Banner Associates, Inc.
409 22nd Ave So, Box 298
Brookings, SD 57006
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www.bannerassociates.com

ADDENDUM | No. 1

PROJECT	MCWC 2021 Watermain Relocations
BID DATE	**2:00 PM** **Thursday, January 20, 2022**
BID LOCATION	Minnehaha Community Water Corporation Office 47381 248th St. Dell Rapids, SD 57022
ISSUE DATE	Monday, January 17, 2022
NOTICE	Failure to acknowledge all addenda in the BID may cause rejection of the BID. See Instructions to Bidders.

SCOPE OF THIS ADDENDUM

The following becomes a part of the original project manual and drawings, taking precedence over the items that may conflict. The bidder shall note receipt and make acknowledgment of the Addendum on his/her bid form, incorporating its provision in his/her bid.

PROJECT MANUAL

The following additions, changes and clarifications have been made to the Project Manual.

Index

Delete: C-410 as a whole

Add: C-410 as attached to this addendum

Section 33 1000 – Water Utilities

Delete: Paragraph 2.1F.9. and Paragraph 2.1F.10 in their entirety

Add: 2.1F.

9. Ductile IronPipe shall be Tyton as manufactured by McWane Ductile or US Pipe, Fastite as manufactured by American Ductile Iron Pipe, or Engineer approved equal.

Add: 2.1G.

3. Ductile Iron RJ Pipe:

a. When restrained joints require factory welding, the manufacturer shall qualify all welding procedures and welders used to produce the product per the requirements of a documented quality assurance system based on ANSI/AWS D11.2. Gasket material shall be standard styrene butadiene copolymer (SBR). The pressure rating for restrained joints shall be a minimum of 350 psi or the specified pressure rating of the pipe, whichever is less.

b. Ductile iron RJ pipe shall be TR-Flex as manufactured by U.S. Pipe or McWane Ductile, Flex-Ring as manufactured by American Ductile Iron Pipe, or Engineer approved equal.

Delete: Section 2.5 in its entirety

Add: 2.5 AIR RELEASE VALVES

A. Branch connections for air releases or branches shall be made with a service saddle and corporation. Connection to the air relief pipeline shall be with a corporation stop same size as saddle outlet.

1. Saddles and corporation stops must be as specified in Section 2.11. Manufacturer shall provide certification to the Engineer that saddles and corporation stops are designed for at least 200 psi working pressure.
2. Pipe from the saddle to the ball valve curb stop shall be of the material shown on the Drawings and from ball valve to the surface shall be galvanized steel pipe as shown on the Drawings.
3. Contractor to provide ½ ton of imported granular embedment around each air release valve.

Delete: Section 2.11 in its entirety

Add: 2.11 CORPORATION STOPS AND SERVICE SADDLES

A. Service saddles shall utilize dual stainless steel bales or bands and an epoxy coated ductile iron body. Service saddles shall be provided with Female Iron Pipe Thread (FIPT) for connecting to corporation stop. Gasket shall be made of Buna-N and NSF 61 listed. Service Saddles shall be Smith Blair Series 317, Ford Series 202, PowerSeal Series 3417DI, Romac Series 202 or Engineer approved equal.

B. The corporation stops shall be constructed of bronze alloy and furnished with male iron pipe thread for connection to service saddle and with pack joint ends suitable for connecting to the type of water service line specified. Corporation stops shall be ball type meeting AWWA C-800 standards. Corporation stops shall be Ford Ballcorp FB1100, FB1101, FB1102, or Engineer approved equal.

C. The cutting tool used to make service connections shall be a shell type (hole) cutter which will retain the coupon and be designed to accommodate walls as heavy as DR 14. The equipment used shall attach to the corporation stop and permit the cutting tool to be fed through the corporation stop to cut a hole in the pipe. The Contractor shall take care to prevent filings from entering the pipe.

DRAWINGS

The following additions, changes and clarifications have been made to the Drawings.

Delete: Plan Sheets 19, 24, 25, 26, 28, 30 and 32

Add: *Plan Sheets 19, 24, 25, 26, 28, 30 and 32 that is attached to this addendum*

NOTE:
The Plan Holders List, Geotechnical Report, Addendums, and Mechanical/Electrical Drawings are available on our website at http://www.bannerassociates.com

Project Manual and Drawing inquiries regarding the work should be directed to:

CONTACT PERSON(S)

Banner Associates, Inc.	Tel 1-605-692-6342 | Toll Free 1-855-323-6342 | Fax 1-605-692-5714	
Cullen Kohles, P.E.	Project Engineer	cullenk@bannerassociate.com

ATTACHMENTS

Cullen Kohles, PE

Bid Form

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ARTICLE 1 – BID RECIPIENT

1.01 This Bid is submitted to:

Minnehaha Community Water Corporation
47381 248th Street
Dell Rapids, SD 57022

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2 – BIDDER'S ACKNOWLEDGEMENTS

2.01 Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for 30 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 3 – BIDDER'S REPRESENTATIONS

3.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, and any data and reference items identified in the Bidding Documents, and hereby acknowledges receipt of the following Addenda:

Addendum No.	**Addendum, Date**

B. Bidder has visited the Site, conducted a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfied itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and has satisfied itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if

any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings.

E. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and any Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs.

F. Bidder agrees, based on the information and observations referred to in the preceding paragraph, that no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and confirms that the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work.

J. The submission of this Bid constitutes an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, and that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 4 – BIDDER'S CERTIFICATION

4.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the e execution of the Contract.

E. The prices bid herein include sales tax and all other applicable taxes and fees.

ARTICLE 5 – BASIS OF BID

5.01 Bidder will complete the Work in accordance with the Contract Documents for the following price(s):

UNIT PRICE BASE BID

NOTE: **Bidder shall Bid all Items of each Schedule.**

Schedule No. 1					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
1	Mobilization	L.S.	1	$_____	$_____
2	Imported Granular Embedment	TON	102	$_____	$_____
3	Gravel Surfacing	TON	20	$_____	$_____
4	Seeding and Restoration	LF	4355	$_____	$_____
5	Remove Cleanout Assembly	EA	1	$_____	$_____
6	Remove Valve Box	EA	2	$_____	$_____
7	Install Owner Furnished 1" Copper Service Pipe - OPEN CUT	EA	250	$_____	$_____
8	Furnish and Install 2" class 200 PVC Pipe - OPEN CUT	LF	20	$_____	$_____
9	Furnish and Install 3" Class 200 PVC Pipe - OPEN CUT	LF	80	$_____	$_____
10	Furnish and Install 4" Watermain- OPEN CUT	LF	50	$_____	$_____

Schedule No. 1					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
11	Furnish 16" Watermain	LF	3,975	$_____	$_____
12	Install 16" Watermain - OPEN CUT	LF	3,975	$_____	$_____
13	16"x1" Service Saddle and Corp Stop	EA	8	$_____	$_____
14	16"x2" Service Saddle and Corp Stop	EA	3	$_____	$_____
15	2" Comp. x Comp. Curb Stop and Box	EA	2	$_____	$_____
16	4" D.I. M.J. Gate Valve and Box	EA	1	$_____	$_____
17	16" D.I. M.J. Gate Valve and Box	EA	1	$_____	$_____
18	16" D.I. M.J. 11.25 Degree Bend & Block	EA	1	$_____	$_____
19	16" D.I. M.J. 90 Degree Bend & Block	EA	3	$_____	$_____
20	16"x4" D.I. M.J. Tee & Block	EA	1	$_____	$_____
21	16" D.I. M.J Tee & Block	EA	1	$_____	$_____
22	16" D.I. M.J. Plug and Block	EA	1	$_____	$_____
23	16" D.I. M.J. Cap and Cleanout Assembly	EA	1	$_____	$_____
24	4" D.I. M.J. Long Body Sleeve	EA	1	$_____	$_____
25	16" D.I. M.J. Long Body Sleeve	EA	3	$_____	$_____
26	16" Foster Adapter	EA	2	$_____	$_____
27	3x2" Knuckle Joint Reducer	EA	4	$_____	$_____
28	3x2.5" Knuckle Joint Reducer	EA	4	$_____	$_____
29	1"x1.5" Compression Coupling	EA	8	$_____	$_____
30	1.5" Knuckle Joint Cap	EA	5	$_____	$_____
31	2.5" Knuckle Joint Cap	EA	2	$_____	$_____
32	4" Knuckle Joint Cap	EA	1	$_____	$_____

Schedule No. 1					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
33	3" Knuckle Joint 90 Degree Bend	EA	1	$_____	$_____
34	3" Knuckle Joint Tee	EA	2	$_____	$_____
35	Tracer Wire	LF	4375	$_____	$_____
36	Air Release Valve	EA	2	$_____	$_____
Total of All Unit Price Base Bid Items Schedule No. 1:					$_____

Schedule No. 2					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
1	Mobilization	L.S.	1	$_____	$_____
2	Imported Granular Embedment	TON	11	$_____	$_____
3	Seeding and Restoration	LF	1735	$_____	$_____
4	Remove Cleanout Assembly	EA	1	$_____	$_____
5	Furnish and Install 24" Steel Encasement Pipe (BORE)	LF	270	$_____	$_____
6	Furnish & Install 1.5" ASTM D2241 Class 200 PVC Pipe - OPEN CUT	LF	10	$_____	$_____
7	Furnish 2" Class 250 PVC Yelomine Pipe	LF	442	$_____	$_____
8	Install 2" Yelomine - OPEN CUT	LF	20	$_____	$_____
9	Install 2" Yelomine - BORE	LF	422	$_____	$_____
10	Furnish and Install 4" Watermain - OPEN CUT	LF	193	$_____	$_____
11	Furnish 6" Watermain	LF	170	$_____	$_____
12	Install 6" Watermain - OPEN CUT	LF	170	$_____	$_____
13	Furnish 6" RJ Watermain	LF	585	$_____	$_____
14	Install 6" RJ Watermain- BORE	LF	585	$_____	$_____
15	Furnish 12" Watermain	LF	40	$_____	$_____
16	Install 12" Watermain - OPEN CUT	LF	40	$_____	$_____
17	Furnish 16" Watermain RJ Watermain	LF	305	$_____	$_____
18	Install 16" RJ Watermain - OPEN CUT	LF	35	$_____	$_____
19	Install 16" RJ Watermain - IN CASING	LF	270	$_____	$_____
20	4" D.I. M.J. Gate Valve and Box	EA	1	$_____	$_____
21	6" D.I. M.J. Gate Valve and Box	EA	1	$_____	$_____

Schedule No. 2					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
22	4" D.I. M.J. 90 Degree Bend & Block	EA	1	$_____	$_____
23	4" D.I. M.J. Tee & Block	EA	1	$_____	$_____
24	6" D.I. M.J. Tee & Block	EA	1	$_____	$_____
25	16"x4" D.I. M.J. Tee & Block	EA	1	$_____	$_____
26	16"x12" D.I. M.J. Reducer & Block w/ Joint Restraints	EA	1	$_____	$_____
27	4" D.I. M.J. Cap and Cleanout Assembly	EA	1	$_____	$_____
28	6" D.I. M.J. Cap and Cleanout Assembly	EA	2	$_____	$_____
29	12" D.I. M.J. Cap and Cleanout Assembly	EA	1	$_____	$_____
30	4" D.I. M.J. Long Body Sleeve	EA	1	$_____	$_____
31	6" D.I. M.J. Long Body Sleeve	EA	2	$_____	$_____
32	12" D.I. M.J. Long Body Sleeve	EA	1	$_____	$_____
33	16" Foster Adapter	EA	1	$_____	$_____
34	2"x1.5" Knuckle Joint Reducer	EA	2	$_____	$_____
35	2" Knuckle Joint 90 Degree Bend	EA	1	$_____	$_____
36	2" Knuckle Joint Tee	EA	1	$_____	$_____
37	1.5" Knuckle Joint Tee	EA	1	$_____	$_____
38	1.5" Knuckle Joint Repair Coupling	EA	1	$_____	$_____
39	2" Comp. x Comp. Curb Stop and Box	EA	1	$_____	$_____
40	2"x1.5" Compression Coupling	EA	1	$_____	$_____
41	Tracer Wire	LF	1735	$_____	$_____
42	Meter Pit Assembly and Fittings	EA	1	$_____	$_____
Total of All Unit Price Base Bid Items Schedule No. 2:					$_____

Schedule No. 3					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
1	Mobilization	L.S.	1	$_____	$_____
2	Imported Granular Embedment	TON	80	$_____	$_____
3	Gravel Surfacing	TON	20	$_____	$_____
4	Seeding and Restoration	LF	3112	$_____	$_____
5	Furnish and Install 1" Poly Pipe - OPEN CUT	LF	40	$_____	$_____
6	Furnish and Install 1.5" ASTM D2241 Class 200 PVC Pipe - OPEN CUT	LF	80	$_____	$_____
7	Furnish 2" Class 250 PVC Yelomine Pipe	LF	200	$_____	$_____
8	Install 2" Yelomine - OPEN CUT	LF	20	$_____	$_____
9	Install 2" Yelomine - BORE	LF	100	$_____	$_____
10	Install 2" Yelomine - IN CASING	LF	80	$_____	$_____
11	Furnish 3" ASTM D2241 Class 200 PVC Pipe	LF	2734	$_____	$_____
12	Install 3" PVC Pipe - OPEN CUT	LF	2,734	$_____	$_____
13	Furnish 3" Class 250 PVC Yelomine Pipe	LF	1570	$_____	$_____
14	Install 3" Yelomine - OPEN CUT	LF	94	$_____	$_____
15	Install 3" Yelomine - BORE	LF	1086	$_____	$_____
16	Install 3" Yelomine - IN CASING	LF	390	$_____	$_____
17	Furnish & Install 4" Watermain - OPEN CUT	LF	80	$_____	$_____

Schedule No. 3					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
18	Furnish 6" RJ Watermain	LF	214	$_____	$_____
19	Install 6" RJ Watermain - OPEN CUT	LF	64	$_____	$_____
20	Install 6" RJ Watermain - IN CASING	LF	150	$_____	$_____
21	Furnish & Install 4" Casing - BORE	LF	80	$_____	$_____
22	Furnish & Install 6" Casing - BORE	LF	390	$_____	$_____
23	Furnish & Install 12" Casing - BORE	LF	150	$_____	$_____
24	6" M.J. Gate Valve & Box	EA	1	$_____	$_____
25	3" M.J. Gate Valve & Box	EA	7	$_____	$_____
26	2" Curb Stop & Box	EA	1	$_____	$_____
27	4" D.I. M.J. Long Body Sleeve w/Joint Restraints	EA	1	$_____	$_____
28	6" D.I. M.J. Long Body Sleeve w/Joint Restraints	EA	2	$_____	$_____
29	6" D.I. M.J. Cap	EA	1	$_____	$_____
30	1.5" Knuckle Joint Repair Coupling	EA	1	$_____	$_____
31	2" Knuckle Joint Repair Coupling	EA	1	$_____	$_____
32	3" Knuckle Joint Repair Coupling	EA	1	$_____	$_____
33	1.5" Knuckle Joint 90 Deg. Bend	EA	2	$_____	$_____
34	2" Knuckle Joint 90 Deg. Bend	EA	1	$_____	$_____
35	3" Knuckle Joint 90 Deg. Bend	EA	5	$_____	$_____

Schedule No. 3					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
36	3" Knuckle Joint 22.5 Deg. Bend	EA	1	$_____	$_____
37	2" Knuckle Joint Tee	EA	1	$_____	$_____
38	3" Knuckle Joint Tee	EA	7	$_____	$_____
39	3"x1.5" Knuckle Joint Tee	EA	1	$_____	$_____
40	4"x3" Knuckle Joint Tee	EA	1	$_____	$_____
41	4"x3" Knuckle Joint Reducer	EA	1	$_____	$_____
42	3"x2.5" Knuckle Joint Reducer	EA	14	$_____	$_____
43	2"x1.5" Knuckle Joint Reducer	EA	1	$_____	$_____
44	2" Knuckle Joint Plug	EA	2	$_____	$_____
45	2.5" Knuckle Joint Plug	EA	6	$_____	$_____
46	2.5" Knuckle Joint Cap	EA	1	$_____	$_____
47	3"x1" Service Saddle & Corp Stop	EA	3	$_____	$_____
48	1"x1" Compression Coupling	EA	3	$_____	$_____
49	2" Cleanout Assembly	EA	1	$_____	$_____
50	Tracer Wire	LF	5378	$_____	$_____
Total of All Unit Price Base Bid Items Schedule No. 3:					$_____

Schedule No. 4					
Item No.	**Description of Work and Materials**	**Unit**	**Est. Quant.**	**Bid Price**	**Total**
1	Mobilization	L.S.	1	$_____	$_____
2	Imported Granular Embedment	TON	15	$_____	$_____
3	Seeding and Restoration	LF	1130	$_____	$_____
4	Furnish and Install 2" Class 250 PVC Yelomine Pipe - IN CASING	LF	120	$_____	$_____
5	Furnish and Install 2" ASTM D2241 Class 200 PVC Pipe - OPEN CUT	LF	15	$_____	$_____
6	Furnish and Install 10" Watermain - OPEN CUT	LF	1,115	$_____	$_____
7	Furnish and Install 10" RJ Watermain	LF	475	$_____	$_____
8	Install Owner Furnished 4” Casing - BORE	LF	150	$_____	$_____
9	2" M.J. Gate Valve & Box	EA	2	$_____	$_____
10	2" Curb Stop & Box	EA	1	$_____	$_____
11	10" D.I. M.J. Cap	EA	2	$_____	$_____
12	2.5"x2" Knuckle Joint Reducer	EA	1	$_____	$_____
13	2.5" Knuckle Joint Repair Coupling	EA	1	$_____	$_____
14	2" Knuckle Joint Repair Coupling	EA	1	$_____	$_____
15	10"x2" Service Saddle & Corp Stop	EA	3	$_____	$_____
16	2" Cleanout Assembly	EA	1	$_____	$_____
17	Tracer Wire	LF	1725	$_____	$_____
Total of All Unit Price Base Bid Items Schedule No. 4:					$_____

***Bidder acknowledges that (1) each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and (2) estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids.**

ARTICLE 6 – TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7 – ATTACHMENTS TO THIS BID

7.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in in accordance with Article 8 of the Instructions to Bidders;

ARTICLE 8 – DEFINED TERMS

8.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 9 – BID SUBMITTAL

BIDDER: *[Indicate correct name of bidding entity]*

_____

By:
[Signature] _____

[Printed name] _____
(If Bidder is a corporation, a limited liability company, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:
[Signature] _____

[Printed name] _____

Title: _____

Submittal Date: _____

Address for giving notices:

_____

_____

_____

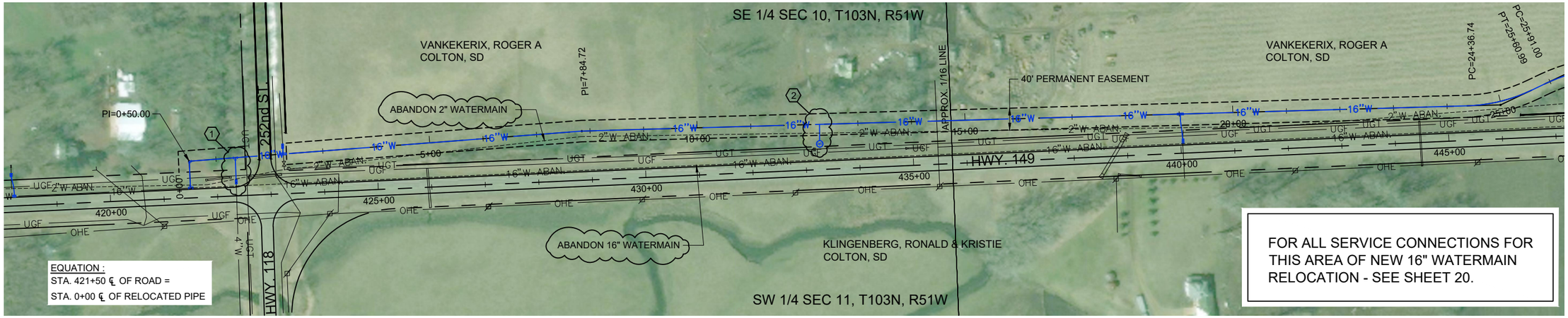
Telephone Number: _____

Fax Number: _____

Contact Name and e-mail address: _____

_____

Bidder's License No.: _____
(where applicable)



WATERMAIN:
STA. 0+00 - ℄ TO 25+00 - ℄
FURNISH AND INSTALL:
2500 L.F. - 16" DIA. WATERMAIN
2 EA. - 16" D.I. M.J. 90 DEG BENDS W/JOINT RESTRAINTS AND THRUST BLOCKS
1 EA. - 16" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS
1 EA. - 16" D.I M.J. CAP TO ABANDON 16" WATERLINE
1 EA. - 16" CAP AND CLEANOUT ASSEMBLY FOR PRESSURE TESTING & FLUSHING (SALVAGE TO OWNER AFTER USE)
45 TONS - IMPORTED GRANULAR EMBEDMENT

WATERMAIN:
STA. 0+00 TO 0+24- ℄
FURNISH AND INSTALL:
24 L.F. - PIPE INSULATION (INCIDENTAL TO PIPE COST)

WATERMAIN:
STA. 0+60± - ℄ DRIVEWAY
FURNISH AND INSTALL:
5 TONS - IMPORTED GRANULAR EMBEDMENT
4 TONS GRAVEL SURFACING

(1) WATERMAIN:
STA. 1+36± - ℄
FURNISH AND INSTALL:
50 L.F. - 4" DIA. WATERMAIN
1 EA. - 16"x4" D.I. M.J. TEE W/JOINT RESTRAINTS & BLOCK
1 EA. - 4" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS
1 EA. - 4" KNUCKLE JOINT CAP
24 LF. - PIPE INSULATION (INCIDENTAL TO PIPE COST)
2 TONS - IMPORTED GRANULAR EMBEDMENT

(2) WATERMAIN:
STA. 12+28± - ℄ TO 20' RT.
FURNISH AND INSTALL:
1 EA. - AIR RELEASE VALVE
RE: DETAIL SHT. 5

WATERMAIN:
STA. 1+90± - ℄
252ND STREET CROSSING
FURNISH AND INSTALL:
10 TONS - IMPORTED GRANULAR EMBEDMENT
8 TONS GRAVEL SURFACING

MATERIAL SCHEDULE:

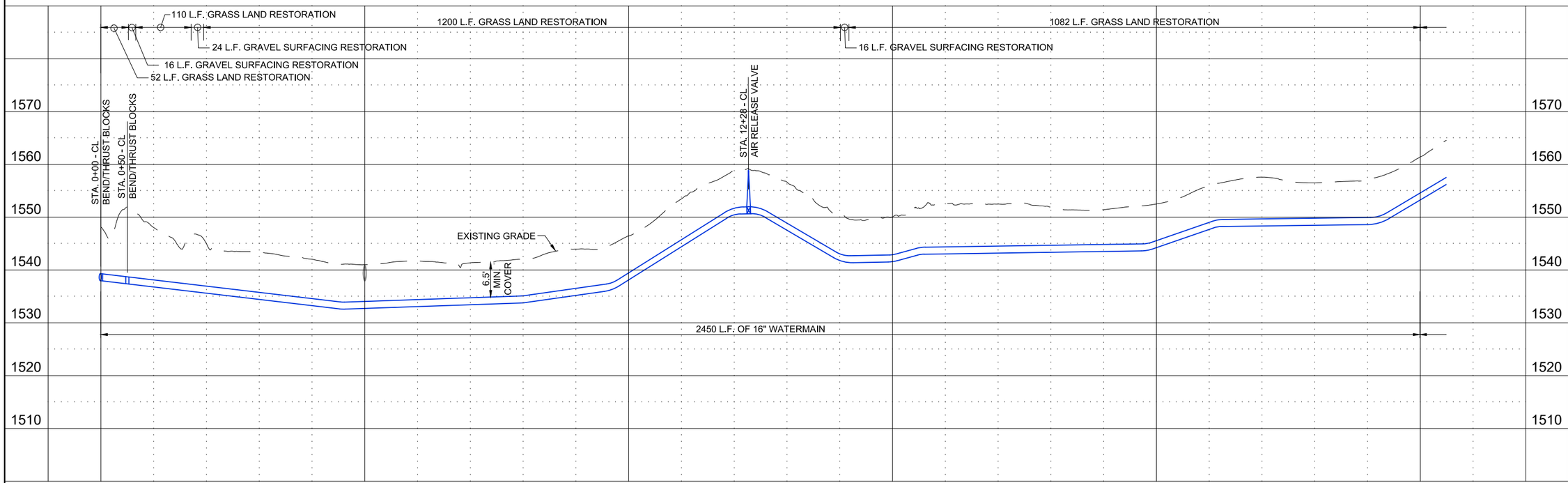
DESCRIPTION:	QUANTITY:
4" DIA. WATERMAIN	50 L.F.
16" DIA. WATERMAIN	2500 L.F.
16"x4" D.I. M.J. TEE W/JOINT RESTRAINTS & BLOCK	1 EA.
4" KNUCKLE JOINT CAP	1 EA.
4" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS	1 EA.
16" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS	1 EA.
16" D.I. M.J. 90 DEG BENDS W/JOINT RESTRAINTS & BLOCK	2 EA.
AIR RELEASE VALVE	1 EA.
16" CAP AND CLEANOUT ASSEMBLY FOR PRESSURE TESTING & FLUSHING (SALVAGE TO OWNER AFTER USE)	1 EA.
PIPE INSULATION (INCIDENTAL TO PIPE COST)	48 L.F.
GRASSLAND RESTORATION	2550 L.F.
IMPORTED GRANULAR EMBEDMENT	67 TONS
GRAVEL SURFACING	16 TON

WATERMAIN:
STA. 14+10± - ℄ DRIVEWAY
FURNISH AND INSTALL:
5 TONS - IMPORTED GRANULAR EMBEDMENT
4 TONS GRAVEL SURFACING

GRID BEARING
100' 50' 0 100' 200'

PLAN NOTES:

1. LOCATION OF EXISTING WATERMAIN & UTILITIES IS APPROXIMATE. CONTRACTOR SHALL VERIFY LOCATION DURING CONSTRUCTION.
2. CONTRACTOR SHALL INSTALL NEW WATERMAIN APPROX. 10' FROM EXISTING WATERMAIN.
3. FOR 16" WATERMAIN, RESTRAIN ALL JOINTS WITHIN 80' OF TEES, WITHIN 50' OF ALL FITTINGS (90 DEG., 45 DEG., ETC...), AND WITHIN 150' OF DEAD ENDS AND VALVES.
4. APPROXIMATE CENTERLINE OF DRIVEWAY CROSSINGS ARE LOCATED AT THE FOLLOWING LOCATIONS:
   - STA. 0+60 AND STA. 14+10
5. CONTRACTOR SHALL OPEN CUT GRAVEL ROAD CROSSINGS. APPROXIMATE CENTERLINE OF GRAVEL ROAD CROSSINGS ARE LOCATED AT THE FOLLOWING LOCATIONS:
   - STA. 1+90



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PROJECT / SHEET TITLE :
MCWC WATER UTILITY RELOCATION
HWY 149 WATER RELOCATION PLAN & PROFILE - 420+00 TO 445+00
MINNEHAHA, SOUTH DAKOTA

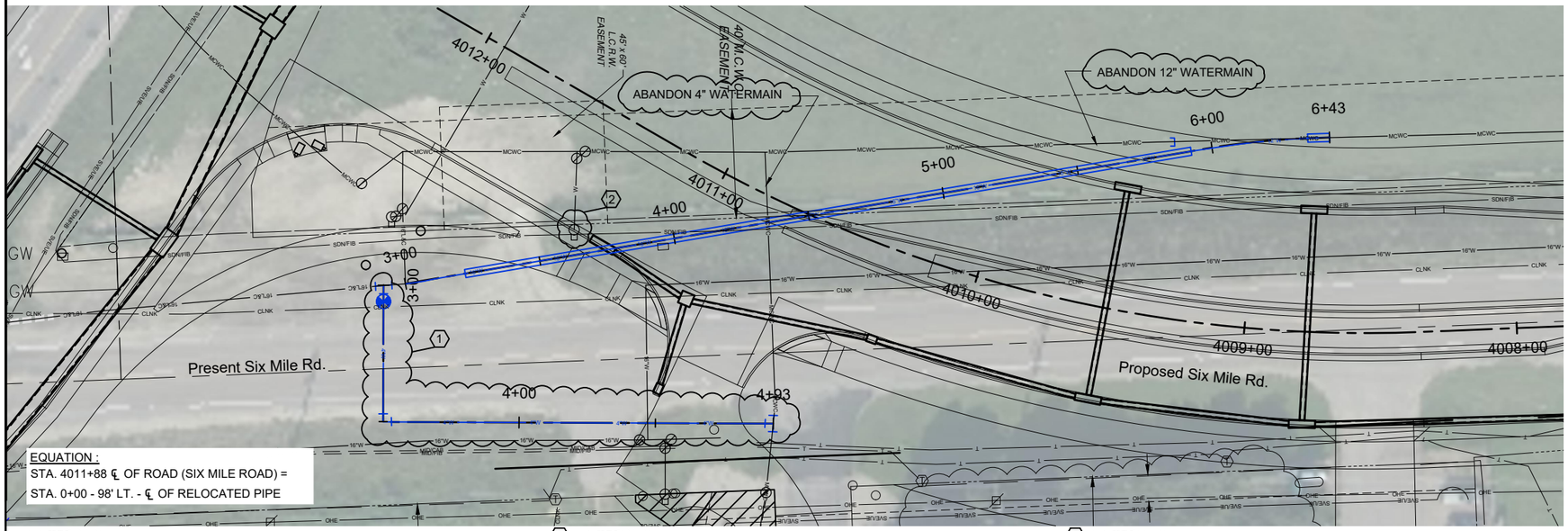
REV	DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 13167
CHRISTOPHER J. KURLES
SOUTH DAKOTA
11/12/2021

JOB No.:	23462.00
DATE:	NOVEMBER 2021
DESIGNED BY:	BAL
CHECKED BY:	CJK
DRAWN BY:	CMC

0 1/2" 1"
SCALE REDUCTION BAR

SHEET No. :
19



EQUATION :
STA. 4011+88 ℄ OF ROAD (SIX MILE ROAD) =
STA. 0+00 - 98' LT. - ℄ OF RELOCATED PIPE

MATERIAL SCHEDULE:

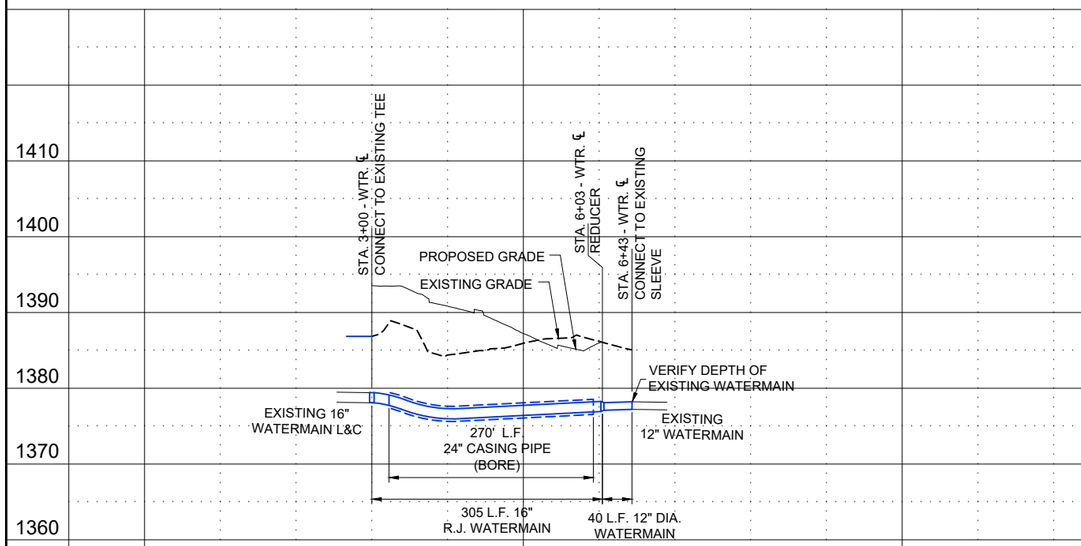
DESCRIPTION:	QUANTITY:
4" DIA. WATERMAIN	193 L.F.
12" DIA. WATERMAIN	40 L.F.
16" DIA. R.J. WATERMAIN	305 L.F..
24" STEEL ENCASEMENT PIPE	270 L.F.
16"x4" D.I. M.J. TEE W/JOINT RESTRAINTS & BLOCK	1 EA.
4" D.I. M.J. TEE & BLOCK W/JOINT RESTRAINTS	1 EA..
16" FOSTER ADAPTER	1 EA.
16"x12" D.I. M.J. REDUCER W/JOINT RESTRAINTS	1 EA.
4" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS	1 EA.
12" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS	1 EA.
12" D.I M.J. CAP TO ABANDON 12" WATERLINE	1 EA.
4" D.I. M.J. CAP & CONCRETE BLOCK	1 EA.
4" D.I. M.J. GATE VALVE & BOX W/JOINT RESTRAINTS	1 EA.
4" D.I. M.J. 90 DEG BENDS W/JOINT RESTRAINTS & THRUST BLOCKS	1 EA.
IMPORTED GRANULAR EMBEDMENT	7 TON

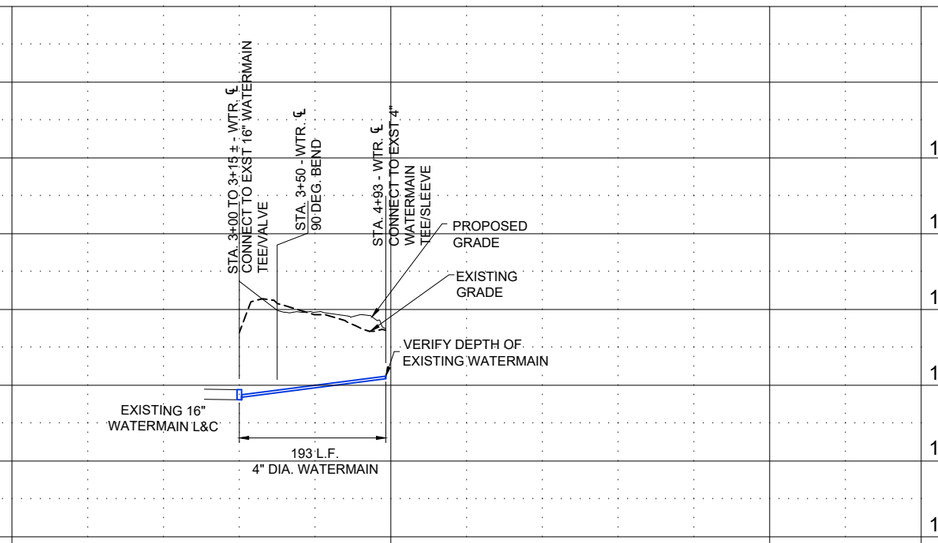
WATERMAIN:
STA. 3+00 - ℄ TO 6+43 - ℄
FURNISH AND INSTALL:
40 L.F. - 12" DIA. WATERMAIN
305 L.F. - 16" DIA. R.J. WATERMAIN
270 L.F. - 24" STEEL ENCASEMENT PIPE
1 EA. - 16"x4" D.I. M.J. TEE W/JOINT RESTRAINTS & BLOCK
1 EA. - 16" FOSTER ADAPTER
1 EA. - 16"x12" D.I. M.J. REDUCER W/JOINT RESTRAINTS
1 EA. - 12" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS
1 EA. - 12" D.I M.J. CAP TO ABANDON 12" WATERLINE
2 TONS - IMPORTED GRANULAR EMBEDMENT

1 WATERMAIN:
STA. 3+00 TO 4+93- ℄
FURNISH AND INSTALL:
193 L.F. - 4" DIA. WATERMAIN
1 EA. - 16"x4" D.I. M.J. TEE W/JOINT RESTRAINTS & BLOCK
1 EA. - 4" D.I. M.J. GATE VALVE & BOX W/JOINT RESTRAINTS
1 EA. - 4" D.I. M.J. 90 DEG BENDS W/JOINT RESTRAINTS & THRUST BLOCKS
1 EA. - 4" D.I. M.J. TEE & BLOCK W/JOINT RESTRAINTS
1 EA. - 4" D.I. M.J. CAP & CONCRETE BLOCK
1 EA. - 4" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS
5 TONS - IMPORTED GRANULAR EMBEDMENT

2 WATERMAIN:
REMOVE AND SALVAGE TO OWNER:
1 EA. - HYDRANT

GRID BEARING
25' 12.5' 0 25' 50'





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PROJECT / SHEET TITLE:
MCWC ARROWHEAD PARKWAY WATER UTILITY RELOCATION
WATER RELOCATION PLAN - STA. 4011+00 TO 4008+00
SIOUX FALLS, SOUTH DAKOTA

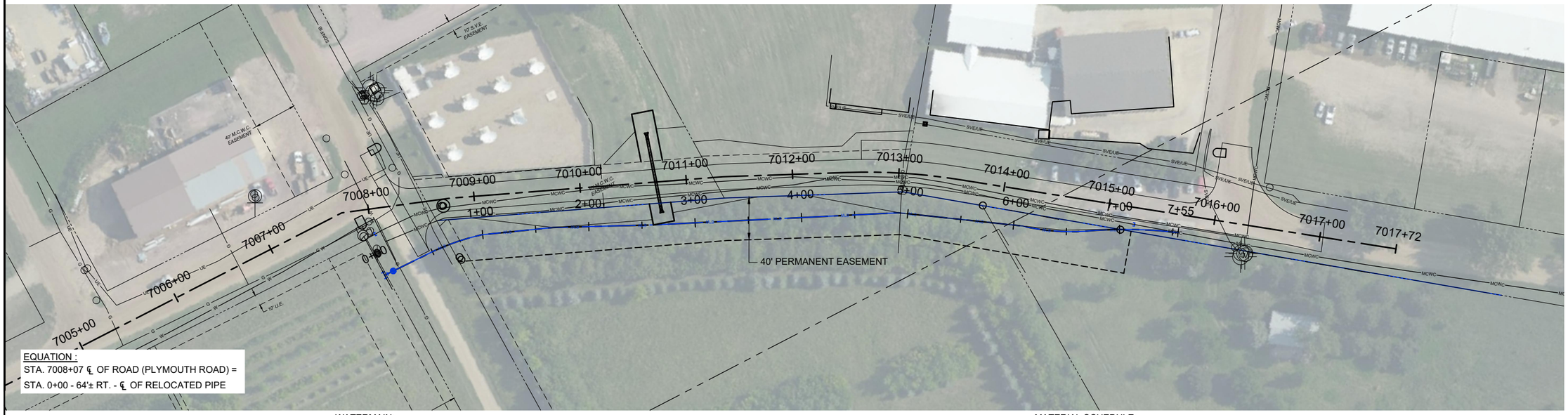
REV.:	DESCRIPTION	DATE

REGISTERED PROFESSIONAL ENGINEER
REG NO. 13167
CHARLES JOSEPH KROHLES
SOUTH DAKOTA
1/12/2022

JOB No.:	23462.00
DATE:	NOVEMBER 2021
DESIGNED BY:	CJK
CHECKED BY:	CJK
DRAWN BY:	CJK

0 1/2" 1"
SCALE REDUCTION BAR

SHEET No. :
24

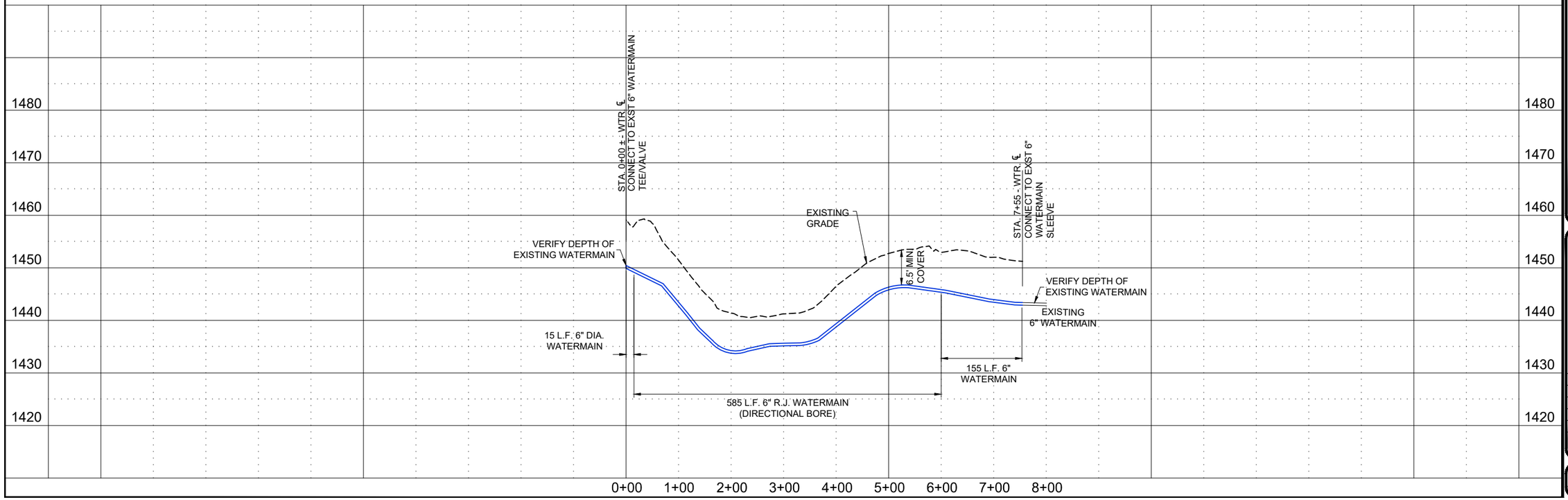


WATERMAIN:
STA. 0+00 - ℄ TO 7+55 - ℄

FURNISH AND INSTALL:
170 L.F. - 6" DIA. WATERMAIN
585 L.F. - 6" DIA. R.J. WATERMAIN
1 EA. - 6" D.I. M.J. TEE & BLOCK W/JOINT RESTRAINTS
2 EA. - 6" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS
2 EA. - 6" D.I M.J. CAP TO ABANDON 6" WATERLINE
1 EA. - 6" D.I. M.J. GATE VALVE & BOX W/JOINT RESTRAINTS
2 TONS - IMPORTED GRANULAR EMBEDMENT

MATERIAL SCHEDULE:

DESCRIPTION:	QUANTITY:
6" DIA. WATERMAIN	170 L.F.
6" DIA. PVC R.J. WATERMAIN	585 L.F.
6" D.I. M.J. TEE & BLOCK W/JOINT RESTRAINTS	1 EA.
6" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS	2 EA.
6" D.I M.J. CAP TO ABANDON 6" WATERLINE	2 EA.
6" D.I. M.J. GATE VALVE & BOX W/JOINT RESTRAINTS	1 EA.
IMPORTED GRANULAR EMBEDMENT	2 TON



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PROJECT / SHEET TITLE:
MCWC PLYMOUTH ROAD WATER UTILITY RELOCATION
WATER RELOCATION PLAN - STA. 7008+00 TO 7016+00
SIOUX FALLS, SOUTH DAKOTA

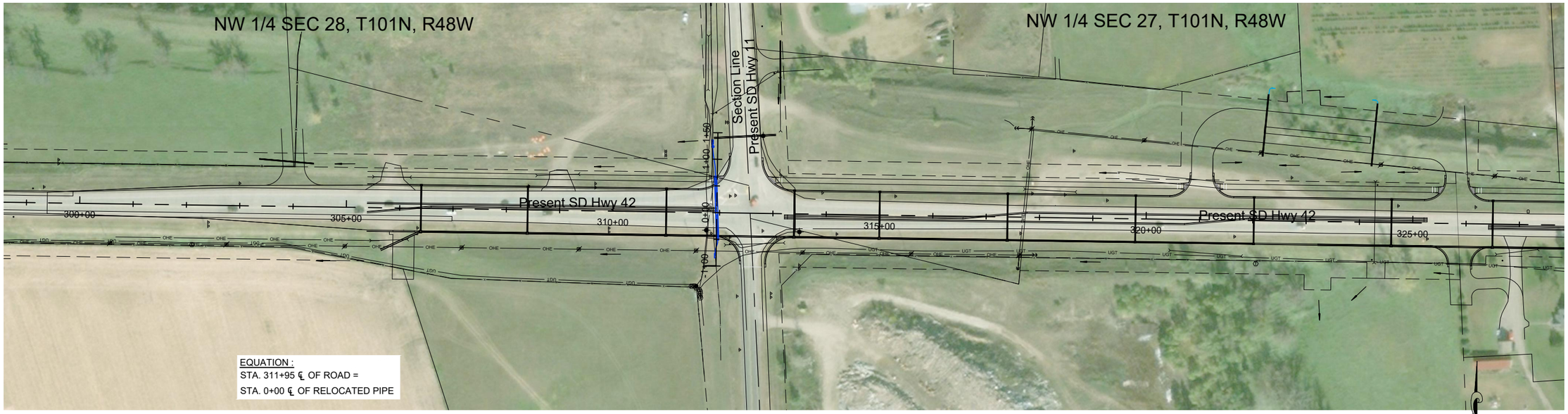
REV.	DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
REG NO. 13167
CORY JAMES KROHLES
SOUTH DAKOTA
1/12/22

JOB No.:	23462.00
DATE:	NOVEMBER 2021
DESIGNED BY:	CJK
CHECKED BY:	CJK
DRAWN BY:	CJK

0 1/2" 1"
SCALE REDUCTION BAR

SHEET No. :
25

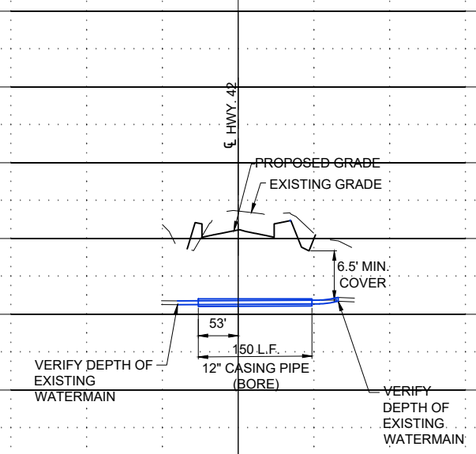


WATERMAIN:
STA. 311+95 - 150' L TO 100' R
FURNISH AND INSTALL:
150 L.F. - 12" CASING PIPE (BORE)
214 L.F. - 6" DIA. RJ WATERMAIN
1 EA. - 6" GATE VALVE AND BOX W/JOINT RESTRAINTS
2 EA. - 6" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS
1 EA. - 6" D.I M.J. CAP & CONCRETE BLOCK
2 TONS - IMPORTED GRANULAR EMBEDMENT

MATERIAL SCHEDULE:

DESCRIPTION:	QUANTITY:
12" CASING PIPE (BORE)	150 L.F.
6" DIA. RJ WATERMAIN	214 L.F.
6" GATE VALVE AND BOX W/JOINT RESTRAINTS	1 EA.
6" D.I. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS	2 EA.
6" D.I M.J. CAP & CONCRETE BLOCK	1 EA.
IMPORTED GRANULAR EMBEDMENT	2 TON

GRID BEARING
100' 50' 0 100' 200'



1330 1320 1310 1300 1290 1280 1270

-2+00 -1+00 0+00 1+00 2+00

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PROJECT / SHEET TITLE:
MCWC WATER UTILITY RELOCATION
HWY 42 WATERLINE RELOCATION PLAN - STA. 312+00
MINNEHAHA, SOUTH DAKOTA

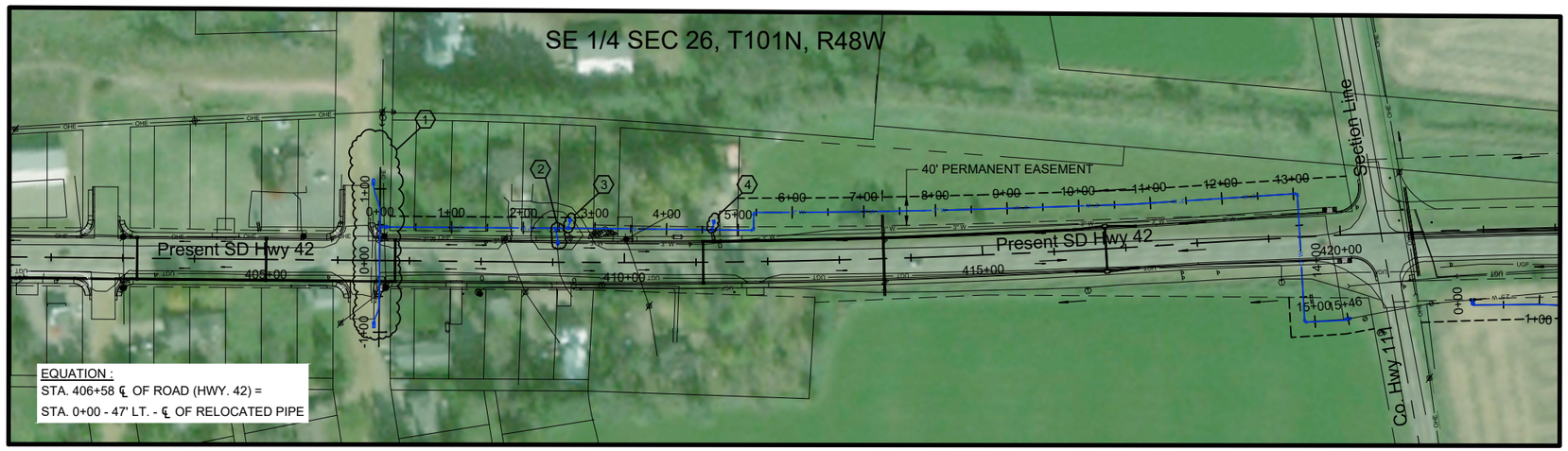
REV.	DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
REG NO. 13167
CHRISTIAN J. KNUDSEN
SOUTH DAKOTA
1/12/2022

JOB No.:	23462.00
DATE:	NOVEMBER 2021
DESIGNED BY:	CJK
CHECKED BY:	CJK
DRAWN BY:	CJK

0 1/2" 1"
SCALE REDUCTION BAR

SHEET No. :
26



MATERIAL SCHEDULE:

DESCRIPTION:	QUANTITY:
6" CASING PIPE (BORE)	180 L.F.
3" DIA. RJ PVC PIPE	740 L.F.
3" DIA. CLASS 200 PVC PIPE	1000 L.F.
4" DIA. WATERMAIN	80 L.F.
1.5" PVC SERVICE PIPE	20 L.F.
1" POLY	20 L.F.
3" D.I. M.J. GATE VALVE AND BOX W/JOINT RESTRAINTS	1 EA.
3" KNUCKLE JOINT 90 DEG. BEND	4 EA.
3"x1.5" KNUCKLE JOINT TEE W/JOINT RESTRAINTS & THRUST BLOCK	1 EA.
4"x3" KNUCKLE JOINT TEE W/JOINT RESTRAINTS & THRUST BLOCK	1 EA.
4"x3" KNUCKLE JOINT REDUCER	1 EA.
2.5"x3" KNUCKLE JOINT REDUCER	1 EA.
4" DIA. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS	1 EA.
3" KNUCKLE JOINT REPAIR COUPLING	1 EA.
1.5" KNUCKLE JOINT REPAIR COUPLING	1 EA.
3"x1" SERVICE SADDLE AND CORP	2 EA.
1"x1" COMPRESSION COUPLING	2 EA.
IMPORTED GRANULAR EMBEDMENT	5 TON

① WATERMAIN:
STA. 406+58 - 108' L TO 90' R
CONNECT TO EXISTING 4" AND 2.5" WATERMAIN
FURNISH AND INSTALL:
80 L.F. - 6" CASING PIPE (BORE)
100 L.F. - 3" RJ PVC PIPE
60 L.F. - 3" CLASS 200 PVC PIPE
80 L.F. - 4" DIA. WATERMAIN
2 EA. - 4"x3" KNUCKLE JOINT TEE W/JOINT RESTRAINTS & THRUST BLOCK
1 EA. - 4"x3" KNUCKLE JOINT REDUCER
1 EA. - 4" DIA. M.J. LONG BODY SLEEVE W/JOINT RESTRAINTS
1 EA. - 3"x2.5" KNUCKLE JOINT REDUCER

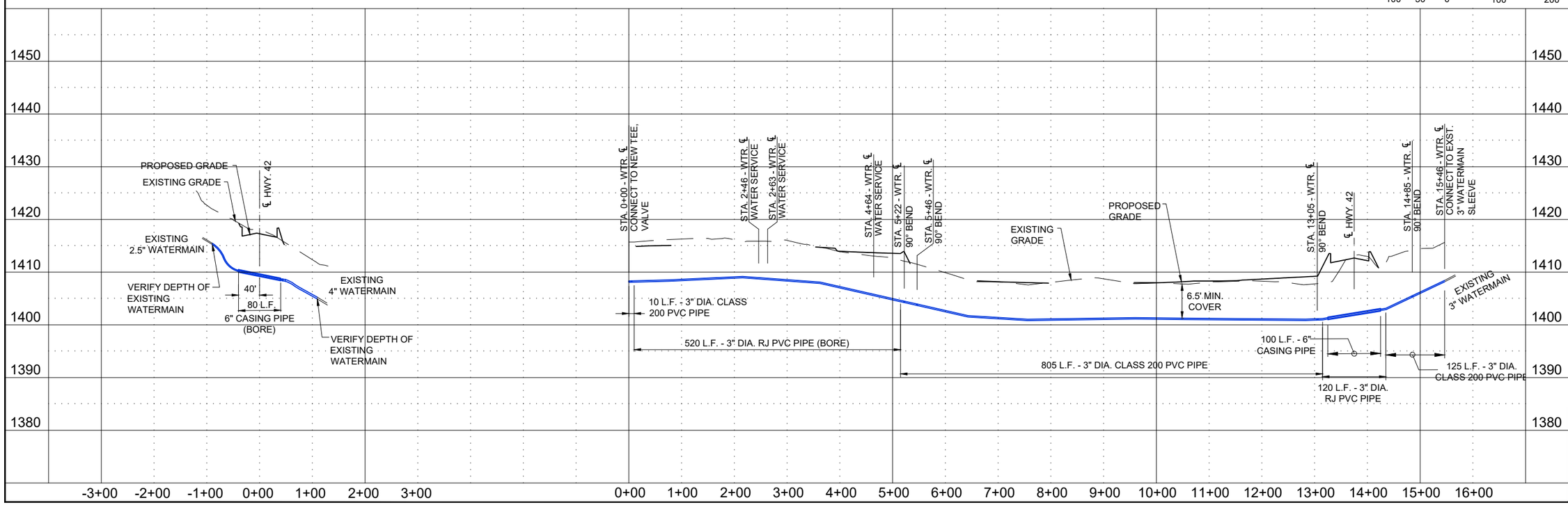
② WATERMAIN:
STA. 2+46 - ℄ TO 20' R
INSTALL NEW SERVICE LINE OFF OF 3" WATER MAIN AND RECONNECT TO 1.5" SERVICE
FURNISH AND INSTALL:
20 L.F. - 1.5" PVC SERVICE PIPE
1 EA. - 3"x1.5" KNUCKLE JOINT TEE
1 EA. - 1.5" KNUCKLE JOINT REPAIR COUPLING
TURN OFF EXISTING CORP.

③ WATERMAIN:
STA. 2+63 - ℄ TO 10' L
INSTALL NEW SERVICE LINE OFF OF 3" WATER MAIN AND RECONNECT TO 1" SERVICE
FURNISH AND INSTALL:
10 L.F. - 1" POLY
1 EA. - 3"x1" SERVICE SADDLE AND CORP
1 EA. - 1"x1" COMPRESSION COUPLING
TURN OFF EXISTING CORP.

④ WATERMAIN:
STA. 4+64 - ℄ TO 10' L
INSTALL NEW SERVICE LINE OFF OF 3" WATER MAIN AND RECONNECT TO 1" SERVICE
FURNISH AND INSTALL:
10 L.F. - 1" POLY
1 EA. - 3"x1" SERVICE SADDLE AND CORP
1 EA. - 1"x1" COMPRESSION COUPLING
TURN OFF EXISTING CORP.

WATERMAIN:
STA. 0+00 TO 15+34 - ℄
FURNISH AND INSTALL:
100 L.F. - 6" CASING PIPE (BORE)
640 L.F. - 3" DIA. RJ PVC PIPE
940 L.F. - 3" DIA. CLASS 200 PVC PIPE
1 EA. - 3" D.I. M.J. GATE VALVE AND BOX W/JOINT RESTRAINTS
4 EA. - 3" KNUCKLE JOINT 90 DEG. BEND
3 EA. - 3"x1.5" KNUCKLE JOINT TEE W/JOINT RESTRAINTS & THRUST BLOCK
1 EA. - 3" KNUCKLE JOINT REPAIR COUPLING

GRID BEARING
100' 50' 0 100' 200'



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PROJECT / SHEET TITLE:
MCWC WATER UTILITY RELOCATION
HWY 42 WATERLINE RELOCATION PLAN - STA. 403+00 TO 423+00
MINNEHAHA, SOUTH DAKOTA

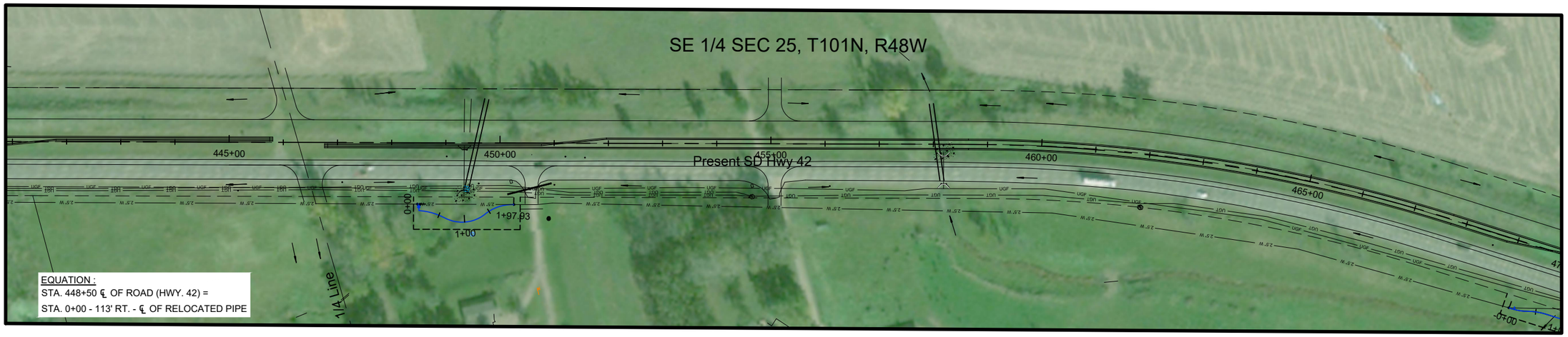
REV.	DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 13167
CHAD J. KOHLES
SOUTH DAKOTA
1/12/2022

JOB No.:	23462.00
DATE:	NOVEMBER 2021
DESIGNED BY:	CJK
CHECKED BY:	CJK
DRAWN BY:	CJK

0 1/2" 1"
SCALE REDUCTION BAR

SHEET No. :
28

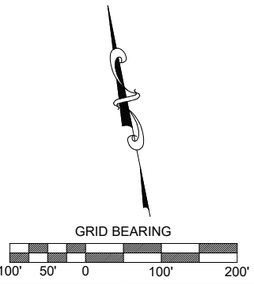


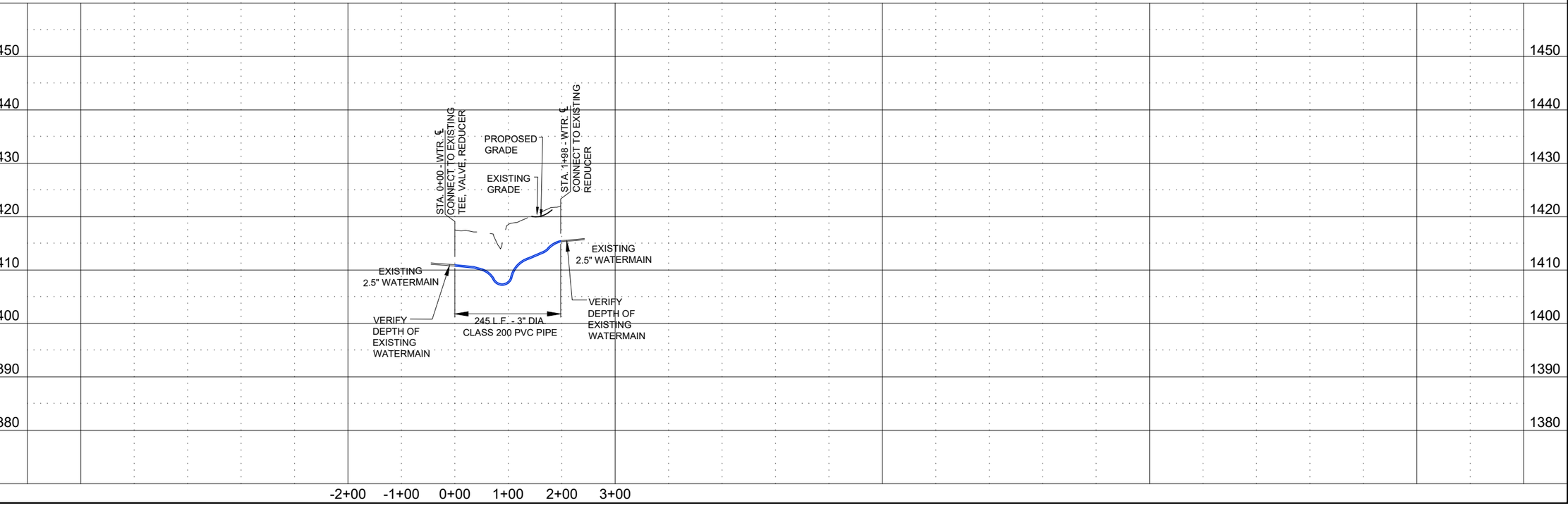
WATERMAIN:
STA. 0+00 TO 1+98 - ℄

FURNISH AND INSTALL:
245 L.F. - 3" DIA. CLASS 200 PVC PIPE
2 EA. - 2.5"x3" KNUCKLE JOINT REDUCER
1 EA. - 3"x3" KNUCKLE JOINT TEE W/JOINT RESTRAINTS & THRUST BLOCK
1 EA. - 3" GATE VALVE AND BOX W/ JOINT RESTRAINTS
1 EA. - 2.5" KNUCKLE JOINT PLUG

MATERIAL SCHEDULE:

DESCRIPTION:	QUANTITY:
3" DIA. CLASS 200 PVC PIPE	245 L.F.
2.5"x3" KNUCKLE JOINT REDUCER	2 EA.
3"x3" KNUCKLE JOINT TEE W/JOINT RESTRAINTS & THRUST BLOCK	1 EA.
3" GATE VALVE AND BOX W/ JOINT RESTRAINTS	1 EA.
2.5" KNUCKLE JOINT PLUG	1 EA.
IMPORTED GRANULAR EMBEDMENT	2 TON





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PROJECT / SHEET TITLE:
MCWC WATER UTILITY RELOCATION
HWY 42 WATERLINE RELOCATION PLAN - STA. 442+00 TO 469+00
MINNEHAHA, SOUTH DAKOTA

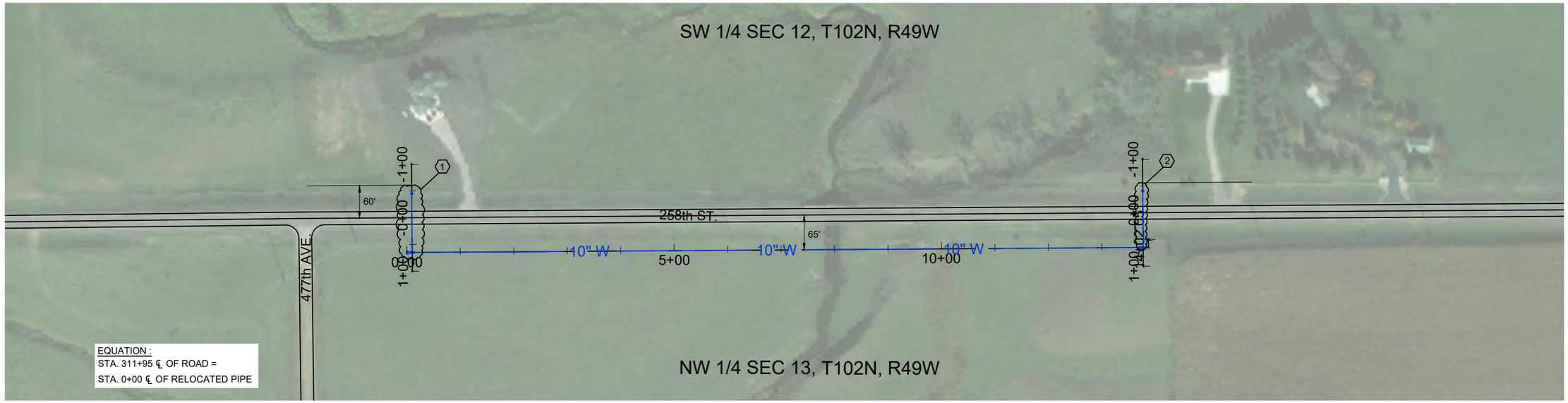
REV.	DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
REG NO. 13167
CHRISTOPHER J. KUHLES
SOUTH DAKOTA
1/12/2022

JOB No.:	23462.00
DATE:	NOVEMBER 2021
DESIGNED BY:	CJK
CHECKED BY:	CJK
DRAWN BY:	CJK

0 1/2" 1"
SCALE REDUCTION BAR

SHEET No. :
30



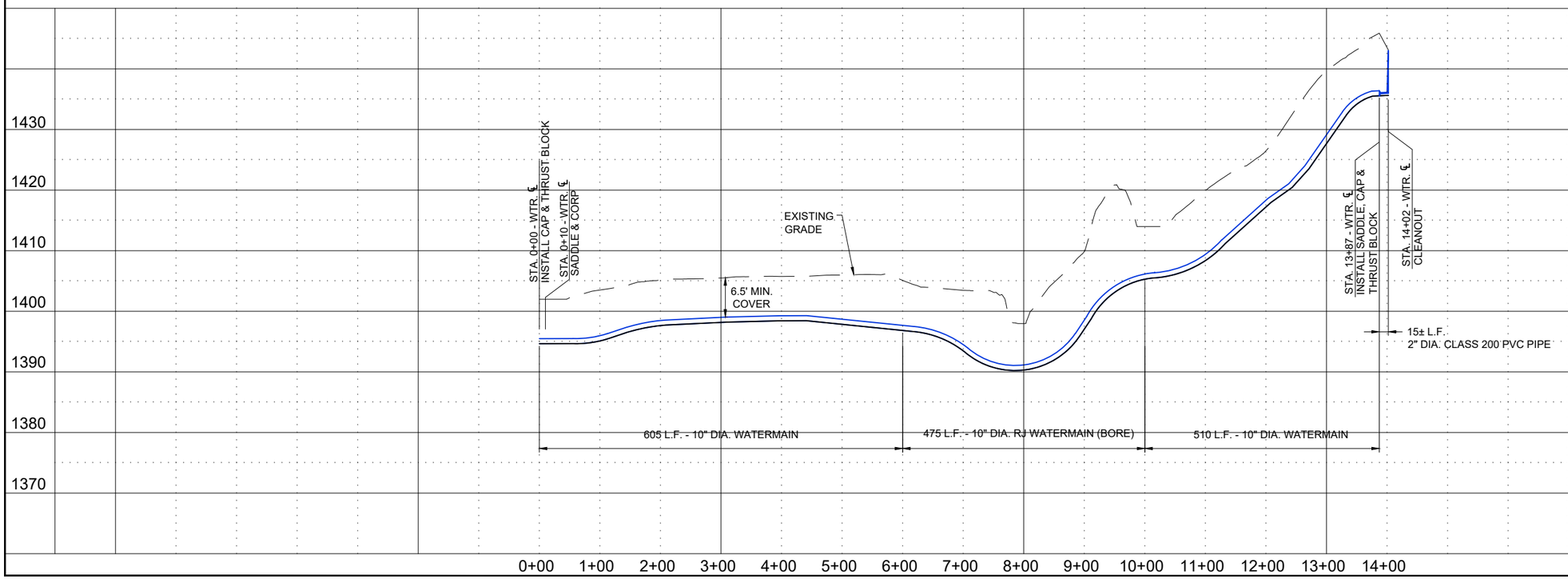
1 WATERMAIN:
STA. 2+03 - 50' L TO 65' R
CONNECT TO EXISTING 2.5" WATERMAIN
FURNISH AND INSTALL:
80 L.F. - 4" CASING PIPE (BORE) (TO BE SUPPLIED BY OWNER)
100 L.F. - 2" RJ PVC PIPE
20 L.F. - 2" DIA. CLASS 200 PVC PIPE
1 EA. - 10"x2" SADDLE & CORP
1 EA. - 2" GATE VALVE AND BOX W/JOINT RESTRAINTS
1 EA. - 2.5"X2" KNUCKLE JOINT REDUCER
1 EA. - 2.5" KNUCKLE JOINT REPAIR COUPLING

WATERMAIN:
STA. 0+00 - ℄ TO 14+02± - ℄
FURNISH AND INSTALL:
1115 L.F. - 10" DIA. WATERMAIN
475 L.F. - 10" DIA. RJ WATERMAIN
15 L.F. - 2" DIA. CLASS 200 PVC PIPE
2 EA. - 10" D.I M.J. CAP & THRUST BLOCK
1 EA. - 10"x2" SADDLE & CORP
1 EA. - 2" CLEANOUT
15 TONS - IMPORTED GRANULAR EMBEDMENT

2 WATERMAIN:
STA. 15+70 - 47' L TO 65' R
CONNECT TO EXISTING 2" WATERMAIN
FURNISH AND INSTALL:
70 L.F. - 4" CASING PIPE (BORE) (TO BE SUPPLIED BY OWNER)
90 L.F. - 2" RJ PVC PIPE
40 L.F. - 2" DIA. CLASS 200 PVC PIPE
1 EA. - 10"x2" SADDLE & CORP
1 EA. - 2" GATE VALVE AND BOX W/JOINT RESTRAINTS
1 EA. - 2" KNUCKLE JOINT REPAIR COUPLING

MATERIAL SCHEDULE:

DESCRIPTION:	QUANTITY:
10" DIA. WATERMAIN	1115 L.F.
10" DIA. RJ WATERMAIN	475 L.F.
4" CASING PIPE (BORE) (TO BE SUPPLIED BY OWNER)	150 L.F.
2" DIA. CLASS 200 PVC PIPE	75 L.F.
2" RJ PVC PIPE	190 L.F.
10" D.I M.J. CAP & THRUST BLOCK	2 EA.
10"x2" SADDLE & CORP	3 EA.
2" GATE VALVE AND BOX W/JOINT RESTRAINTS	2 EA.
2.5"X2" KNUCKLE JOINT REDUCER	1 EA.
2.5" KNUCKLE JOINT REPAIR COUPLING	1 EA.
2" KNUCKLE JOINT REPAIR COUPLING	1 EA.
2" CLEANOUT	1 EA.
IMPORTED GRANULAR EMBEDMENT	15 TON



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www.bannerassociates.com - Toll Free: 1.855.323.6342

PROJECT / SHEET TITLE:
MCWC WATER UTILITY RELOCATION
10INCH LOOP-PP - STA. 0+00 TO 20+00 PP
MINNEHAHA, SOUTH DAKOTA

REV.	DATE	DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 13167
COLEN K. JORGENSEN
SOUTH DAKOTA
1/12/2022

JOB No.:	23462.00
DATE:	NOVEMBER 2021
DESIGNED BY:	CJK
CHECKED BY:	CJK
DRAWN BY:	CJK

0 1/2" 1"
SCALE REDUCTION BAR

SHEET No. :
32