximum of four pages).
E. Describe how the firm proposes to perform the project as defined in the scope of work. This description should demonstrate the firm's unique capabilities, innovative approaches, and/or special methodologies to accomplish the project. Provide a projected time frame for the project that demonstrates the firm's competence to do the work with available manpower and resources taking into account present and projected work-load.
   NOTE: THIS DESCRIPTION SHOULD PROVIDE A SYSTEMATIC AND METHODICAL DESCRIPTION OF HOW THE SCOPE OF WORK WILL BE ACCOMPLISHED, SUITABLE FOR INCLUSION IN THE FINAL CONTRACT DOCUMENT.

List references of all the firm's clients for the past five (5) years for projects that deal with similar work as proposed. (Put in Appendix.)

FEE

A separate sealed fee estimate must be submitted in addition to the proposal. This fee estimate will be non-binding and non-evaluated. After the selection committee chooses the highest ranking firms, negotiations for a fee will begin using the estimate submitted. This process allows the fee not to be used in the selection process but the City would have information to negotiate an equitable fee with the firm.

The fee shall include a breakdown of the firm's fee based on the phases of work proposed in the methodology, as they relate to the scope of services.

SELECTION PROCESS

Selection Committee

The selection committee will include City of Willmar personnel.

Selection Criteria

All proposals submitted will be evaluated in accordance with the following factors:

Firm Specific (Maximum 100 Points)

A. Quality of Firm and Personnel (Maximum 30 Points)
   a) Related experience on similar projects
   b) Qualifications, experience and training of staff to be assigned to this project
B. Capability and Capacity of Firm (Maximum 35 Points)
   a) Ability to meet all technical requirements
   b) Capability of firm to meet project time requirements
   c) Capability of recommended system and equipment to meet project requirements
C. Record of past performance of firm (Maximum 30 Points)
   a) Quality of work, on schedule performance, cost performance, cooperation with clients.
D. Location (Maximum 5 Points)
   a) Firms with office locations closer to Willmar, Minnesota will receive more points than firms located further from Willmar, Minnesota.

Project Specific **(Maximum 100 Points)**

A. Ability of firm to identify project-specific issues (Maximum 20 Points)
B. Ability of firm to communicate proposed approach to this project (Maximum 25 Points)
C. Clarity of firm's response and understanding of City's project requirements (Maximum 30 Points)
D. Organization of the firm's work plan (Maximum 25 Points)

Selection

Following the review and evaluation of all RFP submittals, the list of interested firms will be narrowed to an appropriate short list. Those selected will then be reviewed for their submitted proposal. An interview may be requested to aid in the selection process.

Upon finalization of the selection process and verbal notification of the selected firm, the selection committee or representative will contact the firm to discuss the scope of work and begin negotiation in a contract agreement.

The award will be made to the qualified firm whose proposal is deemed most advantageous to the City of Willmar.

This solicitation is being offered in accordance with City requirements governing recruiting of professional services. Accordingly, the City of Willmar reserves the right to negotiate an agreement based on fair and reasonable compensation for scope of work and services proposed, as well as the right to reject any and all responses deemed unqualified, unsatisfactory or inappropriate. The City also reserves the right to amend the scope of the project should such action be in the best interest of the City of Willmar.

SCOPE OF WORK AND TECHNICAL REQUIREMENTS

Responding firms should develop a detailed scope of work suitable for inclusion in a final contract. At a minimum, the following items should be addressed in the scope of work. The following list should not be considered as either all-inclusive or sequentially ordered. Firms should draw from their experience and expertise to expand on items to be considered. As appropriate, proposed work items should be arranged in a logical sequence.

Scope of services for this project may include but not be limited to:

A. Operating Policy Rules and Other Legal Authority
B. WWTF Organization, Program Procedures, and Staffing
C. Data and Plant Information Review for Local Limits Calculations
D. Local Limits calculations
E. Coordination and Revisions requested from MPCA Review

More particular as follows:

Preliminary Delegated Pretreatment Program Development Submittal

1.1 By 180 days after permit reissuance, the Permittee shall submit the following information and evaluations to facilitate development of an approvable delegated pretreatment program.

a. An evaluation of present legal authority compared to the required legal authority for a delegated pretreatment program.
b. Copies of all existing documents relied on for legal authority.
c. A description and evaluation of POTW organization and its suitability for operating a delegated pretreatment program.
d. A preliminary evaluation of funding levels, equipment and manpower needed for operating a delegated pretreatment program.
e. A preliminary evaluation of existing program procedures and new program procedures needed to operate a delegated pretreatment program.
f. A preliminary draft of an Enforcement Response Plan (ERP) outlining authorities, personnel and actions to be taken in response to non-compliance by industrial users. Note that the City has a Draft ERP completed for your review.
g. A draft of the technical calculations needed to set and justify local limits.
h. A list of Significant Industrial Users (SIUs) and Categorical Industrial Users (CIUs) with characterization and categorization. (Minn.R.7049.0810 through 7049.0870).

Final Delegated Pretreatment Program Development Submittal

2.1 By 365 days after permit issuance, the Permittee shall submit a request for pretreatment program delegation and approval. The submittal shall include the following in final approvable form.

a. A statement of legal authority indicating that the permittee has the required legal authorities.
b. Copies of all ordinances, agreements, and other legal authority relied on by the permittee. If any document relied on is not final at the time or submittal, it must come with a statement, signed by the proper authority, stating that the authority intends to finalize the document once it is approved.
c. A description of the POTW organization which identifies personnel or positions responsible for operating all aspects of the delegated pretreatment program.
d. A description of funding levels, equipment and manpower which will be used to operate the delegated pretreatment program.
e. A description of the program procedures which will be used to operate the delegated pretreatment program.
f. An Enforcement Response Plan outlining authorities, personnel and actions that will be taken in response to non-compliance by industrial users. Note that the Draft ERP completed by the City might be considered Final as is.
g. Local limits technical calculations justifying the local limits included in the final legal authority. (Minn.R. 7049.0810 through 7049.0870).

CONSULTANT DELIVERABLES

Preliminary Delegated Pretreatment Program Submittals
Final Delegated Pretreatment Program Submittals
Any items identified in your proposed detailed scope of services

CITY RESOURCES AVAILABLE

Draft Enforcement Response Plan (ERP)
Draft Ordinance Changes from 2013
Draft Statement of Legal Authority from 2013
NPDES Permit MN0025259
Other pertinent data requested

PROPOSED PROJECT SCHEDULE

RFP to Consultants	August 24, 2015
RFP Submittal Deadline	September 15, 2015
Selection & negotiation of Firm	September 24, 2015
Public Works Public Safety Mtg	September 29, 2015
Council Approval	October 5, 2015
Prepare/Negotiate/Approve Agreement	October 6, 2015
Notice to Proceed	October 13, 2015
Preliminary Submittal	December 9, 2015
Final submittal	June 9, 2016

CITY OF WILLMAR, MINNESOTA
REQUEST FOR COMMITTEE ACTION

Agenda Item Number: 10

Meeting Date: September 29, 2015

Attachments: ☒ Yes No

CITY COUNCIL ACTION

Date: October 5, 2015

☐ Approved ☐ Denied
☐ Amended ☐ Tabled
☐ Other

Originating Department: Waste Treatment

Agenda Item: Continuing Professional Services Agreement with Donohue

Recommended Action: Approve the continuing Professional Services Agreement with Donohue for the NPDES permit assistance, SIU permit assistance, wastewater operations and engineering assistance.

Background/Summary: Donohue is proposing to continue a Professional Services Agreement for the following:

- NPDES Permit Assistance- This is the first step in our approved 20 year compliance schedule. Donohue will work with the City to prepare a document to very easily move forward on our own.
- SIU Permit Assistance
- Wastewater Engineering and Operations Assistance

Alternatives: N/A

Financial Considerations: Compensation for the services will be on a task order basis and is included in the Wastewater Treatment budget.

Preparer: Sean E. Christensen, P.E.
Public Works Director

Signature:

Comments:

DONOHUE

CONTINUING PROFESSIONAL SERVICES AGREEMENT

This Agreement is by and between:

City of Willmar (Owner)
333 6th Street SW
Willmar, MN 56201

and

Donohue & Associates, Inc. (Donohue)
3311 Weeden Creek Road
Sheboygan, WI 53015

Who agree as follows:

Owner hereby engages Donohue to perform the Services set forth in Part I for the compensation set forth in Part III. Donohue will be authorized to commence the Services upon execution and receipt of this Agreement from Owner. Owner and Donohue agree that this signature page, together with Parts I through IV attached, constitute the entire Agreement for this Project.

APPROVED FOR OWNER

By: _____

Printed Name: _____

Title: _____

Date: _____

APPROVED FOR DONOHUE

By: _____

Printed Name: Michael W. Gerbitz

Title: Senior Vice President

Date: _____

PART I
PROJECT DESCRIPTION/SCOPE OF SERVICES/TIMING

A. PROJECT DESCRIPTION

Donohue shall perform the Services requested by the Owner and agreed to by Donohue. Such services shall be defined with a written Task Order including Scope of Services, Project Timing, and Compensation. The Task Order will be signed by Donohue and the Owner, and shall be incorporated into this Agreement as a Task Order. This Agreement shall be automatically renewed annually on the anniversary of its original execution. Either Donohue or Owner may terminate this Agreement by giving the other party written notice at least 30 days prior the renewal date.

PART II
OWNER RESPONSIBILITIES

A. In addition to other responsibilities of Owner set forth in this Agreement and each Task Order, Owner shall:

1. Identify a person authorized to act as the Owner's representative to respond to questions and make decisions on behalf of Owner, accept completed documents, approve payments to Donohue, and serve as liaison with Donohue as necessary for Donohue to complete its Services.

2. Furnish to Donohue copies of existing documents and data pertinent to Donohue's Scope of Services, including but not limited to and where applicable: design and record drawings for existing facilities; property descriptions, land use restrictions, surveys, geotechnical and environmental studies, or assessments.

3. Provide to Donohue existing information regarding the existence and locations of utilities and other underground facilities.

4. Provide Donohue safe access to premises necessary for Donohue to provide the Services.

5. Inform Donohue whenever Owner observes or becomes aware of a Hazardous Environmental Condition, as defined in Part IV.3. of this Agreement, that may affect Donohue's Scope of Services or time for performance.

PART III
COMPENSATION, BILLING AND PAYMENT

A. Owner shall pay Donohue for Services in accordance with a project specific negotiated fee. Compensation will be designated in each Task Order and will apply only to the Task Order in which it is designated.

B. Donohue will be compensated for professional services on a Task Order basis. Compensation will be either on a lump sum basis or a not-to-exceed basis in accordance with Donohue's standard chargeout rates in effect at the time the Services are performed. Routine expenses will be billed at cost and subconsultant costs will include a 10% markup.

C. Donohue will bill Owner monthly, with net payment due in 30 days. For lump sum Task Orders, the invoice will contain a calculation of the amount of lump sum due based on percentage of Project completed during the billing period.

D. Donohue will notify Owner if Project scope changes require modifications to the Task Order contract value. Services relative to scope changes will not be initiated without authorization from Owner.

PART IV
CITY OF WILLMAR, MINNESOTA
STANDARD TERMS AND CONDITIONS

1. STANDARD OF CARE. Donohue's Services shall be performed in accordance with the standard of professional practice ordinarily exercised by the applicable profession under similar circumstances at the same time and in the locality where the Services are performed. Professional services are not subject to, and Donohue does not provide, any warranty or guarantee, express or implied. Any warranties or guarantees contained in any purchase orders, requisitions, or notices to proceed issued by Owner are void and not binding upon Donohue.

2. CHANGE OF SCOPE. The Scope of Services set forth in this Agreement is based on facts known at the time of execution of this Agreement, including, if applicable, information supplied by Owner. For some projects involving conceptual or process development services, scope may not be fully definable during initial phases. As the project progresses, facts discovered may indicate that the scope must be redefined. Donohue will promptly provide Owner with a written amendment to this Agreement to recognize such change, which shall be deemed accepted if not objected to within 15 days of receipt by Owner.

3. HAZARDOUS ENVIRONMENTAL CONDITIONS. Unless expressly stated otherwise in the Scope of Services (Part I) of this Agreement, Donohue's scope of services does not include any services relating to a Hazardous Environmental Condition, including but not limited to the presence at the Project site of asbestos, PCBs, petroleum, hazardous substances or any other pollutant or contaminant, as those terms are defined in pertinent federal, state, and local laws. In the event Donohue or any other party encounters a Hazardous Environmental Condition, Donohue may at its option suspend performance of services until Owner: a) retains appropriate consultants or contractors to identify and remediate or remove the Hazardous Environmental Condition; and b) warrants that the Project site is in full compliance with all applicable environmental laws.

4. SAFETY. Unless specifically included as a service to be provided under this Agreement, Donohue specifically disclaims any authority or responsibility for general job site safety, or the safety of persons (other than Donohue employees) or property.

5. DELAYS. If performance of Donohue's Services is delayed through no fault of Donohue, Donohue shall be entitled to an extension of time equal to the delay and an equitable adjustment in compensation.

6. TERMINATION/SUSPENSION. Either party may terminate this Agreement upon 30 days written notice to the other party. Owner shall pay Donohue for all Services, including profit relating thereto, rendered prior to termination, plus any expenses of termination.

If either party defaults in its obligations under this Agreement (including Owner's obligation to make required payments), the non-defaulting party may, after giving seven days written notice, suspend performance under this Agreement. The non-defaulting party may not suspend performance if the defaulting party commences to cure such default within the seven-day notice period and completes such cure within a reasonable period of time.

Donohue may terminate this Agreement upon seven days written notice if: a) Donohue believes that Donohue is being requested by Owner to perform services contrary to law or Donohue's responsibilities as a licensed professional; or b) Donohue's Services for the Project are delayed, suspended, or interrupted for a period of at least 90 days for reasons not attributable to Donohue's performance of Services; or c) Owner has failed to pay any amount due and owing to Donohue for a period of at least 60 days. Donohue shall have no liability to Owner on account of such termination.

7. OPINIONS OF CONSTRUCTION COST. Any opinion of construction costs prepared by Donohue is supplied for the general guidance of the Owner only. Since Donohue has no control over competitive bidding or market conditions, Donohue cannot guarantee the accuracy of such opinions as compared to contract bids or actual costs to Owner.

8. RELATIONSHIP TO CONTRACTORS. Donohue shall serve as Owner's professional representative for the Services, and may make recommendations to Owner concerning actions relating to Owner's contractors. Donohue specifically disclaims any authority to direct or supervise the means, methods, techniques, sequences or procedures of construction selected or used by Owner's contractors. Donohue neither guarantees the performance of any construction contractor nor assumes responsibility for any contractor's failure to perform in accordance with the construction contract documents.

9. CONSTRUCTION REVIEW. For projects involving construction, Owner acknowledges that under generally accepted professional practice, interpretations of construction documents in the field are normally required, and that performance of construction-related services by the design professional for the project permits errors or omissions to be identified and corrected at comparatively low cost. Owner agrees to hold Donohue harmless from any claims resulting from performance of construction-related professional services by persons other than Donohue.

10. INSURANCE. Donohue will maintain Professional Liability, Commercial General Liability, Automobile, Worker's Compensation, and Employer's Liability insurance coverage in amounts in accordance with legal and Donohue's business requirements. Donohue shall provide to Owner certificates demonstrating such coverage upon request. For projects involving construction, Owner agrees to protect Donohue's interests through appropriate property and liability insurance, and to require its construction contractor, if any, to include Donohue as an additional insured on Contractor's policies relating to the Project. Donohue's coverages referenced above shall, in such case, be excess over contractor's primary coverage.

11. INDEMNIFICATION. Donohue shall indemnify and save harmless Owner from and against loss, liability, claims, and damages sustained by Owner due to bodily injury or death to persons or damage to tangible property to the extent caused by the willful misconduct or negligence of Donohue, its agents, or employees.

To the fullest extent permitted by law, Owner shall defend, indemnify and save harmless Donohue, its agents, employees, and representatives from and against loss, liability, claims, and damages (including reasonable attorneys' and consultants' fees) arising from or relating to the Project in any way, except to the extent that such loss, liability, claims or damages are caused by the willful misconduct or negligence of Donohue, its agents or employees. Owner also agrees to require its construction contractor, if any, to include Donohue as an: a) indemnitee under any indemnification obligation to Owner; and b) additional insured under its Commercial General Liability policy.

To the fullest extent permitted by law, Owner shall indemnify, defend, and hold harmless Donohue, its employees, agents, and representatives, and Donohue's subconsultants, from and against any loss, liability, claims and damages caused by, arising out of, or resulting from the presence at the Project site of asbestos, PCBs, petroleum, hazardous substances, or any other pollutant or contaminant, as those terms are defined in pertinent federal, state, and local laws, except to the extent that the loss, liability, or damages are caused solely by the willful misconduct or negligence of Donohue, its agents or employees.

12. LIMITATIONS OF LIABILITY. No owner, shareholder, principal, employee or agent of Donohue shall have individual liability to Owner; and Owner covenants and agrees not to sue any such individual in connection with the Services under this Agreement.

Owner agrees that, to the fullest extent permitted by law, Donohue's total liability to Owner for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in any way related to the Project or this Agreement from any causes including, but not limited to, Donohue's negligence, errors, omissions, strict liability, or breach of contract, shall not exceed the proceeds available from Donohue's professional liability insurance policy for a maximum of $3,000,000 per occurrence and $3,000,000 aggregate. No additional compensation will be paid to Donohue for this increased limit. Donohue agrees to maintain as a minimum this identified insurance limit for the duration of this Project. If Owner desires a limit of liability greater than that provided above, Owner and Donohue shall include in Part III of this Agreement the amount of such limit and the additional compensation to be paid to Donohue for assumption of such additional risk.

IN NO EVENT AND UNDER NO CIRCUMSTANCES SHALL DONOHUE BE LIABLE TO OWNER FOR CONSEQUENTIAL, INCIDENTAL, INDIRECT, SPECIAL OR PUNITIVE DAMAGES.

13. OWNERSHIP AND REUSE OF PROJECT DOCUMENTS. All documents and other deliverables, in all media, prepared by or on behalf of Donohue in connection with this Agreement are instruments of service, and Donohue shall hold the copyright to and all other ownership and property interests in such instruments of service. Owner shall not reuse any such documents or other deliverables pertaining to the Project for any purpose other than that for which such documents or deliverables were originally prepared. Owner shall not cause or allow the alteration of such documents or deliverables without written verification and approval by Donohue for the specific purpose intended, and any alteration by Owner shall be at the Owner's sole risk. Owner agrees to defend, indemnify, and hold harmless Donohue from all claims, damages, and expenses (including reasonable attorneys' and consultants' fees), arising out of such reuse or alteration by Owner or others acting through Owner.

14. ELECTRONIC MEDIA. Copies of documents that may be relied upon by Owner are limited to printed copies that are signed and sealed by Donohue. Files or information in electronic media are furnished by Donohue to Owner solely for convenience of Owner. If there is a discrepancy between electronic files and printed copies, the printed copies govern.

Because data stored in electronic media format can deteriorate or be modified, the Owner agrees to perform acceptance tests within 60 days. Donohue will not be responsible to correct any errors or for maintenance of documents in electronic media format after the acceptance period.

15. AMENDMENT. This Agreement, upon execution by both parties hereto, can be amended only by a written instrument signed by both parties, except as provided in Paragraph 2.

16. SUCCESSORS, BENEFICIARIES AND ASSIGNEES. This Agreement shall be binding upon and inure to the benefit of the owners, administrators, executors, successors, and legal representatives of the Owner and Donohue.

The rights and obligations of this Agreement cannot be assigned by either party without written permission of the other party. This Agreement shall be binding upon and inure to the benefit of any permitted assignees.

17. NO THIRD-PARTY BENEFICIARY. Nothing contained in this Agreement, nor the performance of the parties hereunder, is intended to benefit, nor shall inure to the benefit of, any third party, including Owner's construction contractors, if any.

18. STATUTE OF LIMITATION. To the fullest extent permitted by law, parties agree that, except for claims for indemnification, the time period for bringing claims under this Agreement shall expire one year after Project completion.

19. DISPUTE RESOLUTION. Owner and Donohue shall provide written notice of a dispute within a reasonable time and after the event giving rise to the dispute. Owner and Donohue agree to negotiate any dispute between them in good faith for a period of 30 days following such notice. Owner and Donohue may agree to submit any dispute to mediation or binding arbitration, but doing so shall not be required or a prerequisite to initiating a lawsuit to enforce this Agreement.

20. CONTROLLING LAW. This Agreement is governed by the law of the state in which the Project is located.

21. NO WAIVER. No waiver by either party of any default by the other party in the performance of any particular section of this Agreement shall invalidate any other section of this Agreement or operate as a waiver of any future default, whether like or different in character.

22. SEVERABILITY. The various terms, provisions and covenants herein contained shall be deemed to be separate and severable, and the invalidity or unenforceability of any of them shall not affect or impair the validity or enforceability of the remainder.

23. AUTHORITY. The persons signing this Agreement warrant that they have the authority to sign as, or on behalf of, the party for whom they are signing.

24. SURVIVAL. All express representations, indemnifications and limitations of liability included in this Agreement will survive its completion or termination for any reason.

Date: April 2006

DONOHUE

TASK ORDER NO. 1 TO
CONTINUING PROFESSIONAL SERVICES AGREEMENT
Between City of Willmar, MN (Owner) and
Donohue & Associates, Inc. (Donohue)
Date of Original Executed Agreement: TBD

TASK ORDER DESCRIPTION

This Task Order covers services related to three items: NPDES Permit Assistance, SIU Permit Assistance, and Wastewater Operations and Engineering Assistance.

A. SCOPE OF SERVICES

1. **NPDES Permit Assistance: SDRP and CWMPSR** – The Owner is required to submit a Salty Discharge Reduction Plan (SDRP) and Comprehensive Water Management Plan Status Report (CWMPSR) each year until it ultimately complies with the Salty Discharge Water Quality Based Effluent Limits (WQBELs) in the Year 2035. The first SDRP/CWMPSR must be submitted in early Year 2016. Donohue will assist the Owner with the production of the Year 2016 SDRP/CWMPSR and the development of an SDRP/CWMPSR framework. The intent of these services is to work collaboratively with the Owner and the Minnesota Pollution Control Agency (MPCA) to establish an SDRP/CWMPSR framework that will allow the Owner to develop post-Year 2016 SDRP/CWMPSRs with minimal assistance from others. Specific services related to this effort are listed below.
   - Conduct a kickoff meeting with the Owner to review the specific SDRP/CWMPSR requirements and begin developing a "Workplan" for SDRP/CWMPSR development. The Workplan will outline the specific tasks required to develop an SDRP/CWMSPR and define the parties responsible for those tasks.
   - Develop and submit an SDRP/CWMPSR Workplan to the Owner.
   - Develop and submit an SDRP data collection program to the Owner.
   - Develop and submit an Existing Conditions Memorandum documenting existing conditions related and relevant to the salty discharge matter. This Memorandum will provide information ultimately required in the SDRP: potential sources of salty discharge parameters, historical influent and effluent data, historical wastewater treatment facility (WWTF) removal performance, and an evaluation of past and present WWTF operations to enhance removal performance.
   - Develop and submit a DRAFT SDRP. The SDRP will include the information contained in the Existing Conditions Memorandum, sources of salty discharge parameters, strategies for controlling or reducing salty parameter discharges from those sources, and salty parameter management and reduction goals for the next 5, 10, and 15 years. It will also include a framework for future reporting that will include a summary of activities that the Owner has completed during the previous 12-month period, a schedule of activities planned for the next 12-month period, and an assessment of the Owner's compliance status with the previous SDRP.
   - Conduct a meeting to review the DRAFT SDRP and receive Owner comments.

- Incorporate mutually-agreed-to comments related to the DRAFT SDRP and submit a FINAL SDRP.
- Develop and submit a DRAFT CWMPSR. The CWMPSR will include the information the information required by the NPDES Permit: summary of activities completed during the 12-month period including an interpretation of the successes/reductions in pollutants; the amount of money spent on implementation of the CWMP; a schedule of activities expected to be completed in the next 12-month period; and revisions to the CWMP with an explanation of the need for those revisions.
- Conduct a meeting to review the DRAFT CWMPSR and receive Owner comments.
- Incorporate mutually-agreed-to comments related to the DRAFT CWMPSR and submit a FINAL CWMSPR.

2. **SIU Permit Assistance** – The Owner receives a significant wastewater mass and volume loading from a significant industrial user (SIU) that produces food products. The wastewater discharge agreement between the Owner and the SIU will soon expire. Donohue will work collaboratively with the Owner and SIU to develop the next Agreement. Specific services related to this effort are summarized below.
   - Conduct a meeting between the Owner and SIU to discuss the soon-to-expire agreement and elements of the agreement that the parties may want to revise in the subsequent agreement.
   - Develop and submit a DRAFT agreement for review by the Owner and SIU.
   - Discuss the DRAFT agreement with the Owner and SIU.
   - Incorporate mutually-agreed-to revisions and provide a FINAL agreement.
3. **Wastewater Operations and Engineering Assistance** – The Owner occasionally needs assistance related to the operation and maintenance of its WWTF. Examples include alternative chemical additive evaluations, chemical addition calculations, operating performance evaluations, equipment maintenance alternatives, and engineering assessments. Donohue will provide up to 40 hours of assistance.

B. PROJECT TIMING

1. **NPDES Permit Assistance: SDRP and CWMPSR** – Donohue will perform these services to accommodate the Year 2016 Compliance Schedule in the NDES Permit. Donohue is authorized to perform these services when this Task Order is executed.
2. **SIU Permit Assistance** – Donohue is only authorized to perform these services after receive written authorization from the Owner (City Engineer or Wastewater Superintendent). Donohue will perform these services in accordance with the schedule outlined in the authorization.
3. **Wastewater Operations and Engineering Assistance** – Donohue is only authorized to perform these services after receive written authorization from the Owner (City Engineer or Wastewater Superintendent). Donohue will perform these services in accordance with the schedule outlined in the authorization.

C. COMPENSATION

1. **NPDES Permit Assistance: SDRP and CWMPSR** – Not to exceed $49,975. See Attachment 1.
2. **SIU Permit Assistance** – Not to exceed $8,845. See Attachment 1. Requires written authorization.
3. **Wastewater Operations and Engineering Assistance** – Not to exceed $6,550. See Attachment 1. Requires written authorization.

APPROVED FOR OWNER

By: _____

Printed Name: _____

Title: _____

Date: _____

APPROVED FOR DONOHUE

By: _____

Printed Name: Michael W. Gerbitz, PE

Title: Senior Vice President

Date: _____

City of Willmar, Minnesota
Amendment 1: Wastewater Program Assistance 2015
Fee Estimate Summary
Donohue & Associates, Inc.

Task	Gerbitz/PM $ 235	Principal Engineer $ 185	Senior Engineer $ 165	Junior Engineer $ 135	Operations $ 100	Total Hours	Total Labor	Travel	Printing	Total Cost
NPDES Permit Assistance	**85**	**-**	**50**	**150**	**-**	**285**	**$ 48,475**	**$ 1,200**	**$ 300**	**$ 49,975**
Prepare for and Conduct Kickoff Meeting	15		15			30	$ 6,000	$ 600		$ 6,600
Develop Workplan	10		10			20	$ 4,000			$ 4,000
Develop Data Collection Program	10			20		30	$ 5,050			$ 5,050
Compile and Review Collected Data	5			20		25	$ 3,875			$ 3,875
Document Existing Conditions: Sources and Treatment Facility Operations	10			40		50	$ 7,750			$ 7,750
Develop DRAFT	20		10	60		90	$ 14,450		$ 150	$ 14,600
Conduct Meeting to Review DRAFT	10		10			20	$ 4,000	$ 600		$ 4,600
Develop FINAL	5		5	10		20	$ 3,350		$ 150	$ 3,500
SIU Permit Assistance	**35**	**-**	**-**	**-**	**-**	**35**	**$ 8,225**	**$ 620**	**$ -**	**$ 8,845**
Attend Meeting with City and SIU	10					10	$ 2,350	$ 620		$ 2,970
Provide DRAFT SIU Permit	10					10	$ 2,350			$ 2,350
Provide Communication with City and SIU	10					10	$ 2,350			$ 2,350
Provide FINAL SIU Permit	5					5	$ 1,175			$ 1,175
Wastewater Engineering and Operations Assistance	**10**	**10**	**-**	**10**	**10**	**40**	**$ 6,550**	**$ -**	**$ -**	**$ 6,550**
Provide Miscellaneous Assistance as Requested and Authorized	10	10		10	10	40	$ 6,550			$ 6,550
Total	130	10	50	160	10	360	$ 63,250	$ 1,820	$ 300	**$ 65,370**
Total Labor Dollars by Labor Class	$ 30,550	$ 1,850	$ 8,250	$ 21,600	$ 1,000					

CITY OF WILLMAR, MINNESOTA
REQUEST FOR COMMITTEE ACTION

Agenda Item Number: 7

Meeting Date: September 29, 2015

Attachments: ☒ Yes No

CITY COUNCIL ACTION

Date: October 5 2015

☐ Approved ☐ Denied
☐ Amended ☐ Tabled
☐ Other

Originating Department: Civic Center

Agenda Item: Civic Center HVAC Change Order No. 1

Recommended Action: Approve the Civic Center HVAC Change Order No. 1 in the amount of $19,567.00.

Background/Summary: The City contracted with Stevens Engineering for the Mechanical Systems Evaluation Study in August, 2014. The evaluation provided a refrigeration and mechanical assessment of the Civic Center HVAC system. The design and construction related services contract with Stevens was approved by the Council in June, 2015 and details Phase I of the project, which includes the replacement of the dehumidification system in the Cardinal and Blue Line Arena, infrared heater adjustments and updating electrical equipment. A heating section to the new dehumidification unit for the Cardinal Arena was needed to supply primary heating to the arena, resulting in Change Order No. 1 in the amount of $19,567.00.

Alternatives: N/A

Financial Considerations: The 2015 CIP includes funds for the Civic Center HVAC project and is within the project budget.

Preparer: Sean E. Christensen, P.E.
Public Works Director

Signature:

Comments:

Stevens
ENGINEERS · PLANNERS · SURVEYORS

September 21, 2015

Mr. Sean Christensen
City of Willmar
333 6th Street SW
P.O. Box 755
Willmar, MN 56201

Via email: schristensen@willmarmn.gov

Re: **Change Order No. 1**
Willmar Civic Center HVAC Improvements
Stevens File No. 900-14-231

Dear Mr. Christensen:

Enclosed is Change Order No. 1 for the Willmar Civic Center HVAC Improvements Project. This change order includes adding a heating section to the new dehumidification unit for the Cardinal Arena (DH-1) identified in Field Order No. 1. This change is necessary to supply primary heating to the arena that is currently provided through the existing dehumidification / ventilation system being removed as part of the project.

We recommend the City accept this change order in the amount of $19,567.00.

Please have the first page of the change order signed and emailed back to me and I will distribute to the Contractor.

If you have any questions regarding this documentation or the project in general please feel free to call us anytime. Our office number is 651.436.2075.

Sincerely,
STEVENS

Jason R. Raverty, PE
Project Manager

C:

Enclosures: Change Order No. 1 with supporting documentation.

Stevens
ENGINEERS & PLANNERS

Change Order

No. 1

Date of Issuance: September 2, 2015 Effective Date: September 2, 2015

Project: Willmar Civic Center HVAC Improvements	Owner: City of Willmar	Owner's Contract No.: NA
Contract:		Date of Contract: June 2, 2015
Contractor: Cool Air Mechanical Inc.		Engineer's Project No.: 900-15-231

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

Provide a post heating section to the new dehumidification unit for the Cardinal Arena.

Attachments (list documents supporting change):

Field Order No. 1, Cool Air Mechanical Change Order Proposal

CHANGE IN CONTRACT PRICE:

Original Contract Price:

$ 595,800.00

Change from previously approved Change Orders No. 0 to No. 0:

NONE

Contract Price prior to this Change Order:

$ 595,800.00

INCREASE of this Change Order:

$ 19,567.00

Contract Price incorporating this Change Order:

$ 615,367.00

CHANGE IN CONTRACT TIMES:

Original Contract Times: ☐ Working days ☐ Calendar days

Substantial completion (days or date): 10/2/2015

Ready for final payment (days or date): 10/16/2015

Change from previously approved Change Orders No. 0 to No. 0:

Substantial completion (days): NONE

Ready for final payment (days): NONE

Contract Times prior to this Change Order:

Substantial completion (days or date): 10/2/2015

Ready for final payment (days or date): 10/16/2015

Change from this Change Order:

Substantial completion (days or date): NONE

Ready for final payment (days or date): NONE

Contract Times with all approved Change Orders:

Substantial completion (days or date): 10/2/2015

Ready for final payment (days or date): 10/16/2015

RECOMMENDED: By: Jan K. Raff Engineer (Authorized Signature) Date: 9/2/2015	ACCEPTED: By: Owner (Authorized Signature) Date: 9.23.15	ACCEPTED: By: Contractor (Authorized Signature) Date: 9/2/15

COOL AIR MECHANICAL, INC.

1544 134TH AVE NE
HAM LAKE, MN 55304
P. 763-205-0821 F. 763-432-7394

CHANGE ORDER PROPOSAL

Project:	Willmar Civic Center Arena	Date:	08/12/15
Attention:	Jason Raverty	COP#	1

Description of Extra Work:
Add post heat to dehumidification unit

CONTRACTOR: **Cool Air Mechanical**

LABOR:

Man-hours		2
Rate	$	97

LABOR SUBTOTAL	$194

MATERIAL:

SVL quote	$16,060
Additional gas piping	$50

MATERIAL SUBTOTAL	$16,110

FEES:

Labor Fee	10%	$19
Material Fee	10%	$1,611

TOTAL LABOR, MATERIAL AND FEES	$17,934

OTHER COSTS:

Sales Tax	7.75%	Material Fee	$1,249
Bond	2%	Total Change Order Costs	$384
Incidental Expenses			

TOTAL OTHER COSTS	$1,632

TOTAL CHANGE ORDER PRICE	$19,567

NOTE: This RFCOP adds _____ days to substantial completion.

4600 Churchill Street, Shoreview, MN 55126 | Phone: 651-481-8000 | Fax: 651-481-8621
2504 Main Ave. West, West Fargo, ND 58078 | Phone: 701-356-0896 | Fax: 701-356-0899
www.svl.com | svlteam@svl.com

To	Cool Air Attn: Tyler	**PROPOSAL NUMBER** **BID DATE** **PRICES GOOD FOR**	536240 05/27/2015 30 DAYS
Project	Willmar Civic Center HVAC Improvements Willmar, MN	Terms of Payment Delivery Terms	NET 30 DAYS FOB FACTORY FREIGHT ALLOWED
Engineer	Gausman & Moore	Addendums Received Date	Addendum 1

Air Handling Units

Net add for stainless steel natural gas post heat section added to DH-1 complete with 1,000 mbh input, 800 mbh gas output and modulating gas heat capacity control.

TOTAL NET ADD TO ABOVE.....$ 16,060.00

Sincerely,

Tim Harris

Schwab-Vollhaber-Lubratt, Inc.

Stevens
ENGINEERS · PLANNERS · SURVEYORS

Field Order

No. 1

Date of Issuance: July 13, 2015 Effective Date: July 13, 2015

Project:	Owner:	Owner's Contract No.:
Willmar Civic Center HVAC Improvements	City of Willmar	
Contract:		Date of Contract: May 13, 2015
Contractor: Cool Air Mechanical		Engineer's Project No.: 900-15-231

Attention:
You are hereby directed to promptly execute this Field Order issued in accordance with General Conditions Paragraph 9.04.A, for minor changes in the Work without changes in Contract Price or Contract Times. If you consider that a change in Contract Price or Contract Times is required, please notify the Engineer immediately and before proceeding with this Work.

Reference: 238416 (Specification Section(s)) MD101, M101, M106 (Drawing(s) / Detail(s))

Description:

SEE ATTACHED DESCRIPTION FOR CHANGES

Attachments:

238416 Packaged Gas-Fired Dehumidification Units

Plan Sheets MD101, M101, M601

Engineer: Jan R. Raft

Receipt Acknowledged by Contractor:	Date:

Copy to Owner

Gausman &Moore
Mechanical and Electrical Engineers

FIELD ORDER NO. 1

THE FOLLOWING DRAWINGS ARE ATTACHED HERETO:
Mechanical
MD101, M101, M601
Specifications
238416 PACKAGED GAS-FIRED DEHUMIDIFICATION UNITS

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

PROJECT:
Willmar Ice Arena
G&M Project No. 83109

DATE:
July 10, 2015

Sent from:
☒ **St. Paul Office**
700 Rosedale Tower
1700 Highway 36 West
St. Paul, MN 55113
Phone: 651-639-9606
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☐ **Santa Clarita Office**
Suite 205
26415 Carl Boyer Drive
Santa Clarita, CA 91350
Phone: 661-291-1978
FAX: 661-291-6213

To: Field

This Field Order is a change to the Contract Documents and may apply to any or all Contracts and subcontracts. Unless otherwise specified herein or shown on the attached drawings (if any), all work required by this Field Order shall be in complete accord with the Contract Documents and subsequent Field Order thereto.

The items listed in this Field Order are not in any order in regard to the Project Drawings or the Project Manual. All contractors are cautioned to examine each and every item of this Field Order.

ITEM	REFERENCE	CHANGE/COMMENTS
CHANGES TO MECHANICAL SPECIFICATIONS		
1.	Section 235216 (Section attached)	Under Article 3.4 SEQUENCE OF OPERATION, paragraph 18. Updated specifications to indicate the interlocking of existing exhaust fans and motorized dampers.
CHANGES TO MECHANICAL DRAWINGS		
1.	MD101 - HVAC Demolition Plan	1. Revised keynote 8.
2.	M102 - Overall HVAC Plan	1. Added keynote 16. 2. Revised the gas pipe size going to DHU-1 to be 1-1/4".
3.	M601 – Mechanical Risers and Schedules	1. Indicated on the drawings that the DHU-1 and DHU-2 are to be interlocked with existing exhaust fans. 2. Revised the gas pipe size going to DHU-1 to be 1-1/4".3. Updated various keynotes. 3. Added a post heating section to the DHU-1 schedule.

SECTION 238416 – PACKAGED GAS-FIRED DEHUMIDIFICATION UNITS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Types of dehumidification units specified in this section include the following:
   1. Single-zone gas-fired desiccant units.

B. Provide the following electrical work as work of this section complying with requirements of Division 26 sections:
   1. Control wiring between field-installed controls, indicating devices, and unit control panels.

1.3 SUBMITTALS

A. Provide Data: Submit manufacturer's technical product data, including rated capacities of selected model clearly indicated, weights, furnished specialties and accessories; and installation and start-up instructions.

B. Wiring Diagrams: Submit manufacturer's electrical requirements for power supply wiring for units. Submit manufacturers' ladder-type wiring diagrams for interlock and control wiring. Clearly differentiate between portions of wiring that are factory installed and portions to be field installed.

C. Maintenance Data: Submit maintenance data and parts list for each unit, control, and accessory; including "trouble-shooting" maintenance guide. Include this data and product data in maintenance manual; in accordance with requirements of Division 01.

1.4 QUALITY ASSURANCE

A. Listing and Labeling: Provide electrically operated components specified in this Section that are listed and labeled.
   1. The Terms "Listed" and "Labeled": As defined in the National Electrical Code, Article 100.
   2. Comply with AGA Z223.1 for gas-fired furnace section.
   3. Comply with NFPA 70.

B. Vibration: Fan wheels and shaft assemblies shall be factory dynamically balanced.

C. Fan Performance: Curves shall be based on tests in accordance with current AMCA Standards. Tests shall be conducted in a certified AMCA laboratory.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver dehumidification units as factory-assembled units with protective crating and covering.

B. Coordinate delivery and storage of dehumidification units.

C. Handle dehumidification units to comply with manufacturer's written rigging and installation instructions for unloading and moving to final location.

1.6 COORDINATION

A. Coordinate installation of equipment supports and wall penetrations.

1.7 SPECIAL PROJECT WARRANTY

A. Special Warranty: Provide written warranty, signed by manufacturer, agreeing to replace/repair, within warranty period, components with inadequate and defective materials and workmanship, including leakage, breakage, improper assembly, or failure to perform as required; provided manufacturer's instructions for handling, installing, protecting, and maintaining units have been adhered to during warranty period.
   1. Gas Heat Exchanger Warranty Period: Ten years from date of substantial completion.
   2. Desiccant Wheel Warranty Period: Five years from date of substantial completion.
   3. Remainder of Unit Components: One year from date of substantial completion.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Manufacturer: Subject to compliance with requirements, provide packaged dehumidification units of one of the following:
   1. Munters.
   2. Innovent.
   3. Concepts & Designs Inc. (CDI)

2.2 PACKAGED DEHUMIDIFICATION UNITS

A. Unit Base: Unit base shall be bolted steel construction with formed 12 gauge galvanized steel channels around the outside perimeter and reinforced with galvanized steel cross members bolted on centers not exceeding 31 inches. Base shall have a minimum of four lifting brackets bolted in place.

B. Unit Case:
   1. The unit casing shall be constructed using a double wall panel and frame system for torsional rigidity. This includes walls, floors, and ceilings. This system shall not contain any through metal. The unit casing shall also meet the following criteria based on ASTM E84-90 (Standard Test Method for Surface Burning of Building Materials), flame spread = 25, smoke index = 50.
   2. The frame system components shall be constructed of fiberglass reinforced plastic (FRP) pultruded members. Horizontal frame members shall be supported along their length by intermediate supports and internal partitions. Through metal systems shall not be allowed. To avoid condensation, heat loss, or loss of cooling capacity, each panel shall be 2 inches thick and constructed such that there are no through metal connections between the exterior surface and the interior surface. The exterior casing shall be 22-gauge corrosion resistant galvalume. The interior casing shall be 22-gauge galvanized steel. Manufacturers not providing exterior galvalume construction must provide painted

galvanized exterior panels. Painted coating must be corrosion resistant exceeding ANSI 2000 hour salt spray standards. Panels shall be foam injected into individual panels with a density of 2-1/2 lb/ft^3. The heat transfer rate through casing walls shall be less than 0.0625 Btu/sq. ft./°F equivalent to an R-value of 14. This construction shall be suitable for a 50 F difference as tested between process air dry bulb temperature and the dew point of the air surrounding the plenum. The unit casing shall be manufactured as an air and vapor tight system. There shall be a gasket system that seals the panels to the structure. Fixed panels shall be provided with flat closed cell neoprene and be sealed in place with FDA approved silicon. Doors and plug panels shall be provided with polyvinyl chloride seals.

C. Access Doors and Plug Panels: Access doors or plug panel doors will be provided as indicated on the drawings. Doors shall be rigid double wall construction and shall use heavy-duty hinges with lockable latches on each door. Doors shall be a minimum of 30.5" in width and be the full height unit plenum. Doors shall be of the same construction as panels. Hinges shall be installed by locating hinges no more than 36 inches on center from hinge to hinge. Door latches shall be capable of being fully tightened against gasket surfaces. All major components such as coils, filters, blowers, etc., within the air handling structure shall be easily removable through access panels without dismantling plenums or distributing ductwork. Equipment that requires disassembly of components rather than access through removable or hinged panels shall not be acceptable. The unit casing shall include access panels for inspection and for any maintenance required by the operating and maintenance manual. Panels without gaskets shall not be acceptable.

D. Weather Protection:
1. The dehumidification system shall be capable of continuous outdoor operation. The air inlets shall be protected from flowing water by mist eliminators or connected duct work. Consequently, all access panels shall be weather tight, as shall all joints between casing and electrical conduits and between the unit casing and any components mounted in separate enclosures.
2. For outdoor units a roof shall be fabricated using a capped standing seam style construction. Outside air inlets shall be provided with mist eliminating architectural louvers and rain hoods. Mist eliminating louvers shall be an extruded aluminum construction utilizing a 2" vertical blade with a 2 phase separation chamber per blade. Frame shall be no less than 2-3/8" deep and arranged with bottom front drainage. Standard AMCA testing shall show beginning of water penetration to be not less than 930 FPM. The pressure drop through the louver shall not be more than 0.125". Louvers shall bear the AMCA Seal and have its ratings certified to comply with AMCA Publication 511.

E. Desiccant Wheel:
1. The desiccant wheel media shall be a monolithic, extended-surface contact medium, fabricated entirely of inert, inorganic binders and glass fibers formed into narrow passages in the direction of airflow. The wheel shall be non-toxic. It shall also meet the following requirements.

2. The process and reactivation air streams shall be separated by air seals and internal partitions so the humid reactivation air does not mix with the dry process air. Suppliers who do not also manufacture the active desiccant dehumidification wheel must provide a five-year parts and labor warranty for the wheel. Manufacturers must provide the desiccant dehumidification capacity without exceeding a gas usage specified. Acceptable manufacturers must be able to procure replacement if required within 24 hours or provide a spare stock for each unit size. The proposed equipment shall meet the following minimum requirements:
   a. Wheel face seals: The dehumidifier shall have full-face seals on both the process air entering and the process air leaving sides of the wheel. These shall seal the entire perimeter of both air streams as they enter and leave the wheel. Partial seals shall not be acceptable. The seals shall be the silicone rubber bulb-type, with a protective strip of low-friction, abrasive-resistant surface to extend seal life and reduce the force needed to turn the desiccant wheel. Neither wiper-type seals nor brush-type nor any non-contact-type seal shall be acceptable. The seals shall be documented to have a minimum working life of 25,000 hours of normal operation.
   b. Materials: The glass fibers that form the support matrix shall be made from uniform continuous strands larger than five microns in diameter that are nonrespirable and are not considered a possible health risk by the International Agency for Research on Cancer (IARC).
   c. Flame spread and smoke generation: The wheel shall be tested according to ASTM E84-90 (Standard Test Method for Surface Burning of Building Materials) and shall achieve a Flame spread index = 0 and a Smoke developed index = 10.
   d. Desiccant impregnation: The desiccant shall be evenly impregnated throughout the structure for predictable, consistent performance and for maximum wheel life. Coatings applied on top of the contact medium shall not be acceptable unless the manufacturer can provide independent life tests demonstrating less than a 5% decline in desiccant capacity over a five-year period of normal operation.
   e. Desiccant type: The desiccant impregnated into the contact medium shall be:
      1) Titanium-reinforced silica gel: The HoneyCombe desiccant wheel shall be a fabricated extended surface contact medium with a multitude of small passages parallel to the airflow. The rotary structure shall be a monolithic composite consisting of inert silicates with microscopic pores designed to remove water in a vapor phase. The desiccant shall be hydrothermally-stabilized silica gel reinforced with titanium for maximum strength and stability over time. The fabricated structure shall be smooth and continuous, having a depth of 400 millimeters, as specified in unit schedule, in the direction of airflow without interruptions or sandwich layers that restrict air flow or create a leakage path at joining surfaces. Nominal face velocity shall not exceed 800 fpm.
      2) The HoneyCombe wheel shall be manufactured in the United States. The manufacturer shall provide documentation to establish that:
         a) The desiccant retains more than 90% of its original capacity after 10 years of continuous operation in clean air, with inlet air conditions up to an including 100% relative humidity.
         b) The wheel as impregnated with silica gel is capable of withstanding five complete water immersion cleaning cycles while retaining more than 95% of its original absorption capacity.

F. Desiccant Wheel Support and Drive Assembly:
   1. Desiccant wheels less than 86" in diameter shall be a single piece for fast removal and simple handling. The desiccant wheel shall be supported by four rollers at the base of the unit so the wheel can be easily removed by lifting it over the rollers using the drive belt. Center-axle support or any arrangement that requires disassembly of the support structure for wheel removal shall not be acceptable. In addition, the wheel drive assembly shall provide:
      a. Rotation speed: To avoid excessive heat carryover from reactivation to the process air, the wheel rotation speed shall not exceed 16 rph while achieving the required moisture removal rate at the specified conditions.
      b. Drive belt: The drive belt shall be the flat toothed type with aramid fiber reinforcement.
      c. Drive motor: The drive motor shall be fractional horsepower and rated for continuous duty for a period of 20,000 hours under the load conditions imposed by the drive assembly.
      d. Rotation detection: The drive assembly shall be equipped with a rotation detection circuit that shuts down the dehumidifier and signals the operator through an indicating light on the control cabinet if the wheel is not rotating.

G. Reactivation Circuit:
   1. The reactivation circuit shall conform in all respects to the current National Electrical Code.
   2. Direct-fired natural gas reactivation:
      a. The direct-fired raw gas burner shall have a rust-resistant cast iron air-fuel manifold and stainless steel air mixing plates. The burner assembly shall be mounted inside a housing constructed of G-90 hot dipped galvanized steel. The housing shall be welded and equipped with internal insulation of fibrous glass with a minimum thickness of 1 inch.
      b. Burners with less than 401 MBH input capacity shall be equipped with a single-stage combination gas valve. The complete pilot ignition system has been A.G.A. design certified to ANSI Standard Z21.7A-1985 "Automatic Intermittent Pilot Ignition Systems for Field Installation." Gas valves and ignition control units also are A.G.A. design certified (separately) to applicable ANSI standards.
         1) Z21.15 Manual Gas Valves
         2) Z21.18 Gas Pressure Regulators
         3) Z21.20/Z21.20A Automatic Ignition Systems
         4) Z21.21/Z21.21A Automatic Valves
         5) Z21.35 Gas Filters
         6) The butterfly valve utilized for gas flow control is a UL recognized component. The actuator provided to modulate the valve is powered by a UL listed Class 2 cover mounted transformer.
      c. Burners with 401 MBH and greater input capacity shall be equipped with a general purpose ANSI-standard gas train with redundant fluid power valves rated for duty at the specified gas supply pressures.
      d. Reactivation energy shall be automatically matched to dehumidification requirements by means of a modulating gas valve with proportional electric valve actuator. The valve/ actuator assembly shall be connected to a temperature sensor/controller mounted in the discharge of the reactivation air stream.

H. Filters:

1. Reactivation filter: The unit shall include a disposable pleated filter with 25% to 30% minimum efficiency with 90% to 92% arrestance minimum as rated by ASHRAE Test Standard 52-76.
2. Standard medium efficiency filters: The unit shall include removable filters at the inlet of both process and reactivation air streams. These filters shall be mounted on sliding racks and accessible through access panels. All supply air is filtered through filters of 25% to 30% minimum efficiency with 90% to 92% arrestance minimum as rated by ASHRAE Test Standard 52-76. Filters are disposable 2" deep, pleated disposable type with non-woven media held in place by a welded wire grid. Filters are held in aluminum channels top and bottom with spacers and back-up plates to minimize bypass. Filter channels are welded and sealed in place to eliminate air bypass.

I. Fans:

1. General requirements: Blowers provide the specified air volume(s) through the system with adequate static pressure to overcome duct and distribution losses specified. Blowers are of the non-overloading, backward inclined, air foil blade type for air volumes greater than 1000 scfm. Blowers are direct or belt drive, provided fan speed does not exceed 80% of the fan shaft critical speed. Access shall be provided on both sides of the supply blower for inspection and servicing. All fans shall be rated in accordance with AMCA Standard 210. Fan motors shall be TEFC, high efficiency type with Class B insulation and a 1.15 service factor.
2. Construction: Fans shall be a single width/single inlet (SWSI) housed construction if mounted on exterior of unit housing. Fans shall be SWSI plenum type if mounted interior to the unit housing.
3. Balancing: Fans shall be balanced after assembly and after coating at the speed the unit is scheduled to operate. Fans are balanced such that the maximum displacement in any plane does not exceed 1.5 mils for fans operating at or below 2000 rpm or 1.0 mils for fans operating above 2000 rpm.
4. Belt drive fans: For fan motors of 10 hp and smaller, the belt drive shall be selected for 120% of rated capacity. For fans driven by motors larger than 10 hp, the drive shall be selected for 150% of rated capacity. All belt-driven fans shall be equipped with:
    a. Motors mounted on slide rails or bases and belt tension is adjustable without repositioning of belt guard.
    b. Fan assemblies mounted on a rigid structural steel base supported at not less than 4 points by rubber-in-shear or spring type vibration isolators. Overall isolation efficiency is not less than 95% at the design fan speed. Fan and base assembly shall be equipped with not less than three tie-down bolts for stability during shipment to prevent damage.
    c. Fan and base assembly shall be equipped with not less than three tie down bolts for stability during shipment to prevent damage.
5. Direct drive fans: Direct drive blowers are 1725 or 3450 RPM. Direct drive blowers are mounted on vibration pads or rubber-in-shear type vibration isolators. Overall isolation efficiency is not less than 95% at the design blower speed.
6. Fan motors: Fan motors shall be the totally enclosed fan-cooled (TEFC), high-efficiency type with Class B insulation and shall be selected for a service factor of 1.15.

J. Direct Expansion (DX) Cooling Coils:

1. Coils shall be sized to provide the full capacity scheduled. Coils shall be arranged to condition the full volume of process air with bypass or balancing dampers as required. Refrigerant pressure drop to be between 1.5 psi and 5 psi, and air face velocities are 500 fpm or less. Coil circuiting provides for optimum performance with minimum pressure loss. Coil shall be designed for 250 psi working pressure and factory tested under water at 300 psi air pressure.
2. Direct expansion cooling coils are fin and tube type constructed of 0.016 inch seamless copper tubes and .006 inch thickness aluminum fins mechanically bonded to tubes. Casing and tube support sheets are 16 gauge galvanized steel formed to provide mounting flanges and structural support for the tinned-tube assembly. Supply header consists of a distributor to feed liquid refrigerant through seamless copper tubing to all circuits in the coil equally. Tubes are circuited to insure minimum refrigerant pressure drop and maximum heat transfer. Fin spacing of up to 12 FPI provides adequate transfer area to minimum air pressure drop. Coils are mounted for counterflow and have a maximum air face velocity of 500 fpm. Direct expansion coils conform to ARI Standard 410 and are compatible with all other components of the same refrigeration circuit.

K. Drain Pains:

1. The drain pan is to be constructed of welded 304 SS and bolted in place. The cooling coil drain pan shall extend the entire length of the coil and extend a minimum of 4 inches beyond the air leaving side of the coil. Drain pans with a single drain connection shall be double-sloped to ensure zero standing water. Drain pans with drain connections on both sides of the unit shall use a single-sloped drain pan, sloped in the direction of airflow. Drain connection shall extend through unit base. Connection(s) to be 1 inch male NPT.

L. Refrigeration Condensing Units:

1. Condensing units are complete with compressor(s), condenser heat exchanger, optional receiver tank (if required), and all controls and accessories required to regulate refrigerant pressure, flow rates, and temperatures. The condensing unit is piped together with evaporator coil(s) and is sized and controlled to operate at all conditions required. Condensing units manufactured by a separate company and then mounted and piped and a single skid are not acceptable.
2. Compressors are scroll type. Service access shall be provided around the entire compressor for maintenance. Isolation valves shall be provided in the refrigeration circuit to allow removal of pressure sensors and other control instruments. Condenser fans shall be provided with fan guards both on the intake and discharge. Condensing unit section shall be accessed through access doors. Access panels are not acceptable. Condenser coils shall be provided with exterior coil guards to prevent damage.
3. All piping connections are brazed using a filler material with not less than 15% silver content for copper to brass joint. Brazing flux is used on all joints, and all interior surfaces of brazed assemblies are exposed only to dry nitrogen during heating and cooldown periods. All refrigeration tubing is copper, type "L", hard drawn, cleaned and capped, designed specifically for refrigeration service. All piping circuits contain thermostatic expansion valve with external equalization and M.O.P. feature, liquid line solenoid valves, liquid line sight glass, liquid line filter/dryer, and optional hot gas regulating valve and auxiliary side connector. All components are completely installed in piping circuit and all joints leak tested with refrigerant charge and electronic leak detector prior to evacuation, final charging and complete factory testing and set-up. All assembly and testing work is performed at the factory prior to shipping. All refrigeration circuits

are pumped down, valved off and shipped with the full refrigerant charge ready for on-site start-up.

M. Indirect Fired Post Heater:
1. Heater shall conform to ANSI Z83.9. Unit shall be suitable for operation on natural gas or propane as specified. Unit shall be of downblast or horizontal configuration. Unit shall have an input rating of 400 MBH on high firing rate and 200 MBH on low firing rate. Where input is greater than 400 MBH, multiple heaters shall be used. It shall contain tube type heated exchangers, flue gas collector with vent fan, in-shot burners, and controls for high and low fire. Unit shall be unhoused and fit within the unit housing envelope dimensions.
2. Burners shall be die formed in shot type with adjustable air shutters. Burners must be individually removable for cleaning or service. Entire burner assembly must be easily removable as an assembly.
3. Unit shall have a powered venting system consisting of a collection box, direct drive vent fan, and an air proving switch. The collection box shall be made of the same material as the heat exchanger bulkhead plate and shall be removable. The venting fan bearings shall have a minimum L10 bearing life of 24,000 hours. The vent fan shall exhaust the flue gas horizontally out of the side of the unit. The unit fan shall operate on 120/1/60 and not exceed 2 FLA.
4. Tubes shall be permanently attached to a bulkhead plate to form an airtight seal between combustion byproducts and heated air system. Heat exchanger shall be constructed of 18 gauge aluminized tubes with 14 gauge aluminized steel bulkhead plate. Heat exchanger shall be rated for a minimum lifespan of 100,000 cycles.
5. Gas train shall utilize components certified by AGA. Gas train shall consist of a 24 VAC two-stage combination valve (manual on-off, automatic safety shutoff, regulation to handle 0.5 psig input pressure and adjustable pilot valve). The combination valve shall be rated at a flow of 400 MBH. The valve shall feed in-shot burners through a manifold with screw-in brass orifices sized for either natural gas or propane, as required by unit schedule. The flame controllers shall be solid state module that operates on 24 VAC. It shall have a built-in spark igniter and flame sensor with 100% gas shutoff. The pilot shall be ignited during each cycle of operation. After the pilot is proven, the main burner valve shall open. Pilot and main burners shall be extinguished during the off cycle. The thermal disc type high temperature limit switch shall shut off main and pilot valves if an overheat occurs.

N. Electrical Control Cabinet:
1. The electrical control cabinet shall be weather tight to NEMA 3R standards and shall include:
   a. Wiring to comply with the current National Electrical Code with further fuse and wiring sizing to meet or exceed UL 508A Industrial Control Panel.
   b. Wires shall be color coded or numbered at both ends and all terminal block connection points shall be numbered. These markings shall correspond with the electrical diagram provided in the operating and maintenance manual.
   c. Components shall be UL or CSA approved where possible.

d. Control system: Provide a remote programmable standalone DDC terminal for control of dehumidification units. Provide all temperature and dew point sensors wiring, and connectivity required for operation of the unit, including space temperature and dew point sensors for connection to the integral internal microprocessor control system. The unit shall monitor and sequence all internal components to stage dehumidification, cooling, and heating functions as well as all damper operations. The unit sequence of operations shall include separate indication for:
   1) Power on.
   2) Unit running.
   3) Desiccant wheel rotation fault.
   4) Burner fault.
   5) High condensing pressure (packaged condensing units).
   6) Motor overload.

e. Operating and maintenance manual: The control cabinet shall include a copy of the O&M manual, mounted in a separate compartment or pocket to allow access to critical information by maintenance personnel after installation.

f. Disconnecting means: Unit shall have a built-in non-fused means of disconnecting from the power supply.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Install dehumidification units in accordance with manufacturer's installation instructions. Install units plumb and level, firmly anchored in locations indicated, and maintain manufacturer's recommended clearances.

B. Verify that electrical wiring installation is in accordance with manufacturer's submittal and installation requirements of Division 26 sections. Do not proceed with equipment start-up until wiring installation is acceptable to equipment installer.

3.2 FIELD QUALITY CONTROL

A. Start-up dehumidification units in accordance with manufacturer's start-up instructions. Test controls and demonstrate compliance with requirements. Replace damaged or malfunctioning controls and equipment.

B. Provide factory start-up and system checkout and balancing by factory trained and authorized representative.

C. Provide field training and instructions for Owner's operation personnel.

PART 4 - CONTROL SEQUENCE

4.1 GENERAL

A. Standalone DDC controller:
   1. Provide with required temperature, dew point, and CO2 sensors and programming.
   2. Factory programmed, mounted, and tested.

3. User terminal with LCD readout for changing operating parameters, set points and monitoring unit operation.
    a. User terminal can be unit mounted or remote mounted and is connected by straight through six wire flat cable.
    b. Verify location of remote user terminal with Owner prior to installation. Provide all temperature, dew point, and CO2 sensors, wiring, and appurtenances as required for a complete and operating system in accordance with the manufacturer's requirements.

B. BMS Interface:
1. BACnet MS/TP compatible for future connectivity.

4.2 SEQUENCE OF OPERATION – DHU-1

A. The stand-alone DDC controller shall perform the following control sequence.
1. Unit start command.
    a. Actuators for the outside air dampers and return air damper are powered.
    b. DDC controller checks damper actuator end switch status.
    c. Exhaust fan starts after dampers are open (minimum of 120 seconds delay, adjustable).
    d. Supply fan starts 5 seconds (adjustable) after the exhaust fan.
    e. Heating operation – not used.
    f. Dehumidification and Cooling (if applicable) operation per below.
2. Unit stop command (or de-energized):
    a. Fans are de-energized.
    b. All damper actuators are de-energized and spring return to their fail position after a 120 second delay.
3. Outside air/return air damper control:
    a. Each item (outside air damper and return air damper) has an adjustable minimum and maximum position (field balance) that it will modulate between when the outside air damper is at its minimum position and the return air damper is at its maximum position. Provide low occupancy reduced ventilation CO2 control positions and scheduled minimum outdoor air positions for return and outdoor air dampers.
4. Supply fan control:
    a. The supply fan VFD shall be used for manual balancing only.
5. Exhaust fan control:
    a. The exhaust fan VFD shall be used for manual balancing only.
6. Desiccant wheel reactivation:
    a. Reactivation lockout: The reactivation will be locked out when the outside air is <20°F - 2°F hysteresis, adjustable.
    b. Reactivation is controlled to maintain the supply dew point set point (set point = 15°F, adjustable). Regeneration system will activate when the supply dew point control loop is active (supply dew point above set point).
        1) Regeneration outside damper will open.
        2) Regeneration fan will start.
        3) The desiccant wheel shall run the wheel at a fixed speed of 15 RPH.
        4) Supply dew point control will reset the wheel regeneration air leaving air set point between the set points below:
            a) Minimum set point = outside air temp.
            b) Maximum set point = 103°F.

5) Wheel regeneration air leaving air set point will reset the wheel regeneration air entering air (same as heater leaving air) set point between the set points below:
   a) Minimum set point = 150°F.
   b) Maximum set point = 248°F.
6) The reactivation direct fired gas heat is controlled to maintain the regeneration wheel entering air set point above.

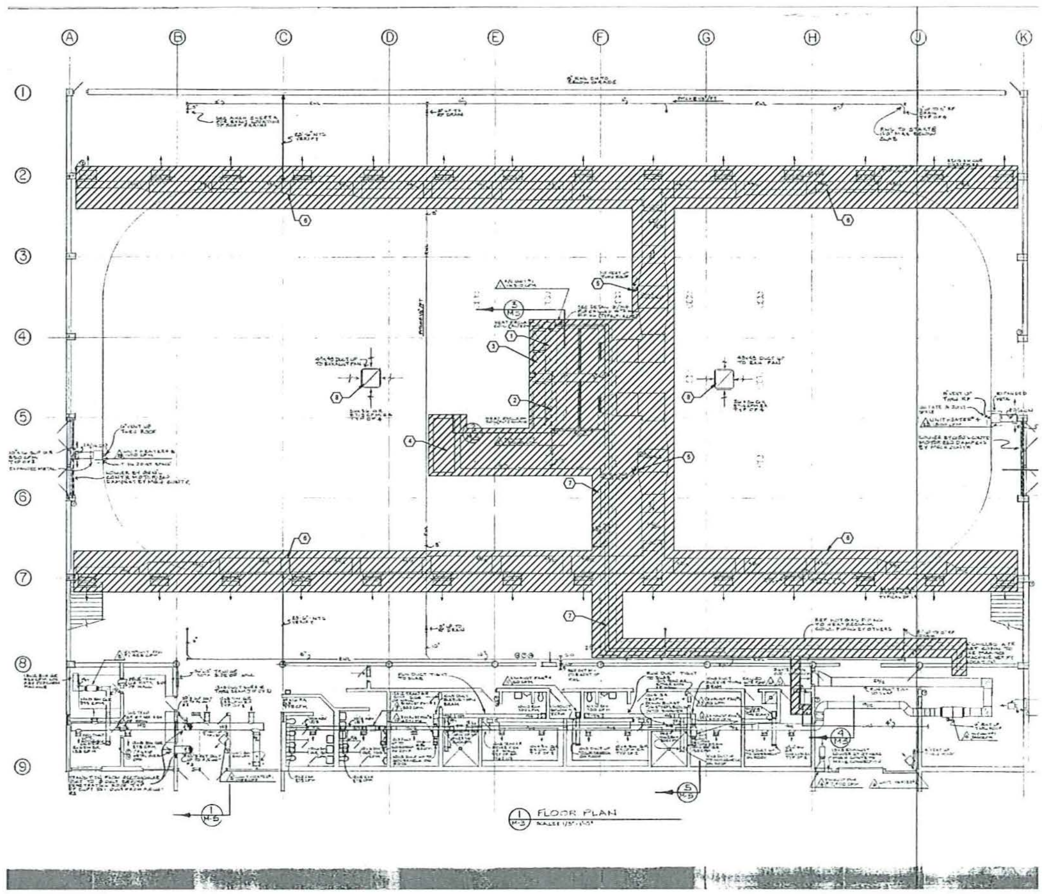
7. Reactivation system post heat purge mode:
   a. Post heat purge mode will occur anytime the regen system switches from active to inactive.
   b. Regeneration damper is open.
   c. Regeneration fan is ON.
   d. Regeneration heaters are OFF.
   e. Purge time: 300 seconds (adjustable).
8. Remote On/Off: Unit DDC shall have an input allowing the unit to be started/stopped by others.
9. Occupied/Unoccupied Modes:
   a. Occupied/unoccupied mode shall be controlled through the standalone unit DDC controller. Occupied/unoccupied mode can be initiated by external signal, programmable time schedule (7 days per week) and future BAS protocol.
   b. Occupied mode:
      1) Supply fan ON.
      2) Exhaust fan ON.
      3) Dampers open and operational, sequence
      4) DH and Cooling, to maintain ice arena indoor conditions of 55°F to 60°F temperature and 35°F to 40°F dew point (adjustable).
      5) Cooling to maintain non-ice arena indoor condition of 78°F temperature (adjustable).
   c. Unoccupied Mode – Unit off and dampers closed.
10. Supply discharge low limit: If the supply discharge temperature drops below 40°F (adjustable), the DDC shall de-energize the unit after a preset time delay.
11. Phase monitor: A phase/voltage protection relay shall be provided for each unit. Upon sensing a loss of phase or voltage the unit shall be de-energized.
12. Alarm indication: DDC shall have one digital output for remote indication of an alarm condition (e.g., blower current/differential pressure switch, damper end switches, freeze stat, fire stat, smoke, dirty filters).
13. The DryCool Packaged can provide stand alone control based on space and ambient conditions. It can be programmed to override space conditions requirements for Cooling or dehumidification (DH) based on ambient conditions to prevent swings in space conditions.
14. In stand alone mode, the DryCool Packaged receives a signal to initiate the supply fan (run signal). The microprocessor then determines whether DH or Cooling is needed.
15. In stand alone mode of operation, there is a single set point with a dead band for each of cooling and DH. The first stage of DH initiates when the space dew point is greater than the required dew point range. The microprocessor then waits for a stage delay and checks the dew point. If it is still above range, the second stage initiates. After another stage delay, it again evaluates whether an additional stage is required. If the space is within the desired range, the unit maintains status quo. If the dew point has dropped too low, a stage is shut off. This sequence is used for cooling as well.

16. Dehumidification:
    a. When space conditions require dehumidification mode, cooling, DH wheel, regeneration and outdoor, return and bypass dampers will stage and sequence to maintain indoor conditions.
    b. Compressors for pre-cooling and post-cooling are energized in order as required to produce the desired space dew point and temperature as well as unit discharge air temperature set point. The airflow for the condenser coils is provided by condenser fans that cycle on discharge pressure to maintain the required condensing temperature at low ambient temperatures.
    c. Ambient Overrides - The microprocessor monitors ambient temperature and dew point. If the ambient dew point is above Amb DH override (adjustable), Stage 1 DH will energize. Additional stages of dehumidification can be brought on based on additional increases in ambient humidity (adjustable) to prevent swings in space conditions.
17. Cooling:
    a. When in cooling-only mode of operation (ambient dew point is low or for non-ice event space cooling), compressors for pre-cooling and post-cooling are sequenced and energized, after stage delays, as required to maintain desired space temperature as well as unit discharge air temperature set point.
    b. When the DH wheel is not required for dew point control, a DH wheel bypass damper opens to reduce air pressure drop and the supply fan goes to a lower speed to save energy.
    c. Ambient Overrides - The microprocessor monitors ambient temperature and dew point. If the ambient temperature is above the Ambcool Override (adjustable), the first stage of cooling will energize. Additional stages of cooling can be brought on based on additional increases in ambient temperature (adjustable) to prevent swings in space conditions.
18. Reduced Ventilation Demand CO2 Control:
    a. **Existing rink exhaust fans and associated motorized dampers shall be interlocked with DHU.** When in the occupied mode, the controller shall measure the CO2 level from CO2 sensors located in the arena. The ambient CO2 level shall be assumed to be 450 ppm. When the CO2 sensor drops below the set point (800 ppm, adjustable), reset the outdoor air quantity to 2,000 cfm (adjustable) and modulating outdoor and return air dampers. **Interlocked exhaust fans and dampers shall be off and closed.** When the CO2 sensor rises above the set point, reset the outdoor air quantity to the scheduled outdoor air quantity**, open the interlocked motorized dampers and turn on the interlocked exhaust fans**.

4.3 SEQUENCE OF OPERATION – DHU-2

A. Sequence of operation similar to DHU-1 except unit has no pre-cooling or post-cooling function. Input from CO2 sensor shall allow outdoor air to reset to a low occupancy reduced ventilation demand quantity of 750 cfm (adjustable) and index to the scheduled outdoor air quantity if the CO2 set point is exceeded.

END OF SECTION 238416



KEYNOTES

1. REMOVE EXISTING AC-1 AND ALL ASSOCIATED DUCTWORK, HANGERS, PIPING, TERMINALS, FURNACES, AND CONTROLS.
2. REMOVE EXISTING AC-2 AND ALL ASSOCIATED DUCTWORK, HANGERS, PIPING, TERMINALS, FURNACES, AND CONTROLS.
3. REMOVE EXISTING GRAVITY INTAKE HOOD ON ROOF SERVING AC-1 AND AC-2 AND ASSOCIATED DUCTWORK, HANGERS, AND CONTORLS. PROVIDE INSULATED CANTED CURB CAP AND SEAL WATER TIGHT.
4. REMOVE EXISTING UNIT AND ALL ASSOCIATED DUCTWORK, HANGERS, PIPING, TERMINALS, AND CONTROLS.
5. REMOVE EXISTING VENT ON ROOF. PROVIDE CAP AND SEAL WATER TIGHT.
6. REMOVE EXISTING DUCTWORK AND HANGERS.
7. REMOVE PIPING BACK TO MAIN AND CAP.
8. EXISTING EXHAUST FAN TO REMAIN. INTERLOCK EXHAUST FAN AND ASSOCIATED MOTORIZED DAMPER WITH DHU-1.

THIS SHEET IS FOR REFERENCE ONLY TO SHOW EXISTING HVAC CONDITIONS. CONTRACTOR TO VERIFY EXISTING LAYOUT.

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Project No. 83109

Project:
WILLMAR CIVIC CENTER HVAC IMPROVEMENTS

Location:
WILLMAR, MINNESOTA

Certification:
I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Signature

Registration Number

Date 05/01/2015

Drawn By	P. DISCHINGER
Checked By	B. LARSON
Project No.	83109
Date	05/01/2015
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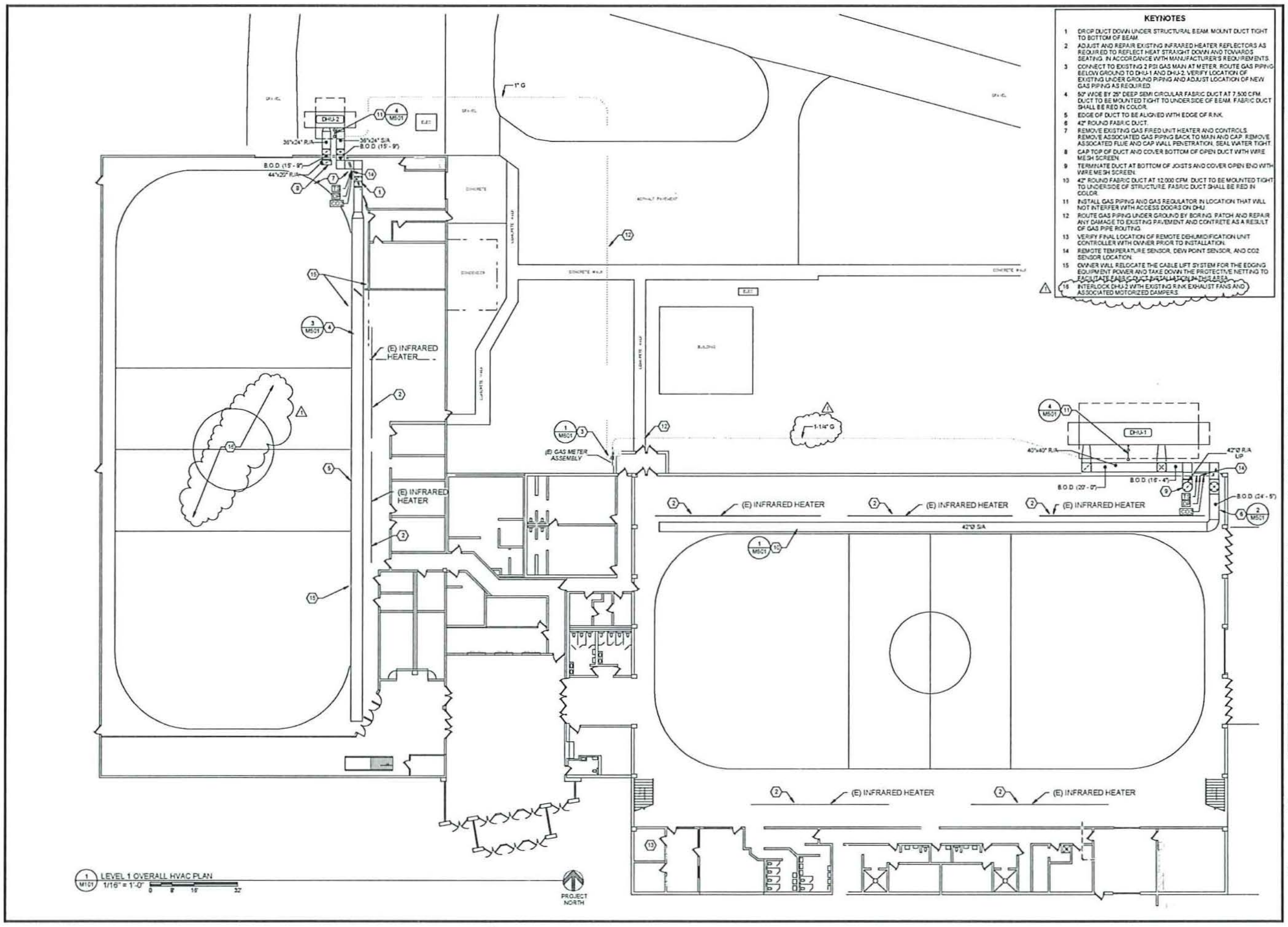
1	07-10-2015	FIELD ORDER NO. 1

CONSTRUCTION DOCUMENTS

Sheet Title:
HVAC DEMOLITION PLAN

Sheet No.:
MD101



KEYNOTES

1. DROP DUCT DOWN UNDER STRUCTURAL BEAM. MOUNT DUCT TIGHT TO BOTTOM OF BEAM.
2. ADJUST AND REPAIR EXISTING INFRARED HEATER REFLECTORS AS REQUIRED TO REFLECT HEAT STRAIGHT DOWN AND TOWARDS SEATING. IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.
3. CONNECT TO EXISTING 2 PSI GAS MAIN AT METER. ROUTE GAS PIPING BELOW GROUND TO DHU-1 AND DHU-2. VERIFY LOCATION OF EXISTING UNDER GROUND PIPING AND ADJUST LOCATION OF NEW GAS PIPING AS REQUIRED.
4. 50" WIDE BY 25" DEEP SEMI CIRCULAR FABRIC DUCT AT 7,500 CFM. DUCT TO BE MOUNTED TIGHT TO UNDERSIDE OF BEAM. FABRIC DUCT SHALL BE RED IN COLOR.
5. EDGE OF DUCT TO BE ALIGNED WITH EDGE OF RINK.
6. 42" ROUND FABRIC DUCT.
7. REMOVE EXISTING GAS FIRED UNIT HEATER AND CONTROLS. REMOVE ASSOCIATED GAS PIPING BACK TO MAIN AND CAP. REMOVE ASSOCATED FLUE AND CAP WALL PENETRATION. SEAL WATER TIGHT.
8. CAP TOP OF DUCT AND COVER BOTTOM OF OPEN DUCT WITH WIRE MESH SCREEN.
9. TERMINATE DUCT AT BOTTOM OF JOISTS AND COVER OPEN END WITH WIRE MESH SCREEN.
10. 42" ROUND FABRIC DUCT AT 12,000 CFM. DUCT TO BE MOUNTED TIGHT TO UNDERSIDE OF STRUCTURE. FABRIC DUCT SHALL BE RED IN COLOR.
11. INSTALL GAS PIPING AND GAS REGULATOR IN LOCATION THAT WILL NOT INTERFER WITH ACCESS DOORS ON DHU.
12. ROUTE GAS PIPING UNDER GROUND BY BORING. PATCH AND REPAIR ANY DAMAGE TO EXISTING PAVEMENT AND CONTRETE AS A RESULT OF GAS PIPE ROUTING.
13. VERIFY FINAL LOCATION OF REMOTE DEHUMIDIFICATION UNIT CONTROLLER WITH OWNER PRIOR TO INSTALLATION.
14. REMOTE TEMPERATURE SENSOR, DEW POINT SENSOR, AND CO2 SENSOR LOCATION.
15. ~~OWNER WILL RELOCATE THE CABLE LIFT SYSTEM FOR THE EDGING EQUIPMENT POWER AND TAKE DOWN THE PROTECTIVE NETTING TO FACILITATE FABRIC DUCT INSTALLATION IN THIS AREA.~~
16. INTERLOCK DHU-2 WITH EXISTING RINK EXHAUST FANS AND ASSOCIATED MOTORIZED DAMPERS.

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Project No. 83109

Project: **WILLMAR CIVIC CENTER HVAC IMPROVEMENTS**

Location: **WILLMAR, MINNESOTA**

Certification: I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Professional Engineer under the laws of the State of Minnesota.

Signature

Registration Number

Date 05/01/2015

Drawn By	P. DISCHINGER
Checked By	B. LARSON
Project No.	83109
Date	05/01/2015
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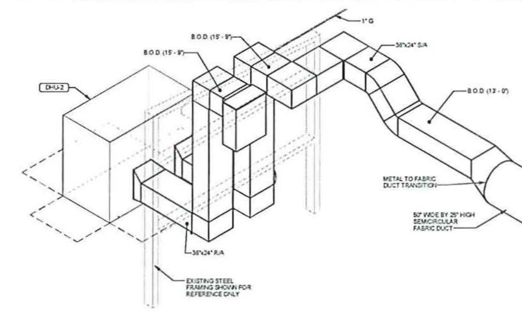
No.	Date	Description
1	07-10-2015	FIELD ORDER NO. 1

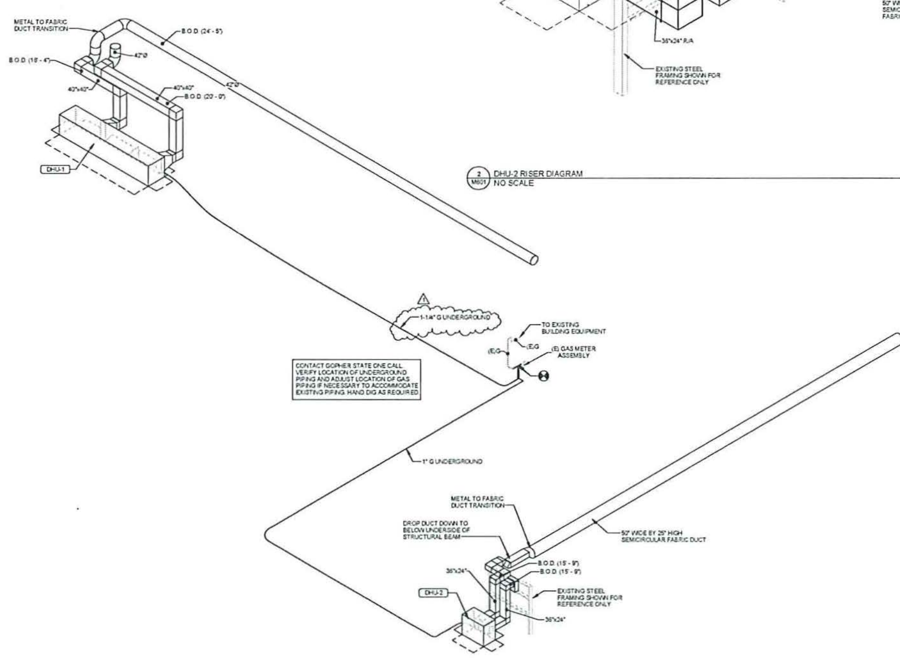
CONSTRUCTION DOCUMENTS

Sheet Title: **LEVEL 1 OVERALL HVAC PLAN**

Sheet No.: **M101**



2 DHU-2 RISER DIAGRAM
M601 NO SCALE



1 OVERALL BUILDING GAS RISER DIAGRAM
M601 NO SCALE

DEHUMIDIFICATION UNIT SCHEDULE		
GENERAL INFORMATION		
TAG	DHU-1	DHU-2
MANUFACTURER	MUNTERS DRYCOOL	MUNTERS DRYCOOL
MODELNUMBER	DD530	DD520
DESIGN DATA		
OUTSIDE AMBIENT (DB / GR/LB)	73 / 82	92 / 121
RETURN AIR (DB / GR/LB)	64 / 34	64 / 34
DELIVERED AIR (DB / GR/LB)	54/16	99 / 22
SUPPLY AIR VOLUME (SCFM)	12,000	7,500
MAKE UP AIR VOLUME (SCFM)	11,200	1,500
SUPPLY AIR BLOWER		
SIZE	30X100% / SWSI	24X107% / SWSI
TYPE/CLASS	BI-AF / 11	BI-AF / II
AIR FLOW (SCFM)	12,000	7,500
TOTAL STATIC PRESSURE (IN WC)	6.1	4.7
EXTERNAL STATIC PRESSURE (IN WC)	1.5	1.5
FAN RPM	1570	1750
MOTORHP	20	15
REACTIVATION FAN		
SIZE	16X80% / SWSI	15X90% / SWSI
TYPE/CLASS	BI-AF /111	BI-AF / II
AIR FLOW (SCFM)	3,456	2,774
TOTAL STATIC PRESSURE (IN WC)	6.5	5.7
FAN RPM	3450	3450
MOTOR HP	7.5	5
REACTIVATION HEATER - NATURAL GAS		
TYPE OF GAS	NATURAL	NATURAL
MAX CAPACITY INPUT (BTUH)	750,000	400,000
DESIGN CAPACITY INPUT (BTUH)	597,817	318,088
STAGES OF CAPACITY	MODULATING	MODULATING
GAS PRESSURE REQUIRED (IN WC)	6-15	6-15
GAS PRESSURE AT PILOT (IN WC)	3.5	3.5
MANIFOLD PRESSURE (IN WC)	4.5	4.5
BURNER AIR PRESSURE DROP (IN WC)	0.7	0.7
PRE-COOLING COIL - DX		
REFRIGERANT	410A	NA
TOTAL CAPACITY (BTUH)	523952	NA
SENSIBLE CAPACITY (BTUH)	332066	NA
COIL CIRCUITS	21	NA
ROWS/FPI	8 / 12	NA
FH / FL (IN)	53 / 82	NA
FACE AREA (SQ FT)	29.9	NA
ENTERING AIR TEMPERATURE (°F)	77.1	NA
LEAVING AIR TEMPERATURE (°F)	51.0	NA
ENTERING AIR MOISTURE (GR/LB)	78.8	NA
LEAVING AIR MOISTURE (GR/LB)	56.6	NA
CONDITIONED AIR	12,000	NA
DESICCANT WHEEL		
MOISTURE REMOVAL (LB/HR)	315	138
PRESSURE DROP PROCESS (IN WC)	1.9	1.97
PRESSURE DROP REACTIVATION (IN WC)	2.74	2.75
WATER REMOVAL EFFICIENY (BTU/LB)	2039	2,126
HEAT TRANSFER EFFICIENY (BTU/LB)	1536	1,541
POST-COOLING COIL - DX		
REFRIGERANT	410a	NA
TOTAL CAPACITY (BTUH)	503,176	NA
SENSIBLE CAPACITY (BTUH)	503,176	NA
COIL CIRCUITS	32	NA
ROWS/FPI	6/12	NA
FH / FL (IN)	45/32	NA
FACE AREA (SQ FT)	25.6	NA
ENTERING AIR TEMPERATURE (°F)	88.3	NA
LEAVING AIR TEMPERATURE (°F)	50	NA
ENTERING AIR MOISTURE (GR/LB)	15.6	NA
LEAVING AIR MOISTURE (GR/LB)	15.8	NA
CONDITIONED AIR	12,000	NA
COIL AIR PRESSURE LOSS (IN WC)	0.5	NA
POST HEATING - NATURAL GAS		
TYPE OF GAS	NATURAL	NA
MAX CAPACITY INPUT (BTUH)	1,000,000	NA
DESIGN CAPACITY INPUT (BTUH)	800,000	NA
STAGES OF CAPACITY	MODULATING	NA
ENTERING AIR TEMPERATURE (°F)	-16	NA
LEAVING AIR TEMPERATURE (°F)	50	NA
CONDENSING UNIT PRE-COOLING		
TOTAL COMPRESSOR HP	40	NA
AMBIENT DESIGN TEMP (DB)	95	NA
STAGES OF CAPACITY	4	NA
TOTAL CONDENSER FAN HP	6	NA
CONDENSER FAN RPM	1140	NA
CONDENSING UNIT POST-COOLING		
TOTAL COMPRESSOR HP	40	NA
AMBIENT DESIGN TEMP (DB)	95	NA
STAGES OF CAPACITY	4	NA
TOTAL CONDENSER FAN HP	6	NA
CONDENSER FAN RPM	1140	NA
FILTERS		
REACTIVATION TYPE	30%	
REACTIVATION QTY / SIZE	4/16X20	
PRE-COOLING TYPE	30% -2 inch thick	
PRE-COOLING QTY / SIZE	14 / 16X 20 10/16X25	
ELECTRICAL		
SYSTEM VOLTAGE (V/P/H)	460/3/60	460/3/60
CONTROL CIRCUIT VOLTAGE	115/1/60	115/1/60

*DHU-1 AND DHU-2 TO BE INTERLOCKED WITH EXISTING RINK EXHAUST FANS AND ASSOCIATED MOTORIZED DAMPERS. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

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Project No. 83109

Project:
WILLMAR CIVIC CENTER HVAC IMPROVEMENTS

Location:
WILLMAR, MINNESOTA

Certification:
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Signature
Registration Number
Date 05/01/2015

Drawn By P. DISCHINGER
Checked By B. LARSON
Project No. 83109
Date 05/01/2015
Scale

Revisions:

No.	Date	Description
1	07-10-2015	FIELD ORDER NO. 1

CONSTRUCTION DOCUMENTS

Sheet Title:
MECHANICAL RISERS AND SCHEDULES

Sheet No.:
M601

CITY OF WILLMAR, MINNESOTA
REQUEST FOR COMMITTEE ACTION

Agenda Item Number: 8

Meeting Date: September 29, 2015

Attachments: ☒ Yes No

CITY COUNCIL ACTION

Date: October 5, 2015

☐ Approved ☐ Denied
☐ Amended ☐ Tabled
☐ Other

Originating Department: Public Works

Agenda Item: Playground Priority 2 Hazard Analysis

Recommended Action: For information only

Background/Summary: The Public Works Department's Certified Playground Safety Inspector Justin DeLeeuw recently performed a detailed inspection of 230 individual pieces of playground equipment in the City's 28 parks. Each piece of equipment has a Priority rating of 1 through 5, with 1 indicating a potential life threatening issue and recommendations to remove immediately and 5 signifying no issues. The Priority 2 equipment has been analyzed with recommendations prepared for the units to either be removed, repaired or remain as is.

Alternatives: N/A

Financial Considerations: N/A

Preparer: Sean E. Christensen, P.E.
Public Works Director

Signature:

Comments:

PLAYGROUND PRIORITY 2 HAZARD ANALYSIS

CITY OF WILLMAR

Inspected by Rob Baumgarn & Justin DeLeeuw

Certified Playground Safety Inspectors

Inspections Occurred Between September 10th and September 15th

Unit: Exerglide Swings

Locations: Cardinal, Hilltop, Miller, Northside, Pleasantview, Rice, Swanson, Vos, Valleyside

Recommendation: These swings are all of similar design. They all have entrapment, crush, and protrusion hazards. The swings should be removed because of these hazards. The frames could be used for another single swing or should be removed completely if other swings are present in the playground.

Unit: Buck A Bout

Location: Southfield Park

Recommendation: The original Priority 2 rating was due to a possible head entrapment hazard. The risk of injury due to entrapment is extremely minimal because of the location of the handles and footrests. This unit should remain until the rubber mechanism in the center fails and at that point should be removed.

Unit: T-Swings

Locations: Miller, Sunrise

Recommendation: Both units can be made compliant by making a few adjustments. The chains and s-hooks at Miller should be replaced along with sand being added. The bolts on the top rail of sunrise should be replaced with shorter bolts in order to eliminate the entanglement hazards.

Unit: Jack N Jill

Location: Welshire

Recommendation: This unit should be removed. There are 8 protrusion hazards throughout the unit and it has already been modified at least once. Also, one of the side arch climber has been removed and access is limited.

Unit: Swing Set

Locations: Northside, Sperry, Robbins Island

Recommendation: All three of these swing sets are of similar design. The frames are all made of angle iron rather than the typical round posts. This creates very distinct edges and greater potential for head and body injury. The Northside unit should be removed as there are 2 other swing sets already in the park. Both the Sperry and Robbins Island units should have sand added and the center swings should be removed. The chains and s-hooks should also be replaced and staff should keep a close watch on injuries due to the angle iron frame.

Unit: Slides

Locations: Miller, Northside, Rice

Recommendation: Theses slides were all rated as Priority 2 because of the entrapment potential. The slides at Miller and Rice have a minimal risk of entrapment but should be closely monitored by staff in order to ensure safety. The slide at Northside should be removed as the entrapment hazard is greater and there is another slide in the park.

Unit: Play Unit

Locations: Gesch, Northside, Rainbow, Welshire

Recommendation: These units should all be removed. The units at Northside and Welshire are both wooden units similar in age to the units that are being pulled at the other parks. The wooden posts and platforms are beginning to splinter and there is no reasonable fix to them aside from total replacement. The units at Gesch and Rainbow have both been altered in the past and both are still non-compliant. Barriers are needed for all the platforms and both have slides that need to be replaced.

CITY OF WILLMAR, MINNESOTA
REQUEST FOR COMMITTEE ACTION

Agenda Item Number: 9

Meeting Date: September 29, 2015

Attachments: Yes ☒ No

CITY COUNCIL ACTION

Date: October 5, 2015

☐ Approved ☐ Denied
☐ Amended ☐ Tabled
☐ Other

Originating Department: Engineering

Agenda Item: Auditorium Cooling Design Options

Recommended Action: For information only

Background/Summary: It was previously noted the Auditorium was not equipped with a cooling system as historically the building was used less frequently in the summer. The 2014 Master Plan of the building noted cooling as a low priority and listed cooling options in Step 5. The Council decided to complete Step 1 abatement, Step 2 replacing the building air handling unit, and Step 3 to renovate the gun range. The gun range air handling unit does not indicate a space for a cooling coil but the engineer believes it could possibly be installed and there are locations for coils to be installed in the training room and gym units.

Alternatives: N/A

Financial Considerations: Unknown at this time.

Preparer: Sean E. Christensen, P.E.
Public Works Director

Signature:

Comments: