

Board Agenda



Diversion Board of Authority

October 27, 2022 @ 3:30 p.m. CST

This meeting will be in-person at Fargo City Hall Commission Chambers (225 4th St N, Fargo, ND 58102) and online.

1. Call to Order
 - a. Roll Call of Members
2. Approve minutes from September 22, 2022
[Attachment 00.01] (Pg. 3)
3. Approve Order of Agenda

CONSENT AGENDA – APPROVE THE FOLLOWING:

- a. Finance Report [Attachment 01.00] (Pg. 7)
- b. Voucher Approval [Attachment 02.00] (Pg. 29)
- c. DA Board Approval Contract Actions [Attachment 03.00] (Pg. 45)
 - i. AON Risk Services Central, New Services Agreement [Attachment 03.01] (Pg. 47)
 - ii. WPAi New Services Agreement [Attachment 03.02] Pg. 50)
 - iii. Program Advisor Services, MSA 2023-2027 [Attachment 03.03] (Pg. 52)
 - iv. GA Group Services Agreement Amendment 2 [Attachment 03.04] (Pg. 55)
 - v. Grand Farm New Services Agreement [Attachment 03.05] (Pg. 58)
- d. DA Board Approval MOU and Agreement Actions [Attachment 04.00] (Pg. 60)
 - i. Cass Rural Water MFDA MURA [Attachment 04.01] (Pg. 63)

REGULAR AGENDA:

4. Executive Director Report
[Attachment 05.00] (Pg. 179)
5. General Counsel Update
 - a. Joint Resolution – CWSRF Loan Resolution
[Attachment 06.00] (Pg. 181)
 - b. Resolution Requesting Permanent Right of Way Obstruction – SWDCAI Phase II
[Attachment 07.00] (Pg. 241)
 - c. Executive Director Employment Contract

Board Agenda



6. USACE Project Update –
 7. Communications Team Update
 8. Land Management Update
 - a. Property Acquisition Status Report
[Attachment 08.00] (Pg. 286)
 9. Finance Update
 - a. Updated City of Fargo Work for Projects Bid in 2022
[Attachment 09.00] (Pg. 291)
 10. Other Business
 - a. P3 Developer Safety Presentation
[Attachment 10.00] (Pg. 296)
 - b. Program Information Points Handout
 11. Next Meeting: November 17, 2022
 12. Adjournment
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MEDIA AND PUBLIC PARTICIPATION INFORMATION

There are multiple ways to attend or watch this public meeting.

- View the Meeting on Fargo TV or at www.TVFargo.com
- View the Meeting on the City of Fargo's Facebook or Twitter feed.
- View the Meeting at FMDiversion.com/Meeting
- View the Meeting at [Twitter.com/FMDiversion](https://twitter.com/FMDiversion)



Metro Flood Diversion Authority Board of Authority Meeting Minutes

3:30 P.M. – September 22, 2022
City of Fargo Commission Chambers

A regular meeting of the Metro Flood Diversion Authority Board of Authority was held on September 22, 2022. The following members were present: Chad Peterson, Cass County Commissioner; Dr. Tim Mahoney, Mayor, City of Fargo; Shelly Carlson, Mayor, City of Moorhead; Chuck Hendrickson, Moorhead City Council; David Ebinger, Clay County Commissioner; John Strand, Fargo City Commissioner; Kevin Campbell, Clay County Commissioner; Mary Scherling, Cass County Commissioner and Rick Steen, Cass County Commissioner.

Members absent: Bernie Dardis, Mayor, City of West Fargo; Dave Piepkorn, Fargo City Commissioner; Rodger Olson, Cass County Joint Water Resource District and Larry Seljevold, Moorhead City Council.

1. CALL TO ORDER

Mr. Peterson called the meeting to order at 3:32 PM. Roll call was taken, and a quorum was present.

2. APPROVE MINUTES FROM THE AUGUST 2022 MEETING

MOTION PASSED

Mrs. Scherling moved to approve the minutes from the August 2022 meeting and Mr. Ebinger seconded the motion. On a voice vote, the motion carried.

3. APPROVE ORDER OF AGENDA

MOTION PASSED

Mr. Strand moved to approve the order of the agenda as presented and Mr. Campbell seconded the motion. On a voice vote, the motion carried.

CONSENT AGENDA

MOTION PASSED

Mr. Steen moved to approve the consent agenda Mr. Campbell seconded the motion. On a roll call vote, the motion passed.

4. EXECUTIVE DIRECTOR REPORT

Mr. Paulsen provided the following updates:

Media & Event Highlights

- Nebraska/Dakotas Chapter of American Society of Landscape Architects tour – Sept. 15
- 2 FM Realtor presentations next week
- Shortlisted for P3 Awards
 - MFDA for Public Sector Promoter/Procurer of the Year
 - Joel Paulsen for Future Leader of the Year

- John Shockley for Legal Advisor of the Year
- Shikun & Binui USA, Ashurst and Winston & Strawn for Best Utilities Project for their work on the FM Area Diversion

Major Project Accomplishments

- Rotating Tainter gate at Wild Rice River Structure this week
- CR 81 & 18 intersection open to the public one week early

P3 Updates

- Notice to Proceed 2 issued to Developer

5. GENERAL COUNSEL UPDATE

a. Resolution to Approve and Adopt Governance Policies

Mr. Shockley provided an overview and summary of the proposed resolution to approve and adopt the Governance Policies.

MOTION PASSED

Dr. Mahoney moved to approve the resolution as presented and Mrs. Scherling seconded the motion. On a roll call vote, the motion carried.

b. Resolution to Establish the Planning Committee

Mr. Shockley provided an overview and summary of the proposed resolution to establish the Planning Committee.

MOTION PASSED

Dr. Mahoney moved to approve the resolution as presented and Mr. Ebinger seconded the motion. On a roll call vote, the motion carried.

c. Resolution to Dissolve the Public Outreach Committee

Mr. Shockley provided an overview and summary of the proposed resolution to dissolve the Public Outreach Committee.

MOTION PASSED

Mr. Strand moved to approve the resolution as presented and Mr. Ebinger seconded the motion. On a roll call vote, the motion carried.

d. Resolution to Dissolve the Ag Committee

Mr. Shockley provided an overview and summary of the proposed resolution to dissolve the Ag Committee.

MOTION PASSED

Mr. Campbell moved to approve the resolution as presented and Mr. Ebinger seconded the motion. On a roll call vote, the motion carried.

e. Executive Director Employment Contract

Mr. Shockley provided an overview and update regarding the changes to executive director Paulsen's employment agreement. After lengthy dialogue, it was recommended that Mr. Shockley work with Mr. Peterson to revise the language in Article V, specifically Sections 5.01 and 5.02, and bring back to the Board for consideration.

MOTION PASSED

Dr. Mahoney moved to recommend that Mr. Peterson and Mr. Shockley convene to revise the language in Mr. Paulsen's employment agreement and Mr. Steen seconded the motion. On a voice vote, the motion carried.

6. USACE PROJECT UPDATE

Ms. Williams provided the following USACE update:

1 Diversion Inlet Structure (DIS) – Construction

Structure includes 3-50 ft. wide Tainter gates. Construction is 87% complete and remains on schedule. Required completion date is 7 June 2023. Preparations continue for gate install and setting bridge deck. Schedule for remaining primary features:

2022: Install bridge deck, gates, and operating machinery.

2023: Paint gates, seed.

2024: Turf established.

2 Wild Rice River Structure (WRRS) – Construction

Structure includes 2-40 ft. wide Tainter gates. Construction is 64% complete and remains on schedule. The required completion date is 20 October 2023. Work on dam walls continues. Gate installation has commenced (see photos on back). Schedule for remaining primary features:

2022: Control building, dam embankment, gate installation.

2023: Complete excavation, dam embankment, seed.

2024: Turf established.

3 I-29 Raise – Construction

Includes approximately 4 miles of interstate raise between County Roads 16 and 18. Construction is 58% complete and remains on schedule. IBI prepares to set the CR18 interchange bridge deck and is paving the mainline raise, to be complete Summer 2023. Required completion date NLT 1 January 2024.

4 Southern Embankment – Reach SE-1 (Western Tieback) - Construction

Construction is nearing completion. Final inspections are being scheduled and O&M Manual being completed. This is the first federal reach to be turned over to the Diversion Authority for Operations and Maintenance.

5 Red River Structure (RRS) - Construction

Structure includes 3-50 ft. wide Tainter gates. Structural excavation and embankment construction ongoing. Required completion date is 19 March 2026.

6 Drain 27 Wetland Mitigation Project - Construction

Construction is 50% complete. The anticipated construction completion date is November 2022. Native plantings contract to be issued late-October 2022.

7 Drayton Dam Mitigation Project Design - Construction

Site work continues including construction of temp. riprap road. Anticipated completion is Fall 2023.

8 Southern Embankment – Reach SE-2A - Construction

Inspection trench and embankment placement continues. Anticipated completion is September 2024.

9 Southern Embankment Design – All remaining reaches are being designed.

SE-1B: Final design signoff pending. Contract award: February 2024

SE-2B: 95% review starts late-Oct 2022. Contract award: August 2023

SE-3: 35% review starts mid-Jan 2023. Contract award: January 2025

SE-4: 35% review starts TBD. Contract award: April 2024

SE-5: 35% review starts mid-Jan 2023. Contract award: January 2025

7. COMMUNICATIONS UPDATE

A drone video highlighting the progress on the Wild Rice River Structure and the I-29 road raise project was viewed.

Ms. Willson reported that the wireframe on the website has been finalized and the initial copy is under review. Work continues on additional videos to include the shortlisted awards, finance education and Faces of the Diversion.

8. LAND MANAGEMENT UPDATE

a. Property Acquisition Status Report

Ms. Smith provided the following property acquisition status report:

- 92.24% completion in the Construction Footprint
- 24.3% completion in the UMA Footprint
- 76% of the parcels in the Southern Embankment have been acquired
- 24.4% of the parcels in the Upstream Mitigation Area have been acquired
- 71.7% of the Environmental Easements have been signed
- 99.5% of the parcels in the Stormwater Diversion Channel have been acquired
- 100% of the Oxbow-Hickson-Bakke levee, MFDA constructed in-town levees and the Drayton Dam mitigation is completed

Key Activities

- Negotiating settlement agreements for existing eminent domain actions
- Conducting appraisal reports and making purchase offers for SE-2B and Phase 3 Flowage Easement properties
- Planning for sending Last Written Offers for Flowage Easements
- Planning two UMA Crop Insurance and Flowage Easement public meetings in November
- Presenting a new Irrevocable License Agreement option for unsigned Environmental Monitoring Easements

9. FINANCE UPDATE

Mr. Steen reported the items addressed at the Finance Committee meeting were approved in the Consent Agenda. A "draft" of the 2023 cash budget was presented, and no action is needed at this time.

Mr. Bakkegard gave an overview of the bids that were received for WP50G and recommended that Schmidt & Sons Construction be awarded the bid for structure mitigation, based on their bid submission of \$794,312.

MOTION PASSED

Dr. Mahoney moved to award the bid to Schmidt & Sons Construction and Mr. Ebinger seconded the motion. On a roll call vote, the motion carried.

10. OTHER BUSINESS

There was no other business to report.

11. NEXT MEETING

The next meeting will be October 27, 2022.

12. ADJOURNMENT

Mrs. Scherling moved to adjourn, and Mr. Steen seconded the motion. The meeting adjourned at 4:49 PM.

**FM Metropolitan Area Flood Risk Management Project
Fiscal Accountability Report Design Phase
As of 09/30/22**

Fiscal Accountability Report Design Phase As of 09/30/22								790: FM Diversion Projct Fund	770: Budget Fund			773: Excess Capital Fund		
	2011-2017	2018	2019	2020	2021	2022	Total	2021	2022	Fund	2021	2022	Total	Grand Total
Revenues														
City of Fargo	135,530,327	30,150,091	32,835,957	30,746,840	39,900,525	23,245,143	292,408,882	-	-	-	-	-	-	292,408,882
Cass County	192,414,790	14,305,401	15,637,755	15,716,168	20,605,468	10,807,311	269,486,893	-	-	-	-	-	-	269,486,893
State Water Commission	165,835,767	9,227,010	26,655,616	69,249,584	44,928,872	20,307,764	336,204,612	-	-	-	-	-	-	336,204,612
State of ND - Legacy Fund	-	-	-	-	-	47,546,789	47,546,789	-	-	-	-	-	-	47,546,789
Cass County Joint Water Resource District	-	-	-	-	28,630,991	-	28,630,991	-	-	-	-	-	-	28,630,991
Other Agencies	706,805	-	-	-	-	-	706,805	-	-	-	-	-	-	706,805
City of Oxbow MOU Repayment	1,586,436	-	358,178	878,020	122,038	-	2,944,671	-	-	-	-	-	-	2,944,671
Reimbursements	78,599	27,396	22,600	40,007	52,055	-	220,657	-	-	-	-	-	-	220,657
Lease/Rental Payments	967,151	527,903	653,883	802,745	622,459	86,925	3,661,065	-	-	-	-	-	-	3,661,065
Asset Sales	1,222,335	-	-	13,234	1,802,265	-	3,037,835	-	-	-	-	-	-	3,037,835
Interest Income	505,157	1,246,875	1,885,896	1,152,843	1,011,554	628,457	6,430,782	-	-	-	-	-	-	6,430,782
Miscellaneous	3,879	356	-	651	7,336	1,982	14,205	659,570	951,462	1,611,032	-	-	-	1,625,237
Total Revenues	498,851,246	55,485,032	78,049,884	118,600,091	137,683,563	102,624,371	991,294,188	659,570	951,462	1,611,032	-	-	-	992,905,220
Expenditures														
7905 Army Corp Payments	53,159,000	-	-	-	-	-	53,159,000	-	-	-	-	-	-	53,159,000
7910 WIK - Administration	2,006,449	849,081	1,201,725	2,068,489	2,650,150	1,621,541	10,397,435	697,145	685,860	1,383,005	-	-	-	11,780,440
7915 WIK - Project Design	28,398,585	2,142,880	2,516,133	3,258,835	2,261,337	1,077,315	39,655,086	-	-	-	-	-	-	39,655,086
7920 WIK - Project Management	45,205,261	6,817,589	8,326,357	10,369,118	13,629,756	9,049,583	93,397,664	-	-	-	-	-	-	93,397,664
7925 WIK - Recreation	163,223	-	40,000	75,000	-	-	278,223	-	-	-	-	-	-	278,223
7930 LERRDS - North Dakota	170,376,168	8,114,895	30,223,861	66,942,804	42,321,398	31,539,469	349,518,596	-	-	-	-	-	-	349,518,596
7931 LERRDS - Minnesota	2,202,937	4,914	5,352	2,769,551	3,832,050	1,918,299	10,733,104	-	-	-	-	-	-	10,733,104
7940 WIK Mitigation - North Dakota	843,506	69,283	12,357	97,512	35,279,546	47,748	36,349,952	-	-	-	-	-	-	36,349,952
7941 WIK Mitigation - Minnesota	-	-	-	-	112,271	260,487	372,758	-	-	-	-	-	-	372,758
7950 Construction - North Dakota	69,359,502	4,384,090	18,183,794	12,172,911	25,488,649	3,432,367	133,021,313	-	-	-	-	-	-	133,021,313

FM Metropolitan Area Flood Risk Management Project
Statement of Net Position
9/30/2022

	FM Diversion Project Fund	Budget Fund	Grand Total
Assets			
Cash	\$ 124,138,655	\$ 228,027	\$ 124,366,682
Cash Horace 3.01 MIT	2,506,757	-	2,506,757
Cash Held In Trust at BND			
Excess Revenue Fund	190,722	-	190,722
Temp Debt Obligation Fund	431,874	-	431,874
Authority Loan Fund	24,660	-	24,660
P3 Reserve Fund	16,118,132	-	16,118,132
Revenue Fund	8	-	8
Receivables			-
State Water Commission *	7,164,418	-	7,164,418
Prepaid Expense	223,728	-	223,728
Total assets	150,798,953	228,027	151,026,981
Liabilities			
Vouchers payable	5,427,332	-	5,427,332
Retainage payable	168,468	-	168,468
Rent Deposit	19,600	-	19,600
Deferred Revenue	11,500	-	11,500
Total liabilities	5,626,899	-	5,626,899
NET POSITION	\$ 145,172,054	\$ 228,027	\$ 145,400,082

* Receivable balance is as of 7/31/2022

Data Through Date: Friday, September 30, 2022

Summary Of Expenses
EXP-2022-09

Tuesday, October 18, 2022

Account Number	Check Date	Check Number	Vendor Name	Transaction Amount	Description	Project Number	Project Description
770-7910-429.11-00	9/29/2022	322322	Cass County Government	\$67,595.75	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Full Time Staff / Salaries				\$67,595.75			
770-7910-429.20-01	9/29/2022	322322	Cass County Government	\$5,857.00	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Employee Benefits / Health Insurance				\$5,857.00			
770-7910-429.20-03	9/29/2022	322322	Cass County Government	\$160.00	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Employee Benefits / Dental Insurance				\$160.00			
770-7910-429.21-01	9/29/2022	322322	Cass County Government	\$4,085.57	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Employee Benefits / Social Security				\$4,085.57			
770-7910-429.21-02	9/29/2022	322322	Cass County Government	\$955.48	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Employee Benefits / Medicare				\$955.48			
770-7910-429.22-07	9/29/2022	322322	Cass County Government	\$8,287.24	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Pension Benefits / Retirement				\$8,287.24			
770-7910-429.33-37	9/15/2022	322011	HighRoad Partners, LLC	\$500.00	SEPT HR PARTNER FEES	V09701	HR SERVICES
Other Services / HR Services				\$500.00			
770-7910-429.34-15	9/15/2022	322044	Marco Technologies	\$208.00	IT SERVICES	V10301	SERVICE AGREEMENT - IT
	9/22/2022	322207	Marco Technologies	\$1,639.52	IT SERVICES	V10301	SERVICE AGREEMENT - IT
	9/29/2022	322375	Marco Technologies	\$1,288.56	DIVERSION IT SERVICES	V10301	SERVICE AGREEMENT - IT
Technical Services / Computer Services				\$3,136.08			
770-7910-429.34-20	9/29/2022	322322	Cass County Government	(\$300.00)	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Technical Services / Marketing / Public Relat.				(\$300.00)			
770-7910-429.38-99	9/29/2022	322322	Cass County Government	(\$9,083.68)	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Other Services / Other Services				(\$9,083.68)			
770-7910-429.53-20	9/29/2022	322322	Cass County Government	\$368.55	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Communications / Cellular Phone Service				\$368.55			
770-7910-429.57-60	9/29/2022	322322	Cass County Government	\$1,151.70	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Out of State Travel / Out of State Travel Exp				\$1,151.70			

Data Through Date: Friday, September 30, 2022

Summary Of Expenses
EXP-2022-09

Tuesday, October 18, 2022

Account Number	Check Date	Check Number	Vendor Name	Transaction Amount	Description	Project Number	Project Description
770-7910-429.61-10	9/29/2022	322322	Cass County Government	\$1,930.52	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
General Supplies / Office Supplies				\$1,930.52			
770-7910-429.68-30	9/29/2022	322322	Cass County Government	\$76.32	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Miscellaneous / Meeting Incidentals				\$76.32			
770-7910-429.74-11	9/29/2022	322322	Cass County Government	\$435.87	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Capital Outlay / Computer Equipment				\$435.87			
770-7910-429.74-12	9/29/2022	322322	Cass County Government	\$135.39	DIVERSION PAYROLL EXPENSE	V00106	ED & STAFF-PR/ADMIN EXP
Capital Outlay / Computer Software				\$135.39			
770 Subtotal				\$85,291.79			
790-7910-429.34-20	9/15/2022	322060	Neon Loon Communications, LL	\$13,613.75	COMMUNICATIONS SUPPORT	V09601	COMMUNICATIONS SUPPORT
	9/22/2022	322194	Michael H Klein	\$3,791.03	PUBLIC OUTREACH	V07201	COMMUNICATION CONSULTING
	9/29/2022	322318	C THREE MEDIA, LLC	\$8,901.01	VIDEOGRAPHY SERVICES	V08601	VIDEOGRAPHY
Technical Services / Marketing / Public Relat.				\$26,305.79			
790-7910-429.34-40	9/29/2022	322344	Flint Group	\$150.00	DIVERSION WEBSITE DESIGN	V10201	WEBSITE DESIGN
Technical Services / Web Site Develop/Maintain				\$150.00			
790-7910-429.34-56	9/26/2022	ES09220	City of Fargo	\$16,480.00	FISCAL AGENT FEE - 09/22	V05902	MONTHLY FISCAL AGENT FEE
				\$16,480.00			
790-7910-429.38-68	9/22/2022	322170	GA Group, PC	\$4,000.00	SEPT COUNSEL SERVICES	V07601	2021 GOVERNMENT RELATIONS
Other Services / Lobbyist				\$4,000.00			
790-7910-429.42-05	9/15/2022	321949	Ambassador, Inc.	\$925.00	DIVERSION OFFICE CLEANING	V10501	JANITORIAL SERVICES
Cleaning Services / Custodial Services				\$925.00			
790-7910-429.43-50	9/15/2022	322074	ACONEX (North America) INC	\$354,217.00	ACONEX SERVICE AGREEMENT	V01401	8 Year Service Agreement
	9/22/2022	322126	Affinitext Inc	\$62,500.00	DOCUMENT MANAGEMENT SERV	V11001	DOCUMENT MGMT SERVICES
Repair and Maintenance / Maintenance Service Contract				\$416,717.00			
790-7910-429.44-10	9/12/2022	JB092200	City of Fargo	\$10,080.00	2022 CIVIC CENTER RENT	V00102	General & Admin. WIK
Rentals / Land and Building Rents				\$10,080.00			

Data Through Date: Friday, September 30, 2022

Summary Of Expenses
EXP-2022-09

Tuesday, October 18, 2022

Account Number	Check Date	Check Number	Vendor Name	Transaction Amount	Description	Project Number	Project Description
790-7915-429.33-05	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$65,072.56	PROJECT MANAGEMENT	V01633	DESIGN & CONST. SUPPORT
	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$54,249.75	PROJECT MANAGEMENT	V01634	H&H MITIG. & PERMIT SUPPORT
Other Services / Engineering Services				\$119,322.31			
790-7920-429.33-05	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$37,903.92	PROJECT MANAGEMENT	V01633	DESIGN & CONST. SUPPORT
	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$15,107.47	PROJECT MANAGEMENT	V01634	H&H MITIG. & PERMIT SUPPORT
Other Services / Engineering Services				\$53,011.39			
790-7920-429.33-79	9/15/2022	321973	CH2M Hill Engineers Inc	\$585,768.83	PROGRAM MGMT & SERVICES	V00211	CH2M HILL-6/2019-12/2021
	9/15/2022	321973	CH2M Hill Engineers Inc	\$653,418.32	P3 SUPPORT SERVICES	V00212	P3 PROCUREMENT SUPPORT
Other Services / Construction Management				\$1,239,187.15			
790-7930-429.33-05	9/22/2022	322125	ADVANCED ENGINEERING I	\$73,198.45	DIVERSION PROF SERVICES	V00302	PROGRAM MGMT SERVICES
	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$20,607.25	PROJECT MANAGEMENT	V01633	DESIGN & CONST. SUPPORT
	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$20,924.74	PROJECT MANAGEMENT	V01634	H&H MITIG. & PERMIT SUPPORT
	10/6/2022	322454	HDR Engineering, Inc.	\$34,276.23	HDR ENGINEERING GROUP	V01201	Cass Joint Water ROE
	10/6/2022	322454	Prosource Technologies, Inc	\$37,309.65	PROSOURCE TECHNOLOGIES	V01201	Cass Joint Water ROE
	10/6/2022	322454	SRF Consulting Group	\$64,723.44	SRF CONSULTING GROUP, INC	V01201	Cass Joint Water ROE
	10/6/2022	322454	ULTEIG ENGINEERS INC	\$14,151.50	ULTEIG ENGINEERS	V01201	Cass Joint Water ROE
Other Services / Engineering Services				\$265,191.26			
790-7930-429.33-06	9/15/2022	321964	BRAUN INTERTEC CORP	\$8,999.90	MATERIALS TESTING	V00402	TESTING - WP-43 & WP-28A
Other Services / Quality Testing				\$8,999.90			
790-7930-429.33-25	9/29/2022	322326	LIES, BULLIS & HATTING, P	\$1,560.00	LIES, BULLIS, HATTING INV	V10601	CITY OF CHRISTINE MOU
	10/6/2022	322454	Larkin Hoffman Attorneys	\$36,726.00	LARKIN HOFFMAN ATTORNEYS	V01201	Cass Joint Water ROE
	10/6/2022	322454	OHNSTAD TWICHELL PC	\$149,560.43	OHNSTAD TWICHELL, P.C.	V01201	Cass Joint Water ROE
	10/6/2022	322454	OHNSTAD TWICHELL PC	\$221.00	OHNSTAD TWICHELL, P.C.	V01203	Cass Joint Water OHB
Other Services / Legal Services				\$188,067.43			
790-7930-429.33-32	10/6/2022	322454	COMPASS LAND CONSULTA	\$31,600.00	COMPASS LAND CONSULTANTS	V01201	Cass Joint Water ROE
	10/6/2022	322454	CROWN APPRAISALS	\$18,000.00	CROWN APPRAISALS INC	V01201	Cass Joint Water ROE
	10/6/2022	322454	Patchin Messner Valuation Coun	\$31,000.00	PATCHIN MESSNER VALUATION	V01201	Cass Joint Water ROE
Other Services / Appraisal Services				\$80,600.00			

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Account Number	Check Date	Check Number	Vendor Name	Transaction Amount	Description	Project Number	Project Description
790-7930-429.33-79	9/15/2022	321973	CH2M Hill Engineers Inc	\$25,615.56	PROPERTY ACQUISITION MGMT	V00210	CH2M HILL-LAND ACQUISITON
Other Services / Construction Management				\$25,615.56			
790-7930-429.38-95	10/6/2022	322454	Building & Grounds Managemen	\$250.00	BUILDINGS & GROUNDS MGMT	V01701	ND LAND PURCH-OUT OF TOWN
Other Services / Mowing Services				\$250.00			
790-7930-429.38-99	10/6/2022	322454	KAREN KLEIN MEDIATION,	\$3,971.40	KAREN KLEIN MEDIATION LLC	V01201	Cass Joint Water ROE
Other Services / Other Services				\$3,971.40			
790-7930-429.52-70	9/22/2022	322276	Watts and Associates, Inc.	\$27,837.55	CROP INS DEVELOPMENT	V06901	CROP INSURANCE DEVELOPMN
Insurance / Crop Insurance				\$27,837.55			
790-7930-429.61-50	10/6/2022	322454	CASS COUNTY JOINT WATE	\$31.28	UPS	V01201	Cass Joint Water ROE
General Supplies / Postage				\$31.28			
790-7930-429.62-51	10/6/2022	322454	Cass County Electric Cooperativ	\$148.13	CASS COUNTY ELECTRIC COOP	V01701	ND LAND PURCH-OUT OF TOWN
Energy / Electricity				\$148.13			
790-7930-429.67-11	10/6/2022	322454	0877 - RHEAULT 2	\$290.00	RED RIVER REMOVAL	V01701	ND LAND PURCH-OUT OF TOWN
	10/6/2022	322454	2014 - ODEGAARD 4	\$284,250.00	BRETT & HEIDI ODEGAARD	V01701	ND LAND PURCH-OUT OF TOWN
Relocation / Residential Buildings				\$284,540.00			
790-7930-429.68-10	10/6/2022	322454	ALERUS FINANCIAL	\$15.00	CASS COUNTY JOINT WRD	V01201	Cass Joint Water ROE
Miscellaneous / Miscellaneous				\$15.00			
790-7930-429.68-22	9/15/2022	322007	HARWOOD TOWNSHIP	\$2,364.00	LOST TAX REVENUE PAYMENT	V09001	LOST TAX REVENUE
Miscellaneous / Lost Tax Revenue				\$2,364.00			
790-7930-429.71-30	10/6/2022	322454	0877 - RHEAULT 2	\$500.00	GLEN RHEAULT	V01701	ND LAND PURCH-OUT OF TOWN
	10/6/2022	322454	1107 - GENE J & BRENDA J S	\$975,000.00	AALAND LAW OFFICE	V01701	ND LAND PURCH-OUT OF TOWN
	10/6/2022	322454	1199 - LARSON 5	(\$232,000.00)	CLERK OF DISTRICT COURT	V01701	ND LAND PURCH-OUT OF TOWN
	10/6/2022	322454	1202 - DELANEY	\$580,140.00	THE TITLE COMPANY	V01701	ND LAND PURCH-OUT OF TOWN
	10/6/2022	322454	9749N - KARN E JAMESON	(\$22,000.00)	CLERK OF DISTRICT COURT	V01701	ND LAND PURCH-OUT OF TOWN
Land / Land Purchases				\$1,301,640.00			

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790-7930-429.71-31	10/6/2022	322454	1942 - DUBORD 3	\$152,249.00	THE TITLE COMPANY	V01701	ND LAND PURCH-OUT OF TOWN
	10/6/2022	322454	2014 - ODEGAARD 4	\$1,033,528.66	THE TITLE COMPANY	V01701	ND LAND PURCH-OUT OF TOWN
	10/6/2022	322454	9229 - ODEGAARD 5	\$1,033,528.67	THE TITLE COMPANY	V01701	ND LAND PURCH-OUT OF TOWN
	10/6/2022	322454	9230 - ODEGAARD 5	\$1,033,528.67	THE TITLE COMPANY	V01701	ND LAND PURCH-OUT OF TOWN
Land / Easements				\$3,252,835.00			
790-7930-429.73-20	9/22/2022	322249	Schmidt and Sons Inc.	\$143,000.00	PAY #2 DIVERSION	V03805	WP50F-STRUCTURE MITIGATIO
Infrastructure / Site Improvements				\$143,000.00			
790-7931-429.33-05	10/6/2022	322461	Prosource Technologies, Inc	\$23,488.54	PROSOURCE TECHNOLOGIES	V06201	MCCJPA - MN ROE
	10/6/2022	322461	SRF Consulting Group	\$53,338.75	SRF CONSULTING GROUP	V06201	MCCJPA - MN ROE
Other Services / Engineering Services				\$76,827.29			
790-7931-429.33-25	10/6/2022	322461	OHNSTAD TWICHELL PC	\$62,125.40	OHNSTAD TWICHELL	V06201	MCCJPA - MN ROE
Other Services / Legal Services				\$62,125.40			
790-7931-429.33-32	10/6/2022	322461	COMPASS LAND CONSULTA	\$8,000.00	COMPASS LAND CONSULTANTS	V06201	MCCJPA - MN ROE
Other Services / Appraisal Services				\$8,000.00			
790-7931-429.38-95	9/15/2022	322010	Heartland Seeds, Inc.	\$250.00	AUGUST MOWING	V02302	MN LAND PURCHASE-HARDSHI
Other Services / Mowing Services				\$250.00			
790-7931-429.38-99	10/6/2022	322461	Building & Grounds Managemen	\$425.00	BUILDINGS & GROUNDS MANAG	V02301	MN LAND PURCHASES
Other Services / Other Services				\$425.00			
790-7931-429.54-10	10/6/2022	322461	Clay County Union	\$44.00	CLAY COUNTY UNION	V06201	MCCJPA - MN ROE
				\$44.00			
790-7931-429.62-51	10/6/2022	322461	LAKE REGION ELECTRIC CO	\$175.56	LAKE REGION ELECTRIC COOP	V02301	MN LAND PURCHASES
	10/6/2022	322461	RED RIVER VALLEY COOPE	\$810.24	RED RIVER VALLEY COOP	V02301	MN LAND PURCHASES
Energy / Electricity				\$985.80			

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790-7931-429.71-31	9/29/2022	322328	1648 - ENGLISH	\$200,019.00	THE TITLE CO	V02301	MN LAND PURCHASES
	9/29/2022	322328	1838 - ENGLISH	\$200,019.00	THE TITLE CO	V02301	MN LAND PURCHASES
	10/6/2022	322461	7103 - SHELLY AFFIELD	\$11,093.00	TITLE CO	V02301	MN LAND PURCHASES
	10/6/2022	322461	7105 - RONALD G & CHERYL	\$6,832.00	TITLE CO	V02301	MN LAND PURCHASES
Land / Easements				\$417,963.00			
790-7940-429.33-06	9/15/2022	321964	BRAUN INTERTEC CORP	\$1,948.39	MATERIALS TESTING	V00402	TESTING - WP-43 & WP-28A
Other Services / Quality Testing				\$1,948.39			
790-7941-429.33-05	9/22/2022	322148	MOORE ENGINEERING INC	\$12,440.00	COMSTOCK LAGOON PROJ	V10102	LAGOON
	9/22/2022	322148	MOORE ENGINEERING INC	\$34,074.68	REIMB MOORE ENG-LAGOON	V10102	LAGOON
	9/29/2022	322327	PIPE DETECTIVES	\$13,787.32	REIMB PIPE DET. INVOICE	V10102	LAGOON
Other Services / Engineering Services				\$60,302.00			
790-7950-429.33-05	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$32,240.43	PROJECT MANAGEMENT	V01633	DESIGN & CONST. SUPPORT
Other Services / Engineering Services				\$32,240.43			
790-7950-429.38-99	9/29/2022	322394	Pleasant Township	\$11,236.80	REIMB TURNER SAND INVOICE	V06801	WILD RICE STUC-BLDG PRMT
Other Services / Other Services				\$11,236.80			
790-7950-429.41-05	9/15/2022	321970	Cass Rural Water	\$27.00	DIVERSION INLET	V05006	DIVERSION INLET UTILITY
Utility Services / Water and Sewer				\$27.00			
790-7951-429.73-70	9/15/2022	322085	RED RIVER VALLEY COOPE	\$118,500.00	RED RIVER-WALSTAD RELOCATI	V10705	S EMBANK REACH SE4-WO1808
Infrastructure / Utilities				\$118,500.00			
790-7952-429.33-05	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$7,848.13	PROJECT MANAGEMENT	V01633	DESIGN & CONST. SUPPORT
Other Services / Engineering Services				\$7,848.13			
790-7955-429.33-05	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$4,271.84	PROJECT MANAGEMENT	V02827	IN TOWN LEVY MAINTENANCE
Other Services / Engineering Services				\$4,271.84			
790-7990-429.33-05	9/22/2022	322181	HOUSTON-MOORE GROUP L	\$35,414.31	PROJECT MANAGEMENT	V01633	DESIGN & CONST. SUPPORT
Other Services / Engineering Services				\$35,414.31			

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Account Number	Check Date	Check Number	Vendor Name	Transaction Amount	Description	Project Number	Project Description
790-7990-429.34-57	9/27/2022	22508	BANK OF NORTH DAKOTA	\$16,480.00	BDN TRUSTEE FEE 8/2022	V08502	MONTHLY TRUSTEE FEE
	9/27/2022	22532	BANK OF NORTH DAKOTA	\$16,480.00	BND TRUSTEE FEE 9/2022	V08502	MONTHLY TRUSTEE FEE
	9/29/2022	22625	BANK OF NORTH DAKOTA	(\$16,480.00)	9/27 BND CORRECT-TRUSTEE	V08502	MONTHLY TRUSTEE FEE
Technical Services / FMDA Trustee Fees BND				\$16,480.00			
790-7998-555.90-81	9/26/2022	ES09220	Diversion Admin Budget Transfe	\$0.00	ANNUAL ADMIN BDGT TRF-SEP	VADMIN	Diversion Administration
FMDA Admin. Budget Fund				\$0.00			
790 Subtotal				\$8,326,174.54			

Total Amount Invoiced this period:	\$8,411,466.33	
	\$0.00	Less Paid Retainage
	\$8,411,466.33	Total Less Paid Retainage

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Cummulative Vendor Payments Since Inception (Paid Only)

Vendor Name	Approved Contract/Invoiced Amount	Liquidated	Outstanding Encumbrance	Purpose
LAND PURCHASE	\$277,759,570.84	\$277,759,570.84	\$0.00	Land Purchase
CH2M HILL ENGINEERS INC	\$152,663,307.12	\$95,582,717.55	\$57,080,589.57	Project & Construction Management
HOUSTON-MOORE GROUP LLC	\$89,418,161.73	\$63,446,544.86	\$25,971,616.87	Engineering Services
INDUSTRIAL BUILDERS INC	\$58,150,478.84	\$58,114,725.50	\$35,753.34	2nd St N Pump Station Project and 2nd St Floodwall, South of Pu
ARMY CORP OF ENGINEERS	\$53,159,000.00	\$53,159,000.00	\$0.00	Local Share
RICHLAND-WILKIN JPA	\$35,000,000.00	\$35,000,000.00	\$0.00	Economic Impact Relief Fund
NORTH DAKOTA PUBLIC FINANCE AUTHORIT	\$30,375,790.00	\$30,375,790.00	\$0.00	Debt Service
MEYER CONTRACTING	\$18,499,075.82	\$18,499,075.82	\$0.00	WP-43CD and Gatewell - PVD & Surcharge Installation
INDUSTRIAL CONTRACT SERVICES INC	\$18,419,743.64	\$18,419,743.64	\$0.00	4th St Pump Station and 2nd Street Floodwall
OHNSTAD TWICHELL PC	\$16,808,757.96	\$16,808,757.96	\$0.00	Legal Services
ADVANCED ENGINEERING INC	\$14,665,462.81	\$8,557,300.78	\$6,108,162.03	Lands Management and Public Outreach
WELLS FARGO	\$11,607,080.05	\$11,607,080.05	\$0.00	Debt Service
DORSEY & WHITNEY LLP	\$11,166,442.49	\$11,166,442.49	\$0.00	Legal Services
DAKOTA UNDERGROUND	\$11,141,625.69	\$11,141,625.69	\$0.00	Utility Relocation
LANDSCAPES UNLIMITED	\$11,007,612.78	\$11,007,612.78	\$0.00	Golf Course Construction - Oxbow Country Club
KEY CONTRACTING INC	\$10,102,870.58	\$10,102,870.58	\$0.00	FM1413 - Oakcreek and Copperfield Court Levee
OKEEFE, OBRIAN, LYSON & FOSS LTD	\$9,962,512.68	\$9,962,512.68	\$0.00	FLDBUY - COF Flood Home Buyouts
ASHURST LLP	\$7,769,668.21	\$6,352,853.01	\$1,416,815.20	PPP Legal Counsel
MOORE ENGINEERING INC	\$6,373,888.69	\$5,483,159.48	\$890,729.21	Engineering Services
CITY OF FARGO	\$6,088,408.67	\$6,082,769.92	\$5,638.75	Utility Relocation, Accounting Svcs, Interest on Deficit Funds
SRF CONSULTING GROUP	\$5,953,078.69	\$2,071,500.07	\$3,881,578.62	Engineering Services
ERNST & YOUNG	\$5,377,000.00	\$4,995,384.80	\$381,615.20	P3 Financial Advisory Services
PROSOURCE TECHNOLOGIES, INC	\$4,198,291.71	\$2,849,543.60	\$1,348,748.11	Land Acquisition Services
RILEY BROS	\$3,656,841.67	\$3,656,841.67	\$0.00	Construction - OHB Ring Levee & WP-28A
CENTURYLINK COMMUNICATIONS	\$3,577,812.07	\$3,502,046.41	\$75,765.66	Utility Relocation
HOUSTON ENGINEERING INC	\$3,155,179.15	\$3,155,179.15	\$0.00	Engineering Services
PLENARY AMERICAS USA LTD	\$3,000,000.00	\$3,000,000.00	\$0.00	Stipend Payment for P3 RFP

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Cummulative Vendor Payments Since Inception (Paid Only)

Vendor Name	Approved Contract/Invoiced Amount	Liquidated	Outstanding Encumbrance	Purpose
RED RIVER VALLEY & WESTERN RAILROAD C	\$2,800,000.00	\$2,800,000.00	\$0.00	Railroad Facilities and the Rail Property
SELLIN BROS INC	\$2,727,095.44	\$2,727,095.44	\$0.00	Riverwood Flood Risk Project - Construction
MINNESOTA DNR	\$2,636,755.60	\$2,617,681.40	\$19,074.20	EIS Scoping and Permit Application
OXBOW, CITY OF	\$2,383,317.16	\$2,383,317.16	\$0.00	OXBOW MOU - LAND ADVANCE
LANDWEHR CONSTRUCTION INC	\$2,304,622.16	\$2,304,622.16	\$0.00	In-Town and WP-43 Demolition Contracts
CASS COUNTY GOVERNMENT	\$2,302,108.44	\$2,302,108.44	\$0.00	Gravel on County Rd 17 Bypass
HDR ENGINEERING, INC.	\$2,192,783.68	\$1,365,542.57	\$827,241.11	Engineering Services
HOUGH INC	\$2,088,832.83	\$2,088,832.83	\$0.00	Construction WP-42F.2 and Oxbow River Intake & Pumping Syst
ACONEX (NORTH AMERICA) INC	\$1,970,927.50	\$1,507,604.59	\$463,322.91	Electronic Data Mgmt and Record Storage System
CROWN APPRAISALS	\$1,937,455.00	\$1,587,230.00	\$350,225.00	Flowage Easements Valuation and Appraisal Services
URS CORPORATION	\$1,805,670.90	\$1,805,670.90	\$0.00	Cultural Resources Investigations
ULTEIG ENGINEERS INC	\$1,744,157.63	\$1,294,905.24	\$449,252.39	Land Acquisition Services
REINER CONTRACTING INC	\$1,599,646.21	\$1,599,646.21	\$0.00	El Zagal Flood Risk Management
PROGRAM ADVISOR SERVICES, LLC	\$1,540,000.00	\$1,288,944.42	\$251,055.58	Program Consulting Services
SCHMIDT AND SONS INC.	\$1,443,107.61	\$1,266,251.86	\$176,855.75	Residential Demolition in Oxbow
CASS COUNTY ELECTRIC COOPERATIVE	\$1,282,653.04	\$1,068,703.04	\$213,950.00	Electrical Services
CASS COUNTY TREASURER	\$1,264,426.56	\$1,264,426.56	\$0.00	Property Taxes
AECOM	\$1,234,234.14	\$547,293.94	\$686,940.20	Cultural Resources Investigations
US BANK	\$1,205,546.13	\$1,205,546.13	\$0.00	Loan Advance Debt Service Payments
XCEL ENERGY-FARGO	\$1,164,929.54	\$1,118,329.54	\$46,600.00	Utility Relocation
CONSOLIDATED COMMUNICATIONS	\$1,073,621.75	\$1,073,621.75	\$0.00	Utility Relocation
KPH, INC.	\$1,048,093.28	\$1,025,640.12	\$22,453.16	WP-43D5 Construction
BRAUN INTERTEC CORP	\$997,695.33	\$848,506.55	\$149,188.78	Materials Testing
CASS RURAL WATER	\$949,992.41	\$942,862.41	\$7,130.00	Utilities and Utility Relocation
CLERK OF DISTRICT COURT	\$939,044.32	\$939,044.32	\$0.00	FLDBUY - COF Flood Home Buyouts
TERRACON CONSULTING ENGINEERS	\$887,718.41	\$887,718.41	\$0.00	Materials Testing
COMPASS LAND CONSULTANTS, INC	\$797,815.00	\$551,607.50	\$246,207.50	Property Appraisal Services

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Cummulative Vendor Payments Since Inception (Paid Only)

Vendor Name	Approved Contract/Invoiced Amount	Liquidated	Outstanding Encumbrance	Purpose
CASS COUNTY JOINT WATER RESOURCE DI	\$752,808.25	\$752,808.25	\$0.00	O/H/B Ring Levee, DPAC, Postage, Miscellaneous
DAKOTA CARRIER NETWORK	\$727,348.58	\$727,348.58	\$0.00	Utility Relocation
UNITED STATES ENVIRONMENTAL PROTECTI	\$707,886.35	\$707,886.35	\$0.00	WIFIA LOAN APPLCATION FEE
ERIK R JOHNSON & ASSOCIATES	\$664,472.23	\$664,472.23	\$0.00	Legal Services
METROPOLITAN COUNCIL OF GOVERNMENTS	\$637,390.01	\$637,390.01	\$0.00	Digital Aerial Photography
MASTER CONSTRUCTION CO INC	\$623,953.29	\$623,953.29	\$0.00	Flood Mitigation - Royal Oaks Area - Construction
DUCKS UNLIMITED	\$587,180.00	\$587,180.00	\$0.00	Wetland Mitigation Credits
AT&T	\$586,269.60	\$586,269.60	\$0.00	Utility Relocation
RED RIVER VALLEY COOPERATIVE ASSOC	\$545,770.11	\$335,770.11	\$210,000.00	Electricity - Home Buyouts
PATCHIN MESSNER VALUATION COUNSELORS	\$543,587.50	\$380,925.00	\$162,662.50	Property Appraisal Services
MINNKOTA POWER COOPERATIVE	\$543,393.07	\$73,393.07	\$470,000.00	Utility Relocation
MIDCONTINENT COMMUNICATIONS	\$539,736.90	\$462,379.87	\$77,357.03	Utility Relocation
LARKIN HOFFMAN ATTORNEYS	\$520,002.68	\$520,002.68	\$0.00	Legal Services
RED RIVER BASIN COMMISSION	\$501,000.00	\$501,000.00	\$0.00	Retention Projects - Engineering Services
HOFFMAN & MCNAMARA CO.	\$493,179.39	\$487,184.67	\$5,994.72	General Landscaping and Planting (WP-42G)
LINNCO, INC.	\$485,221.25	\$485,221.25	\$0.00	House Demo and Removal
BUFFALO-RED RIVER WATERSHED DISTRICT	\$471,568.00	\$471,568.00	\$0.00	Retention Projects - Engineering Services
NUSTAR PIPELINE OPERATING PARTNERSHIP	\$459,693.17	\$442,844.05	\$16,849.12	Utility Relocation
ROBERT TRENT JONES	\$440,431.73	\$440,431.73	\$0.00	Oxbow MOU - Golf Course Consulting Agreement
NDSU BUSINESS OFFICE-BOX 6050	\$391,989.00	\$356,145.00	\$35,844.00	Ag Risk Study Services
BEAVER CREEK ARCHAEOLOGY	\$391,529.14	\$366,112.75	\$25,416.39	Engineering Services
MBA	\$380,636.36	\$380,636.36	\$0.00	Golf course and pump house - Oxbow Country Club
BNSF RAILWAY CO	\$362,925.00	\$2,925.00	\$360,000.00	Permits for In-Town Levee Projects
MVM CONTRACTING	\$339,448.03	\$339,448.03	\$0.00	Fiber Relocation
SWANSON HEALTH PRODUCTS, INC.	\$337,059.00	\$337,059.00	\$0.00	FM1471 - Storm Lift Stations #55 and #56 - Drain 27
AON RISK SERVICES CENTRAL INC	\$330,000.00	\$247,663.50	\$82,336.50	Risk Advisory Services P3 Pre-Award
DFI BRIDGE CORPORATION	\$316,211.21	\$316,211.21	\$0.00	Bridge Construction - Oxbow Country Club

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Vendor Name	Approved Contract/Invoiced Amount	Liquidated	Outstanding Encumbrance	Purpose
FEDERAL STEEL SUPPLY, INC.	\$307,378.00	\$307,378.00	\$0.00	OHB - 42 inch steel pipe
DIRT DYNAMICS	\$301,332.37	\$301,332.37	\$0.00	HD18A1 - Oakcreek, Copperfield & Univerisy - Demo
C THREE MEDIA, LLC	\$294,510.00	\$141,906.30	\$152,603.70	Videography Services
MAGELLAN PIPELINE	\$285,900.00	\$0.00	\$285,900.00	Utility Relocation
GARY KILLEBREW	\$279,500.00	\$279,500.00	\$0.00	Project Manager Services - Oxbow Country Club
TURMAN & LANG	\$277,139.55	\$277,139.55	\$0.00	Legal Services
MOODYS INVESTORS SERVICE, INC.	\$274,375.00	\$274,375.00	\$0.00	WIFIA loan fees
INTEGRA REALTY RESOURCES	\$267,300.00	\$257,750.00	\$9,550.00	Property Appraisal Services
BANK OF NORTH DAKOTA	\$267,245.04	\$267,245.04	\$0.00	Legal review fees
702 COMMUNICATIONS	\$266,892.07	\$266,892.07	\$0.00	Utility Relocation
SPRINT COMMUNICATIONS COMPANY L.P.	\$256,409.37	\$256,409.37	\$0.00	Fiber Optic Relocation for WP-43CD
WATTS AND ASSOCIATES, INC.	\$250,000.00	\$228,212.90	\$21,787.10	Crop insurance product development services
PR FOR GOOD, INC	\$242,482.28	\$242,482.28	\$0.00	Communications Support Services
FREDRIKSON & BYRON, PA	\$241,881.28	\$241,881.28	\$0.00	Lobbying Services
NEON LOON COMMUNICATIONS, LLC	\$236,400.00	\$115,702.50	\$120,697.50	Communications Support
NORTHERN IMPROVEMENT COMPANY	\$235,531.95	\$235,531.95	\$0.00	CR-17 asphalt paving
GRAY PANNELL & WOODWARD LLP	\$231,300.68	\$231,300.68	\$0.00	Legal Services
WILLIAM D. SCEPANIAK, INC.	\$226,235.21	\$226,235.21	\$0.00	ROADWAY RESHAPING & AGGREGATE SURFACING
FORUM COMMUNICATIONS	\$221,991.96	\$221,991.96	\$0.00	Advertising Services
AMERICAN ENTERPRISES, INC.	\$200,281.00	\$200,281.00	\$0.00	Construction/Demolition
CITY OF OXBOW MOU	\$200,000.00	\$200,000.00	\$0.00	Oxbow Park Relocation MOU Amendment
EXECUTIVE MANAGEMENT SYSTEMS, INC.	\$196,763.96	\$196,763.96	\$0.00	Executive Coaching
SERKLAND LAW FIRM	\$182,936.21	\$182,936.21	\$0.00	Legal services
CLAY COUNTY AUDITOR	\$180,495.34	\$180,495.34	\$0.00	Property Taxes - MN
MAPLETON, CITY OF	\$179,605.00	\$61,416.07	\$118,188.93	Prelim Engineering Services
SPRINGSTED INCORPORATED	\$178,010.15	\$178,010.15	\$0.00	Financial Advisor
KADRMAS LEE & JACKSON, INC.	\$176,164.00	\$176,164.00	\$0.00	Engineering Services

Data Through Date: Friday, September 30, 2022

Cummulative Vendor Payments Since Inception (Paid Only)

Vendor Name	Approved Contract/Invoiced Amount	Liquidated	Outstanding Encumbrance	Purpose
PLEASANT TOWNSHIP	\$173,896.90	\$173,896.90	\$0.00	Building Permit Application
MUNICIPAL AIRPORT AUTHORITY	\$166,981.00	\$166,981.00	\$0.00	Easement for Airport
SOIL BORINGS	\$166,232.50	\$166,232.50	\$0.00	Soil Borings
DAWSON INSURANCE AGENCY	\$158,812.15	\$158,812.15	\$0.00	Property Insurance - Home Buyouts
UNITED STATES GEOLOGICAL SURVEY	\$151,520.00	\$151,520.00	\$0.00	Water Level Discharge Collection & Stage Gage Installation
PFM PUBLIC FINANCIAL MANAGEMENT	\$146,460.00	\$146,460.00	\$0.00	Financial Advisor
S&P GLOBAL RATINGS	\$145,625.00	\$145,625.00	\$0.00	Ratings Evaluation Service
DAILY NEWS	\$143,075.16	\$143,075.16	\$0.00	Advertising Services
CHAPMAN AND CUTLER	\$140,000.00	\$140,000.00	\$0.00	Legal Services
QUANTUM SPATIAL, INC.	\$139,061.35	\$139,061.35	\$0.00	Digital Aerial Photography
SENTRY SECURITY, INC.	\$121,212.85	\$121,212.85	\$0.00	Security Services
AFFINITEXT INC	\$118,630.00	\$62,500.00	\$56,130.00	Document Management Services
ENVENTIS	\$115,685.62	\$115,685.62	\$0.00	Utility Relocation
TINJUM APPRAISAL COMPANY, INC.	\$113,450.00	\$73,100.00	\$40,350.00	Property Appraisal Services
GE BOCK REAL ESTATE, LLC	\$112,590.00	\$112,590.00	\$0.00	Property Appraisal Services
OXBOW COUNTRY CLUB	\$110,391.68	\$110,391.68	\$0.00	Golf Course - Oxbow
EIDE BAILLY LLP	\$108,373.00	\$81,086.25	\$27,286.75	Audit Services
GA GROUP, PC	\$108,229.32	\$96,229.32	\$12,000.00	Government Relations
MAPLETON TOWNSHIP	\$108,030.00	\$108,030.00	\$0.00	Lost tax revenue and attorney fees
DAVID CLARDY	\$105,215.05	\$105,215.05	\$0.00	Home buyouts - easement

128 Vendors

Report Totals:

\$946,172,133.81

\$842,774,670.43

\$103,397,463.38

METRO FLOOD DIVERSION AUTHORITY

Tuesday, October 18, 2022

Data Through Date: Friday, September 30, 2022

Parcel (OIN) Physical Location Summary

Project / Physical Location	Parcels	Acquired	Cancelled OIN's (HC)	PCT Acquired / Cancelled	Remaining OIN's	Cost To Date
BIOGEO	423	210	131	81%	82	\$1,024,981
BIOGEO	293	209	2	72%	82	\$253,296
HC	130	1	129	100%	0	\$771,685
CHANNEL	682	437	213	95%	32	\$92,453,654
ENV	2	0	0	0%	2	\$1,250
HC	217	4	213	100%	0	\$2,402,417
LAP01	130	120	0	92%	10	\$7,190,939
LAP02	97	92	0	95%	5	\$12,731,917
LAP03	81	66	0	81%	15	\$18,573,078
LEGACY	155	155	0	100%	0	\$51,554,054
MOBILITY	123	0	1	1%	122	\$0
DA_MOB37_MN	51	0	0	0%	51	\$0
DA_MOB37_ND	19	0	0	0%	19	\$0
DA_MOB38TH	52	0	0	0%	52	\$0
HC	1	0	1	100%	0	\$0
NA	7	0	7	100%	0	\$0
HC	7	0	7	100%	0	\$0
SEAILAND	341	257	34	85%	50	\$52,395,413
DRAIN 27	37	33	0	89%	4	\$15,035,904
HC	35	1	34	100%	0	\$195,421
LEGACY	62	62	0	100%	0	\$10,166,116
SE_I29	11	11	0	100%	0	\$3,062,008
SE-1	43	42	0	98%	1	\$2,675,351
SE-2A	13	13	0	100%	0	\$3,369,529
SE-2B	44	27	0	61%	17	\$6,646,389
SE-3	6	5	0	83%	1	\$25,000
SE-4	28	11	0	39%	17	\$1,801,232
SE-5	7	0	0	0%	7	\$2,750
UMA	2	0	0	0%	2	\$0
WP26	9	8	0	89%	1	\$2,952,107
WP30	8	8	0	100%	0	\$0
WP35	36	36	0	100%	0	\$6,463,605
Sheyenne Mitigatio	2	0	0	0%	2	\$0
SheyMit	2	0	0	0%	2	\$0
WP36	2	0	0	0%	2	\$2,750
WRDAM	2	0	0	0%	2	\$2,750

METRO FLOOD DIVERSION AUTHORITY

Tuesday, October 18, 2022

Data Through Date: Friday, September 30, 2022

Parcel (OIN) Physical Location Summary

Project / Physical Location	Parcels	Acquired	Cancelled OIN's (HC)	PCT Acquired / Cancelled	Remaining OIN's	Cost To Date
WP38	1,023	150	359	50%	514	\$38,088,774
BIOGEO	2	2	0	100%	0	\$4,500
HC	361	2	359	100%	0	\$1,283,123
LEGACY	1	1	0	100%	0	\$750
SE-5	2	0	0	0%	2	\$0
UMA	567	145	0	26%	422	\$36,800,401
UMA-C	34	0	0	0%	34	\$0
UMA-C2	14	0	0	0%	14	\$0
UMA-C3	3	0	0	0%	3	\$0
UMA-W	24	0	0	0%	24	\$0
UMA-W2	8	0	0	0%	8	\$0
UMA-W3	7	0	0	0%	7	\$0
WP40	18	6	10	89%	2	\$0
DRAYTON	7	5	0	71%	2	\$0
HC	10	0	10	100%	0	\$0
LEGACY	1	1	0	100%	0	\$0
WP42	66	50	3	80%	13	\$37,850,061
HC	4	1	3	100%	0	\$0
LEGACY	6	6	0	100%	0	\$18,014,935
WP42A1A3	8	5	0	63%	3	\$376,008
WP42A2	2	2	0	100%	0	\$0
WP42C1	4	3	0	75%	1	\$0
WP42C2	2	1	0	50%	1	\$9,948,373
WP42F1N	2	2	0	100%	0	\$27,000
WP42F1S	13	11	0	85%	2	\$5,852,463
WP42H1	4	4	0	100%	0	\$76,000
WP42H2	8	8	0	100%	0	\$2,463,170
WP42I2	13	7	0	54%	6	\$1,092,111

Data Through Date: Friday, September 30, 2022

Parcel (OIN) Physical Location Summary

Project / Physical Location	Parcels	Acquired	Cancelled OIN's (HC)	PCT Acquired / Cancelled	Remaining OIN's	Cost To Date
WP43	265	119	146	100%	0	\$78,542,485
Non-OIN Hard Land Cost	0	0	0	0%	0	\$22,598,547
HC	146	0	146	100%	0	\$500
LEGACY	4	4	0	100%	0	\$2,422,914
WP43A	1	1	0	100%	0	\$0
WP43B	6	6	0	100%	0	\$676,953
WP43C	74	74	0	100%	0	\$45,142,769
WP43D	20	20	0	100%	0	\$6,437,831
WP43D5	5	5	0	100%	0	\$1,175,055
WP43G	9	9	0	100%	0	\$87,915
Totals	2,952	1,229	904	72%	819	\$300,358,118

FM Metropolitan Area Flood Risk Management Project
Lands Expense - Life To Date
As of September 30, 2022

Property Address	Purchase Date	Purchase Price	Earnest Deposit	Relocation Assistance	Sale Proceeds	Total
Commercial Relocations - Fargo		16,099,989.70	-	16,300,462.10	(1,100.00)	32,399,351.80
Home Buyouts - Fargo		3,044,054.89	-	521,417.80	-	3,565,472.69
Home Buyouts - Moorhead		495,809.91	-	84,060.80	(8,440.00)	571,430.71
Home Buyouts - Oxbow		29,678,181.97	-	17,142,531.46	(368,167.87)	46,452,545.56
Home Buyouts - Hickson		1,031,674.37	-	120,422.18	-	1,152,096.55
Home Buyouts - Horace		7,602,598.67	-	595,320.88	-	8,197,919.55
Home Buyouts - Argusville		215,030.91	-	6,912.57	-	221,943.48
Easements - Fargo		504,716.00	-	-	-	504,716.00
Easements - Hickson		500.00	-	-	-	500.00
Easements - Oxbow		55,500.00	-	-	-	55,500.00
Easements - Diversion Inlet Control Structure		4,234,581.90	-	-	-	4,234,581.90
Easements - Piezometer		259,765.00	-	-	-	259,765.00
Easements - Minesota		1,542,370.79	-	-	-	1,542,370.79
Farmland Purchases		229,836,333.83	-	5,109,571.44	(2,973,670.69)	114,876,965.13
North One-half of the SW Quarter of Section 8, Township 137, Range 48	2/3/2022	291,600.62				291,600.62
East half of the SW Quarter of Section 29, Township 138 Norht of Range 49 West of the Fifth Principal Meridian	2/3/2022	1,412,649.00				1,412,649.00
The South Half of Government Lot 2 and all of Government Lots 3 and 5 of Section 18, in Township 137 North of Range 48 West of the Fifth Principal Meridian, Cass County, North Dakota, including all of Paul Bunyan Subdivision, part of Government Lots 2 and 3, Section 18, Township 137 North of Range 48 West AND Lot 5 Block 1, Babes's Addition, part of government lots 2 and 3 Section 18, Township 137 North, Range 48 West AND Lot 4, Block 1 Babe's Addition, part of Government lots 2 and 3, Section 18, Township 137 North, Range 48 West	2/3/2022	1,534,029.19				1,534,029.19

FM Metropolitan Area Flood Risk Management Project
Lands Expense - Life To Date
As of September 30, 2022

Property Address	Purchase Date	Purchase Price	Earnest Deposit	Relocation Assistance	Sale Proceeds	Total
The Northeast Quarter of Section Three, in Township One Hundred Thirty-seven North of Range Forty-nine West of the Fifth Principal Meridian	2/3/2022	1,711,111.25				1,711,111.25
That part of the East Half of the East Half of the Northwest Quarter of section 32, Township 138 North, Range 49 West of the Fifth Principal Meridian	3/10/2022	646,140.00				646,140.00
That part of Auditor's Lot No. 1 of the Southeast Quarter of Section 28, Township 138 North, Range 49 West of the Fifth Principal Meridian	3/10/2022	241,950.00				241,950.00
East half o the NW Quarter Section 11 in Township 137 North of Range 49 West of the Fifth Principal Meridian	3/10/2022	420,165.00				420,165.00
Part of Section 17, Township 137 North, Range 48 West of the Fifth Principal	3/31/2022	500.00				500.00
North Half of the Southeast Quarter, of Section 32, Township 138, Range 49, Cass County, North Dakota	5/12/2022	538,600.00				538,600.00
Southwest Quarter of Section 28, Township 138, Range 49 West of Fifth Principle Meridian, in the City of Fargo, Cass County North Dakota	6/16/2022	1,785,201.00				1,785,201.00
NW1/4 SW1/4 of Section 29, Township 137, Range 48, Cass County, Minnesota	6/2/2022	400,000.00				400,000.00
Government Lots 4 and 5 in Section 6, Township 137, Range 48, Clay County, Minnesota	6/2/2022	23,524.00			(85,374.41)	(61,850.41)
That part of the SE¼SW¼ of Section 22, Township 137 North of Range 49 West of the 5th Principal Meridian, Cass County, North Dakota, described as: Commencing at the Southeast corner of the Southwest Quarter of Section 22; thence West along the South line of Section 22 a distance of 10 rods to the point of beginning; thence North parallel to the West line of Section 22, 40 rods; thence West parallel to the South line of Section 22 to the center of the Wild Rice River; thence left upstream along the center line of the Wild Rice River Cass County Joint Water Resource District Upstream Mitigation Area Purchase Agreement— Graham OIN No. 858 — Parcel No. 57-0000-10350-017 Page 2 to a point of intersection with the South line of Section 22; thence east along the South line of Section 22 to the point of beginning.	9/1/2022	521,173.10				521,173.10
Lot 1, Block 1, of Sauvageau Subdivision, a portion of Section 4, Township 137 North, Range 49 West, Pleasant Township, Cass County, North Dakota.	9/1/2022	369,108.46				369,108.46
		294,601,107.94	-	39,880,699.23	(3,351,378.56)	331,130,428.61
					Property Management Expense	4,224,499.83
					Grand Total	\$ 335,354,928.44

**FM Metropolitan Area Flood Risk Management Project
In-Town Levee Work
as of September 30, 2022**

Vcode #	Vendor Name	Descriptions	Contract Amount	Amount Paid
V02801	Industrial Builders	WP42.A2 - 2nd Street North Pump Station	\$ 8,696,548.46	\$ 8,696,548.46
V02802	Terracon Consulting	WP-42 (In Town Levees) Materials Testing	\$ 884,070.41	\$ 884,070.41
V02803	Consolidated Communications	2nd Street Utility Relocation	\$ 1,178,781.73	\$ 1,178,781.73
V02804	702 Communications	2nd Street Utility Relocation	\$ 266,892.07	\$ 266,892.07
V02805	ICS	WP-42A.1/A.3 - 4th St Pump Station & Gatewell and 2nd St Floodwall S	\$ 18,365,229.13	\$ 18,365,229.13
V02806	HMG	WP42 - Services During Construction	\$ 6,513,429.90	\$ 6,513,429.90
V02807	CCJWRD	In-Town Levee Work	\$ 5,886,140.36	\$ 5,886,140.36
V02808	City of Fargo	Relocation of fiber optic along 2nd Street North	\$ 397,906.52	\$ 397,906.52
V02809	AT & T	2nd Street Utility Relocation	\$ 586,269.60	\$ 586,269.60
V02811	Xcel Energy	2nd Street & 4th Street Utility Relocations	\$ 769,791.73	\$ 769,791.73
V02812	Industrial Builders	WP-42F.1S - 2nd Street North Floodwall, South of Pump Station	\$ 16,720,591.15	\$ 16,720,591.15
V02813	Landwehr Construction	Park East Apartments Demolition	\$ 1,169,651.74	\$ 1,169,651.74
V02814	Primoris Aevenia	2nd Street Utility Relocation	\$ 16,230.00	\$ 16,230.00
V02815	Centurylink Communications	2nd Street Utility Relocation	\$ 2,660,937.92	\$ 2,660,937.92
V02816	Landwehr Construction	WP-42C.1 - In-Town Levees 2nd Street/Downtown Area Demo	\$ 907,999.08	\$ 907,999.08
V02817	Reiner Contracting, Inc	WP-42H.2 - El Zagal Area Flood Risk Management	\$ 1,599,646.21	\$ 1,599,646.21
V02818	Industrial Builders	WP-42I.1 - Mickelson Levee Extension	\$ 738,880.50	\$ 738,880.50
V02819	Industrial Builders	WP42F.1N - 2nd Street North	\$ 13,362,906.82	\$ 13,362,906.82
V02820	CH2M Hill	WP42 - Construction Management Services	\$ 851,775.30	\$ 851,775.30
V02821	Hough Incorporated	WP42F.2 - 2nd Street South	\$ 1,639,524.33	\$ 1,639,524.33
V02822	City of Fargo	COF - 2016 O&M on Lifts	\$ 184,958.12	\$ 184,958.12
V02823	Hoffman & McNamara	WP-42G General Landscaping and Planting	\$ 493,179.39	\$ 487,184.67
V02824	City of Fargo	COF – In-Town Flood Protection Debt Payments	\$ 23,989,850.00	\$ 30,375,790.00
V01703	Various	In-Town Property Purchases	\$ 39,409,623.22	\$ 38,192,183.71
V02825	Industrial Builders	WP-42E - 2nd Street South and Main Avenue Flood Mitigation	\$ 8,632,103.73	\$ 8,632,103.73
V02826	City of Fargo	In-Town Levee Maintenance	\$ 8,823.82	\$ 8,823.82
V054XX	City of Fargo	In-Town Complementary Work - Reimbursements	\$ 39,289,243.78	\$ 39,289,243.78
			<u>\$ 195,220,985.02</u>	<u>\$ 200,383,490.79</u>

Fargo-Moorhead Metropolitan Area Flood Risk Management Project
State Water Commission Funds Reimbursement Worksheet
Fargo Flood Control Project Costs - HB1020 & SB2020

Time Period for This Request: July 1, 2022 - July 31, 2022

Drawdown Request No: 128	
Requested Amount:	\$ 2,374,484.13
Total Funds Expended This Period:	4,748,968.25
SB 2020 Matching Requirements	50%
Total Funds Requested at 50% Match	2,374,484.13
Total Funds Requested:	2,374,484.13

STATE AID SUMMARY:

Summary of State Funds Appropriated

Appropriations from 2009 Legislative Session	\$ 45,000,000
Appropriations from 2011 Legislative Session	30,000,000
Appropriations from 2013 Legislative Session	100,000,000
Appropriations from 2015 Legislative Session	69,000,000
Appropriations from 2015 Legislative Session - Interior Flood Control	60,000,000
Appropriations from 2017 Legislative Session	66,500,000
Appropriations from 2019 Legislative Session	44,000,000
Total State Funds	- 414,500,000
Less: Payment #1 through #35 - City of Fargo	(55,510,209.00)
Less: Payment #1 - Cass County	(136,039.36)
Less: Payment #1 through #7 - Interior Flood Control	(60,000,000.00)
Less: Payment #1 through #28 - FM Diversion Authority	(38,049,107.00)
Less: Payment #29 through #115 - FM Metro Area Flood Risk Management Project	(209,838,261.15)
Less: Payment #116 - FM Metro Area Flood Risk Management Project	(5,862,311.78)
Less: Payment #117 - FM Metro Area Flood Risk Management Project	(5,543,347.82)
Less: Payment #118 - FM Metro Area Flood Risk Management Project	(2,268,176.69)
Less: Payment #119 - FM Metro Area Flood Risk Management Project	(5,734,800.64)
Less: Payment #120 - FM Metro Area Flood Risk Management Project	(5,380,812.43)
Less: Payment #121 - FM Metro Area Flood Risk Management Project	(4,927,025.23)
Less: Payment #122 - FM Metro Area Flood Risk Management Project	(2,753,630.08)
Less: Payment #123 - FM Metro Area Flood Risk Management Project	(3,945,477.58)
Less: Payment #124 - FM Metro Area Flood Risk Management Project	(5,062,879.53)
Less: Payment #125 - FM Metro Area Flood Risk Management Project	(1,391,419.51)
Less: Payment #126 - FM Metro Area Flood Risk Management Project	(1,224,134.73)
Less: Payment #127 - FM Metro Area Flood Risk Management Project	(3,555,737.95)
Less: Payment #128 - FM Metro Area Flood Risk Management Project	(2,374,484.13)
Total Funds Reimbursed	(413,557,854.61)
Total State Fund Balances Remaining	942,145.40

LOCAL MATCHING FUNDS SUMMARY:

Matching Funds Expended To Date - FM Metro Area Flood Risk Management Project	\$ 101,279,533
Less: Match Used on Payment #1 through #35 - City of Fargo	(41,506,620)
Less: Match used on Payment #1 - Cass County	(136,039)
Less: Match Used on Payment #1 - 114 - FM Metro Area Flood Risk Management Project	(59,636,874)
Balance of Local Matching Funds Available	\$ (0)

Legacy Bond Fund Balance Report
As of 09/30/2022

Total Authorized \$ 435,500,000.00

Current Allocation \$ 219,000,000.00

Available funds remaining \$ 171,453,210.38

Funds Requested

	2021	2022	Total
January	\$ -	\$ 2,942,906.60	\$ 2,942,906.60
February	\$ -	\$ 4,564,036.17	\$ 4,564,036.17
March	\$ -	\$ 5,302,899.35	\$ 5,302,899.35
April	\$ -	\$ 1,472,504.37	\$ 1,472,504.37
May	\$ -	\$ 1,450,140.38	\$ 1,450,140.38
June	\$ -	\$ 4,423,864.76	\$ 4,423,864.76
July	\$ -	\$ -	\$ -
August	\$ 5,059,974.19	\$ -	\$ 5,059,974.19
September	\$ 2,970,327.95	\$ -	\$ 2,970,327.95
October	\$ 6,089,707.34	\$ -	\$ 6,089,707.34
November	\$ 6,415,461.09	\$ -	\$ 6,415,461.09
December	\$ 6,854,966.95	\$ -	\$ 6,854,966.95
Total	\$ 27,390,437.51	\$ 20,156,351.63	\$ 47,546,789.14

Funds Received

May 2022	\$ 27,390,438.00	\$ -	\$ 27,390,438.00
Jul 2022		\$ 12,809,842.11	\$ 12,809,842.11
Sep 2022		\$ 7,346,509.51	\$ 7,346,509.51
	\$ -	\$ -	\$ -
	\$ -	\$ -	\$ -
Total	\$ 27,390,438.00	\$ 20,156,351.62	\$ 47,546,789.62

Finance Committee Bills from October 2022

Vendor	Description	
Cass County Joint Water Resource District	Diversion bills – Request #101 CCJWRD	\$ 7,649,205.39
Clay County	Diversion bills – Request #22 MCCJPA	\$ 1,381,104.00
Ohnstad Twichell, P.C.	Legal services rendered through September 21, 2022	\$ 95,792.46
City of Drayton	Diversion bills – Request #1	\$ 48,923.00
Marsh & McLennan Agency LLC	Diversion Authority general liability insurance premium	\$ 11,810.00
Pleasant Township	Reimburse gravel costs related to MOU	\$ 9,233.35
Cass County	Reimburse misc expenses from Diversion Authority office	\$ 5,488.39
City of Christine	Reimburse legal services related to MOU	\$ 3,012.00
Total Bills Received through October 18, 2022		<u>\$ 9,204,568.59</u>



Cass County
Joint Water
Resource
District

SENT VIA EMAIL

October 7, 2022

Dan Jacobson
Chairman
West Fargo, North Dakota

Diversion Authority
P.O. Box 2806
Fargo, ND 58108-2806

Rodger Olson
Manager
Leonard, North Dakota

Greetings:

Ken Loughheed
Manager
Gardner, North Dakota

RE: Metro Flood Diversion Project
Oxbow-Hickson-Bakke Ring Levee Project

Jacob Gust
Manager
Fargo, North Dakota

Enclosed please find copies of bills totaling \$7,649,205.39 regarding the above referenced projects. The breakdown is as follows:

Keith Weston
Manager
Fargo, North Dakota

Metro Flood Diversion	\$7,648,504.39
Oxbow-Hickson-Bakke Ring Levee	701.00

At this time, we respectfully request 100% reimbursement per the Joint Powers Agreement between the City of Fargo, Cass County and Cass County Joint Water Resource District dated June 1, 2015.

If you have any questions, please feel free to contact us. Thank you.

Sincerely,

CASS COUNTY JOINT WATER RESOURCE DISTRICT

Carol Harbeke Lewis
Secretary-Treasurer

Carol Harbeke Lewis
Secretary-Treasurer

1201 Main Avenue West
West Fargo, ND 58078-1301

Enclosures

701-298-2381
FAX 701-298-2397
wrđ@casscountynđ.gov
casscountynđ.gov

METRO FLOOD DIVERSION RIGHT OF ENTRY/LAND ACQUISITION COST SHARE INVOICES						10/7/2022
Invoice	Invoice	Invoice	Project			
Paid	Date	No.	No.	Amount	Vendor	Description
				(201,160.00)	Clerk of District Court	refund of deposit on OIN 1108-1110
9/9/2022	8/24/2022	184057	130007	10,221.00	Ohnstad Twichell, P.C.	Legal-Diversion Right of Way Acquisition
9/9/2022	8/24/2022	184059	160007	172.00	Ohnstad Twichell, P.C.	Legal-Diversion Authority Agreement - Drains
9/9/2022	8/24/2022	184060	160007	2,959.50	Ohnstad Twichell, P.C.	Legal-Channel Phase I
9/9/2022	8/24/2022	184061	160007	767.50	Ohnstad Twichell, P.C.	Legal-Channel Phase II
9/9/2022	9/7/2022	184300	160007	465.50	Ohnstad Twichell, P.C.	Legal-Channel Phase III
9/9/2022	8/24/2022	184063	170007	76,920.41	Ohnstad Twichell, P.C.	Legal-Upstream Mitigation Area
9/9/2022	8/24/2022	184064	187007	1,489.00	Ohnstad Twichell, P.C.	Legal-Diversion - Southern Embankment
9/9/2022	8/24/2022	184065	197007	249.50	Ohnstad Twichell, P.C.	Legal-ROW-Wild Rice Structure
9/9/2022	8/24/2022	184066	197007	819.00	Ohnstad Twichell, P.C.	Legal-Western Tie Back
9/9/2022	8/24/2022	184067	207007	4,897.50	Ohnstad Twichell, P.C.	Legal-Wetland Mitigation Drain 27
9/9/2022	8/24/2022	30857	19706	1,362.50	Moore Engineering, Inc.	Engineering - Task 2 Development of Design Guidance for P3 RFP
9/9/2022	8/24/2022	30865	22285A	781.17	Moore Engineering, Inc.	Engineering - Expert Witness Cossette
9/9/2022	8/24/2022	30867	22285B	1,560.00	Moore Engineering, Inc.	Engineering - Expert Witness Loberg
9/9/2022	8/24/2022	30862	22285	390.00	Moore Engineering, Inc.	Engineering - Expert Witness Thunberg
9/9/2022	8/31/2022	4809		26,000.00	Crown Appraisals Inc	appraisals TO 5, Amendment 1
9/9/2022	9/9/2022			84,410.00	The Title Company	Kleinjan Flowage Easement
9/9/2022				120,125.82	Newman Signs Inc	moving structure
9/9/2022	8/16/2022	1974223		400.00	Marsh McLennan Agency	General liability endorsement
9/9/2022	9/1/2022			745.60	Jonathan & Tara Bultema	moving costs reimbursement
9/9/2022	9/1/2022			650.96	Glen Rheault	Rheault OIN 877 moving costs
9/16/2022	9/1/2022			3,543.52	Fettes Transporation Services	Rheault OIN 877 moving costs
9/9/2022	9/1/2022			4,550.00	Gene and Brenda Sauvageau	moving cost reimbursement
9/9/2022	9/1/2022			6,631.66	Eric Score	moving costs reimbursement
9/9/2022	9/2/2022			1,500.00	Jonathan & Tara Bultema	refund of security deposit
9/9/2022	9/2/2022			1,000.00	Shelton Tronnes	refund of security deposit
9/9/2022	9/9/2022			2,020,662.70	The Title Company	Property purchase - Leo DuBord
9/9/2022	9/7/2022			419,000.00	Estate of Janet Wanzek	Agreement for Entry and Construction
9/9/2022	9/7/2022			419,000.00	Daniel Edwin Everist III	Agreement for Entry and Construction
9/23/2022	9/6/2022	184277	207007	2,563.23	Ohnstad Twichell, P.C.	Legal-Delaney (OIN 1202) Quick Take Eminent Domain
9/23/2022	9/6/2022	184278	207007	681.50	Ohnstad Twichell, P.C.	Legal-Larson (OIN 1199) QTED
9/23/2022	9/6/2022	184279	207007	25,816.92	Ohnstad Twichell, P.C.	Legal-Gust (OIN 952) Quick Take Eminent Domain
9/23/2022	9/6/2022	184280	207007	1,715.50	Ohnstad Twichell, P.C.	Legal-Cossette (OIN 722, 723) quick take eminent domain
9/23/2022	9/6/2022	184281	207007	2,592.50	Ohnstad Twichell, P.C.	Legal-Loberg (OIN 716) quick take eminent domain
9/23/2022	9/6/2022	184282	207007	922.68	Ohnstad Twichell, P.C.	Legal-Thunberg Living Trust (OIN 720) QTED
9/23/2022	9/6/2022	184283	207007	247.50	Ohnstad Twichell, P.C.	Legal-Larry A. Brandt RLT (OIN 9348) QTED
9/23/2022	9/6/2022	184284	207007	664.50	Ohnstad Twichell, P.C.	Legal-Germanson (OIN 5004/5009-5012/9054-9056) QTED
9/23/2022	9/6/2022	184285	207007	1,342.00	Ohnstad Twichell, P.C.	Legal-Janet Wanzek Estate (OIN 8672-8675, 9747) QTED
9/23/2022	9/6/2022	184286	207007	524.50	Ohnstad Twichell, P.C.	Legal-Libbrecht, Glen (OIN 698/9756-9759) QTED
9/23/2022	9/6/2022	184287	207007	4,914.40	Ohnstad Twichell, P.C.	Legal-Perhus (OIN 747, 751, 5014-5015, 5277) QTED
9/23/2022	9/6/2022	184288	207007	579.50	Ohnstad Twichell, P.C.	Legal-Thue Living Trust (OIN 1169, 1200) QTED
9/23/2022	9/6/2022	184289	207007	273.00	Ohnstad Twichell, P.C.	Legal-Brodshaug RLT (OIN 5008/1930/1932/1941/8517-8518)
9/23/2022	9/6/2022	184290	207007	4,573.39	Ohnstad Twichell, P.C.	Legal-Samuelsen RLT (OIN 1181/1182) QTED
9/23/2022	9/6/2022	184291	207007	519.50	Ohnstad Twichell, P.C.	Legal-Jameson (OIN 9749) QTED
9/23/2022	9/6/2022	184292	217007	1,086.50	Ohnstad Twichell, P.C.	Legal-Coster RET (OIN 9736-9737) QTED
9/23/2022	9/6/2022	184293	217007	3,185.50	Ohnstad Twichell, P.C.	Legal-Sauvageau (OIN 1107) QTED
9/23/2022	9/6/2022	184294	217007	8,240.00	Ohnstad Twichell, P.C.	Legal-Richard (OIN 27 1083) QTED
9/23/2022	9/6/2022	184295	217007	3,904.00	Ohnstad Twichell, P.C.	Legal-Richard Farm (OIN 1087/1093/1095/5002) QTED
9/23/2022	9/6/2022	184296	217007	2,566.50	Ohnstad Twichell, P.C.	Legal-Brunelle LE (OIN 1108-1110) QTED
9/23/2022	9/6/2022	184297	217007	247.50	Ohnstad Twichell, P.C.	Legal-Offut, Karen (OIN 809) QTED
9/23/2022	9/6/2022	184298	227007	61.00	Ohnstad Twichell, P.C.	Legal-Roseen QTED (OIN 25)
9/23/2022	9/6/2022	184299	227007	663.00	Ohnstad Twichell, P.C.	Legal-Brei Estate LLLP (OIN 843) QTED
9/23/2022	9/8/2022	809719	38810.00007	20,807.42	Larkin Hoffman Attorneys	Legal-CCJT v Daniel Flaten

Invoice Paid	Invoice Date	Invoice No.	Project No.	Amount	Vendor	Description
9/23/2022	9/8/2022	809716	38810	197.50	Larkin Hoffman Attorneys	Legal-CCJT v Johnson, Monson, Johnson, Tintes and Anderson
9/23/2022	9/8/2022	809720	38810.00009	750.50	Larkin Hoffman Attorneys	Legal-CCJT v Steve and Lisa Loberg
9/23/2022	9/8/2022	809718	38810.00005	1,422.00	Larkin Hoffman Attorneys	Legal-CCJT v Newman Signs/Newman Trust Condemnation
9/23/2022	9/8/2022	809717	38810.00004	3,831.50	Larkin Hoffman Attorneys	Legal-Richland/Cass Cos/apps for Permit to Enter Land
9/23/2022	9/9/2022	1200460980		22,516.37	HDR Engineering Inc	TO 1 Property Acquisition Services
9/23/2022	8/31/2022	13783.00-28		69,816.55	SRF Consulting Group, Inc.	Project mgmt, ROW Services and relocation services
9/23/2022	9/12/2022	129156	R12.00049	21,527.55	Ulteig Engineers	Task Order 2 - Proj management and acquisition
9/23/2022	8/31/2022	47226	3283-00	17,973.73	ProSource Technologies LLC	TO 2 - project management and acquisition
9/23/2022	9/2/2022	22071-2		38,100.00	Compass Land Consultants Inc	appraisal TO 5 - Flowage Easements
9/29/2022	9/15/2022	22-3		7,200.00	Tinjum Appraisal Company, Inc.	appraisals TO 2, Amendment 3
9/23/2022	9/23/2022			9,791.00	The Title Company	Opgrand Flowage Easement
9/23/2022	9/9/2022	2002778		21,094.81	Marsh McLennan Agency	Occupied Flood Diversion Properties
9/23/2022	9/19/2022	2011748		-1,750.10	Marsh McLennan Agency	correction to commercial property liability
9/23/2022	9/2/2022			530.78	Petro Serve USA	propane for OIN 1129
9/23/2022	9/9/2022			335,605.00	The Title Company	Solberg Flowage Easements
10/3/2022	9/20/2022	31166		1,100.00	Moore Engineering, Inc.	Task 2-Development of Design Guidance for P3 RFP
10/3/2022	9/20/2022	31172		4,356.25	Moore Engineering, Inc.	Flaten Expert Wtiness
9/23/2022	9/23/2022			3,766,546.07	The Title Company	Cossette property purchase
9/23/2022	9/23/2022			229,088.00	The Title Company	Mathison Flowage Easement
			Total	7,648,504.39		
OXBOW-HICKSON-BAKKE RING LEVEE INVOICES						
Invoice Paid	Invoice Date	Invoice No.	Project No.	Amount	Vendor	Description
9/9/2022	8/24/2022	184058	140007	701.00	Ohnstad Twichell, P.C.	Legal-OHB
			Total	701.00		
			Grand Total	7,649,205.39		



COUNTY AUDITOR
LORI J. JOHNSON
Office Telephone (218) 299-5006

October 13, 2022
Diversion Authority
P.O. Box 2806
Fargo, ND 58108-2806

RE: Metro Flood Diversion Project

Greetings:

Attached to this email, please find a spreadsheet summary of invoices/expense and all documentation for invoices paid by Clay County for the FM Flood Diversion project. All requests were approved or authorized by the Diversion Authority. Current invoice/expense reimbursement request total is as follows:

Metro Flood Diversion	\$1,381,104.00
-----------------------	----------------

We respectfully request 100% reimbursement as per the Joint Powers Agreement.

If you have any questions, please feel free to contact us.

Sincerely,

Lori J. Johnson
Clay County Auditor

Enclosures

Clay County Government Center
3510 12th Ave S
PO Box 280
Moorhead, MN 56560

FM Diversion MCCJPA invoices

Vendor	Invoice Date		Invoice Amount	Invoice #	Date Approved	Date Paid	Check #	Reimb Request
Compass Land Consultants	9/2/22	appraisals oin 1252,5186,5188,5207	\$16,000.00	22072-2	9/9/22	9/21/22	109647	10/13/2022
Lake Region Electric Coop	9/8/22	svc 184 180th ave s	\$57.66		9/19/22	9/28/22	109739	10/13/2022
Ohnstad Twichell	9/8/22	Upstream mitigation	\$29,359.00	184304	9/17/22	9/28/22	109747	10/13/2022
Ohnstad Twichell	9/8/22	Southern embankment	\$4,209.00	184305	9/17/22	9/28/22	109747	10/13/2022
Ohnstad Twichell	9/8/22	general 2022	\$1,200.00	184306	9/17/22	9/28/22	109747	10/13/2022
Ohnstad Twichell	9/8/22	relocation appeal kragerud	\$1,665.27	184307	9/17/22	9/28/22	109747	10/13/2022
Ohnstad Twichell	9/8/22	relocation appeal dubois & buth	\$3,780.00	184308	9/17/22	9/28/22	109747	10/13/2022
Ohnstad Twichell	9/8/22	relocation appeal buth	\$1,612.50	184309	9/17/22	9/28/22	109747	10/13/2022
Ohnstad Twichell	9/8/22	relocation appeal leech	\$1,582.50	184310	9/17/22	9/28/22	109747	10/13/2022
SRF Consulting Group	8/31/22	Prof svcs thru 8/31/22	\$24,771.42	13820.00-23	9/21/22	9/28/22	109755	10/13/2022
ProSource Technologies	8/31/22	Prof svcs thru 8/31/22	\$17,042.95	47225	9/21/22	9/28/22	527801	10/13/2022
Red River Valley Coop	9/6/22	svc 15253 3rd st w	\$260.68		9/19/22	9/28/22	527802	10/13/2022
Red River Valley Coop	9/6/22	svc 803 140th ave s	\$45.41		9/19/22	9/28/22	527802	10/13/2022
Red River Valley Coop	9/6/22	svc 13689 3rd st s	\$87.41		9/19/22	9/28/22	827802	10/13/2022
Kenneth & Tina Bye		Reimb replacement property	\$1,061.00			10/5/22	109816	10/13/2022
Kenneth & Tina Bye		Reimb moving costs	\$2,475.00			10/5/22	109816	10/13/2022
Micki Lynn Spanier		Reimb moving costs	\$2,141.81			10/5/22	109867	10/13/2022
Micki Lynn Spanier		Reimb closing costs	\$6,171.00			10/5/22	109867	10/13/2022
Building & Grounds Management	9/26/22	Culvert work oin 254	\$1,600.00	8320	9/29/22	10/19/22	TBD	10/13/2022
The Title Company		Purchase oin 1793 Livdahl	\$1,263,199.31			10/6/22	TBD	10/13/2022
Marsh & McLennan	9/26/22	Nautilus Ins. Co.	\$2,782.08	2018307	9/29/22	10/12/22	109928	10/13/2022
Total Reimbursement Request			\$1,381,104.00					

OHNSTAD TWICHELL, P.C.

Attorneys at Law

P.O Box 458
West Fargo, ND 58078-0458
701-282-3249

15-1395

JTS Invoice # 184724

Flood Diversion Board
Bond Counsel Work - PPP

Date: October 4, 2022

To: Flood Diversion Board
P.O Box 2806
Fargo, ND 58108-2806

PROFESSIONAL SERVICES RENDERED			
	Hours	Rate	Totals
JTS	99.7	\$375.00	\$37,387.50
CMM	3.3	\$375.00	\$1,237.50
LDA	2.0	\$375.00	\$750.00
KJS	71.7	\$375.00	\$26,887.50
TJL	16.7	\$375.00	\$6,262.50
LWC	0.4	\$330.00	\$132.00
KJM	42.8	\$300.00	\$12,840.00
DCP	1.0	\$320.00	\$320.00
AJR	11.1	\$205.00	\$2,275.50
Total Fees:	248.7		\$88,092.50
Westlaw			\$131.73
Prof Service Fee Gwendolyn			\$6,875.00
*Credit Card Processing Fee - 3%			\$206.25
Travel/Mileage			\$486.98
Total Expenses:			\$7,699.96
Grand Total			\$95,792.46

		Rates
JTS	John T. Shockley, Partner, Supervising Attorney	\$375.00
CMM	Christopher M. McShane, Partner	\$375.00
ADC	Andrew D. Cook, Partner	\$375.00
SNW	Sarah M. Wear, Partner	\$375.00
LDA	Lukas D. Andrud, Partner	\$375.00
RGH	Robert G. Hoy, Partner	\$375.00
KJS	Katie J. Schmidt, Partner	\$375.00
MWM	Marshall W. McCullough, Partner	\$375.00
TJL	Tyler J. Leverington, Partner	\$375.00
LWC	Lukas W. Croaker, Associate	\$330.00
ABG	Bo Gruchala, Associate	\$320.00
JRS	J.R. Strom, Associate	\$310.00
KJM	Kathryn J. McNamara, Associate	\$300.00
LRC	Leah R. Carlson, Associate	\$320.00
BTB	Brent T. Boeddeker, Associate	\$330.00
DCP	David C. Piper, Associate	\$320.00
JAM	Jenna A. McPherson, Associate	\$275.00
SJH	Stephen J. Hilfer, Associate	\$225.00
MAN	Morgan A. Nyquist, Associate	\$225.00
CAS	Carol A. Stillwell, Paralegal	\$205.00
AJR	Andrea J. Roman, Paralegal	\$205.00
CRD	Christie R. Dettling, Paralegal	\$185.00
KK	Kiara J. Klinkhammer, Paralegal	\$185.00
TWS	Tim W. Steuber, Paralegal	\$190.00
MRH	Meghan R. Hockert, Paralegal	\$185.00
ATW	Amy T. White, Paralegal	\$185.00
DLR	Dena L. Ranum, Legal Administrative Assistant	\$160.00
KMM	Karla M. Maertens, Legal Administrative Assistant	\$95.00

OHNSTAD TWICHELL, P.C.
WEST FARGO, NORTH DAKOTA 58078

COST ADVANCES BY US FOR YOUR ACCOUNT, FOR WHICH WE HAVE NOT
BEEN BILLED, WILL APPEAR ON YOUR NEXT STATEMENT.

Page 2 of 2

PROFESSIONAL SERVICES RENDERED

15-1395 JTS Invoice # 184724 Flood Diversion Board Bond Counsel Work - PPP		
FILE NUMBER	MATTER DESCRIPTION	INVOICE - TOTAL FEES
151395-1	General Topics (Includes General Governance Questions, Notices, etc.)	\$37,185.50
151395-2	Executive Director	\$672.00
151395-4	Public Finance Issues	\$187.50
151395-5	Consultant Contract Review/Development	\$1,931.50
151395-9	Environmental Permitting Issues/NEPA	\$637.50
151395-10	Insurance Issues	\$5,550.00
151395-12	USACE Interface/Questions	\$150.00
151395-13	Third Party Utility MOU's	\$22,390.00
151395-17	EPA WIFIA Loan	\$412.50
151395-19	USACE WIFIA	\$187.50
151395-22	SRF Loans	\$307.00
151395-23	PRAM	\$1,422.00
151395-24	P3 Implementation	\$17,059.50
TOTAL		\$88,092.50



CITY OF DRAYTON
CHARLES OLSON
PHONE (701) 454-3590

October 3, 2022
Diversion Authority
4784 Amber Valley Parkway South, Suite 100
Fargo, ND 58104

RE: Metro Flood Diversion Project

Greetings:

Attached to this cover page, please reference the attached spreadsheet and executed land purchase documentation for expenditures directly paid by City of Drayton regarding the Metro Flood Diversion project. The land acquisition payments were authorized by the Diversion Authority and the current reimbursement request total is noted below:

Metro Flood Diversion	\$48,923.00
-----------------------	-------------

We respectfully request 100% reimbursement as per the MOU.

If you have any questions, please feel free to contact us.

Sincerely,

Charles Olson
City of Drayton, Mayor

City of Drayton
122 S. Main St.
Drayton, ND 58225

Metro Flood Diversion Invoices - City of Drayton

Vendor	Invoice Date		Invoice Amount	Invoice #	Date Approved	Pgs.	Workflow	Notes
Arthur & Beverly Jensen	10/6/21	OIN 8732 Jensen Purchase	\$6,965.00	OIN-8732	11/17/21	3-23	No	Easement (MN)
Kevin & Jamie Hanson	10/7/21	OIN 8736 & 8738 Hanson Purchase	\$20,475.00	OIN-1648 1838	11/17/21	24-48	No	Easement (MN)
American Crystal Sugar Company	12/21/21	OIN 8742 American Crystal Sugar Co Purchase	\$21,483.00	OIN-8742	2/9/22	49-68	No	Property (ND)
		Total Request #1	\$48,923.00					



**Marsh McLennan
Agency**

Marsh & McLennan Agency LLC

Telephone:
 Fargo Office - 701-237-3311
 Sioux Falls Office - 605-339-3874

PLEASE PAY FROM THIS INVOICE. PAYMENT
 IS DUE ON RECEIPT.

PLEASE REMIT PAYMENT, INCLUDING YOUR INVOICE
 NUMBER, USING ONE OF THESE OPTIONS

ACH/Wire

Routing #071000039 (ACH) / 026009593 (Wire)
 Account Number: 8188193262
 Account Name: Marsh & McLennan Agency LLC

Bank:

Bank of America
 2000 Clayton Rd.
 Concord, CA 94520-2425

Credit Card/echeck

mma.marshmma.com/EPay

Check payable to: Marsh & McLennan Agency, LLC
 62886 Collection Center Drive
 Chicago, IL 60693-0628

----- INVOICE -----

Metro Flood Diversion Authority
 PO Box 2806
 Fargo, ND 58108

Invoice Date 09/20/22
Invoice No. 2011977
Bill-To Code METROFLOOD
Client Code METROFLOOD
Inv Order No. 800*2499196

Named Insured: Metro Flood Diversion Authority

Amount Remitted: \$

Please return this portion with your payment.

Make checks payable to: Marsh & McLennan Agency LLC

Effective Date	Policy Period	Coverage Description	Transaction Amount
10/03/22	10/03/22 to 10/03/23	North Dakota Insurance Reserve Fund Policy No. GL345504 *Renewal - CL General Liability Annual Renewal Premium for General Liability Invoice Number: 2011977 Amount Due:	11,810.00 11,810.00
*Premiums Due and Payable on Effective Date			



Metro Flood Diversion Authority

Renewal Premium Summary

	Expiring (2021-2022)	Renewal (2022-2023)
General Liability	\$11,564	\$11,810
TOTAL	\$11,564	\$11,810

Binding Requirements:

- None

Renewal Changes:

- No changes from expiring

CASS COUNTY GOVERNMENT
PO BOX 2806
211 9th STREET SOUTH
Fargo, ND 58108

(701) 241-5600

DATE: 10/13/22

TO: CITY OF FARGO
PO BOX 2083
FARGO, ND 58107

CUSTOMER NO: 198/294

TYPE: CA - FINANCE OFFICE

CHARGE	DATE	DESCRIPTION	REF-NUMBER	DUE DATE	TOTAL AMOUNT
	9/06/22	BEGINNING BALANCE			81,655.71
	10/04/22	PAYMENT			81,655.71-
AUDIT	10/13/22	FM DIVERSION			88,784.09
		PAYROLL EXPENSES	Employee agreements in place		
AUDIT	10/13/22	FM DIVERSION			
		MISC EXPENSES	Submitted for approval at Oct board mtg		5,488.39

Current	30 days	60 days	90 days
94272.48			

DUE DATE: 11/14/22

PAYMENT DUE: 94,272.48
TOTAL DUE: \$94,272.48

PLEASE DETACH AND SEND THIS COPY WITH REMITTANCE

DATE: 10/13/22 DUE DATE: 11/14/22 NAME: CITY OF FARGO
CUSTOMER NO: 198/294 TYPE: CA - FINANCE OFFICE

REMIT AND MAKE CHECK PAYABLE TO:
CASS COUNTY FINANCE
211 9TH ST S
PO BOX 2806
FARGO ND 58108-2806
(701) 241-5606

TOTAL DUE: \$94,272.48



SWANSON
&
WARCUP, LTD.

*Howard D. Swanson

John A. Warcup

Patricia R. Castro

1397 Library Circle #202
Grand Forks, ND 58201
Telephone: 701-772-3407
Facsimile: 701-772-3833

Cindy R. Savage, Paralegal

*Also Licensed in Minnesota

September 6, 2022

– via U.S. Mail –

Randy Monson, Mayor
City of Christine
P.O. Box 1241
Christine, ND 58015

RE: City of Christine

Dear Mayor Monson:

Please find attached our statement for fees and expenses incurred in the above referenced matter through August 31, 2022.

We have begun our initial review of the materials provided to us by Moore Engineering. I have also had initial communication with the attorney for the Metropolitan Diversion Authority. I have been advised by the counsel for the Authority that any acquisitions undertaken by the City of Christine will need to comply with federal requirements. The City may not have been aware of that. As a result of the application of the federal rules, there are more requirements to be met and steps to be taken. We have significant experience complying with the federal requirements and will be able to assist the City in complying with those requirements.

I will keep you advised as to any developments that may occur in this matter. If at any time you should have any questions or concerns regarding our billing statement or the status of the acquisitions, please do not hesitate to contact me.

Sincerely,

SWANSON & WARcup, LTD.

Howard D. Swanson

hswanson@swlawltd.com

HDS/klr

Attachment: Billing Statement

cc w/o enc.: Brittany Hatting – bhatting@liesandbullis.com

Swanson & Warcup Ltd.

1397 Library Circle, Suite 202
Grand Forks, ND 58201
Federal Tax ID 45-0347664

City of Christine
P.O. Box 1241
Christine, ND 58015

Date: 8/31/2022
File Number: 2535/001
Invoice Number: 9447

Re: City of Christine
Flood Control Project

STATEMENT OF ACCOUNT	
Current Fees	3,012.00
Amount Due and Owing to Date	\$3,012.00

Fees





Diversion Authority Board Meeting

October 27, 2022

Contracting Actions
Joel Paulsen

DA Board Approval Contract Actions

(ACTION)



Description	Company	Budget/ Estimate (\$)
New Services Agreement – Risk Management Advisory Services – Provide risk management services to the MFDA for insurance, performance security, and risk management as requested regarding matters affecting, or that potentially affect the project.	AON Risk Services Central, Inc	\$0.00
New Services Agreement – Polling Services – Perform polling services related to the FM Area Diversion project. Will include 500 surveys in ND and 100 in Clay County, MN.	WPA Intelligence (WPAi)	\$20,000.00
New Master Services Agreement 2023 – Consulting Services – Renew MSA and extend period of performance to December 31, 2027.	Program Advisor Services	\$0.00
Services Agreement Amendment 2 – Consulting Services – Extending period of performance to December 31, 2023 and add budget for 2023 fiscal year.	GA Group, PC	\$48,000.00
Services Agreement 2022-2023 – Autonomous Mowing Services – Identify innovation and technology for automated equipment for project maintenance.	Grand Farm Research & Education Initiative, Inc	\$25,000.00

Executive Director Contracting Recommendation

1. Recommendation for action:

The Executive Director has reviewed and recommended approval of the following Contract Action(s).

2. Summary of Contracting action:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016 and amended December 16, 2021 the Owner's Program Management Consultant (PMC) or Engineer of Record (EOR) is directed to prepare Task Orders and Task Order amendments for existing Professional Services Agreements and submit them to the Deputy Executive Directors and the Executive Director. The Deputy Executive Directors will provide comments which will be consolidated in one form by the PMC and provided to the Director of Engineering. The Director of Engineering shall review the comments and provide recommendations to the Executive Director for review. The Executive Director shall thereafter submit the Master Services Agreement along with a recommendation to the Finance Committee for review. The Finance Committee will submit its recommendation to for the Master Services Agreement to the Diversion Authority Board for review and approval.

The PMC has prepared the following Contract Action(s):

AON Risk Services Central, Inc Professional Services Agreement Risk Management Advisory Services	\$0.00
<ul style="list-style-type: none"> • Provide risk management advisory services to the Metro Flood Diversion Authority July 1, 2022 to July 1, 2024. 	

3. Reason why it is required

Provide risk management advisory services to the Diversion Authority for insurance, performance security requirements and risk management services in conjunction with the Metro Flood Diversion Authority's portion of the project. Aon shall furnish all services and labor necessary to conduct and complete the services described herein. AON's items of work may include, but are not limited to, the following items, as appropriate for the Project:

- Provide insurance, performance security, and risk management advice as requested regarding matters affecting, or that potentially affect, the Project.
- Participate in presentations, briefings, and reporting to the Metro Flood Diversion Authority Board and other decision making bodies.
- Work and liaise with other Metro Flood Diversion Authority service providers and state, local, and federal agencies regarding the Project.
- Attend Meetings or participate in conference calls with the Metro Flood Diversion Authority's personnel and/or consultants and other interested parties to discuss the details of the Project.
- Assist in identification, assessment and allocation of project risks.

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- Participate in the Project implementation process, including workshops, meetings, and evaluations.

The Services to be provided by AON are lot of a legal nature, and AON shall in no event give, or be required to give, and legal opinion or provide any legal representation to the Metro Flood Diversion Authority.

4. Background and discussion:

CH2M, now Jacobs, has served as the Program Management Consultant (PMC) to the OWNER since November of 2011, with primary responsibilities to plan and implement the FM Area Diversion Project (the PROJECT). As such, the OWNER and CONSULTANT have agreed to enter into a Task Order focused on managing and reporting on the various aspects of the PROJECT. The PMC reports directly to the Executive Director.

In accordance with Section 1 of the Professional Services Agreement by and between the Metro Flood Diversion Authority (the "Authority") and AON Risk Services Central, INC ("AON") dated July 1, 2022 (the "Agreement"), the Authority and the AON agree to engage in the above described services.

See the table below for a summary of this task order's contracting history, including this amendment.

Table 1 - Summary of Contracting History and Current Contract Action

Original Agreement or Amendment	Budget Change \$	Original or Revised Budget \$	Agreement Execution Date	Project Completion	Comments
Task Order 01-A0				7/1/2024	To be developed
Total					

5. Financial considerations:

Cost account code is required for accounting purposes to match the invoicing in Source for the Diversion Authority to reconcile.

Table 2 - Summary of Annual Budget Allocation – Per Year

Original Agreement or Amendment	Cost account code	Estimated Cost (\$)	Budget Allocated (\$)	Actual Paid to date (\$)	Budget Remaining (\$)	Comments
2023	SW-1340					To be developed
Totals						

6. Attachments:

- AON Professional Services Agreement

Governance Doc Ref:	Form Ref:	Aconex Reference:	Date:	Revision:
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The PMC prepared this contracting action and feels the information is accurate, complete, and ready for Executive Director review.

Recommendation: Kris Bakkegard, Director of Engineering recommends approval of this contract.

The Executive Director has approved in Workflow and granted permission to add his name to the document.

Approved by: Joel Paulsen, Executive Director

Date: 10/3/2022

Governance Doc Ref:	Form Ref:	Aconex Reference:	Date:	Revision:
	604 PMC SCA - EDCR		06/17/2022	00

Executive Director Contracting Recommendation

1. Recommendation for action:

The Executive Director has reviewed and recommended approval of the following Contract Action(s).

2. Summary of Contracting action:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016 and amended December 16, 2021 the Owner's Program Management Consultant (PMC) or Engineer of Record (EOR) is directed to prepare Services Agreements and Services Agreement amendments and submit them to the Deputy Executive Directors and the Executive Director. Deputy Executive Directors will provide comments which will be consolidated in one form by the PMC and provided to the Director of Engineering. The Director of Engineering shall review the comments and provide recommendations to the Executive Director for review. The Executive Director shall thereafter submit this Services Agreement and Services Agreement amendments along with a recommendation to the Finance Committee for review. The Finance Committee will submit its recommendation to the Diversion Authority Board for review and approval.

The PMC has prepared the following Contract Action(s):

WPA Intelligence (WPAi) Services Agreement – A0 Polling Services	\$20,000.00
<ul style="list-style-type: none"> Perform polling services related to the FM Area Diversion project. 	

3. Reason why it is required

WPAi will conduct surveys post November 2022 Election. This will include 500 in North Dakota and 100 in Clay County Minnesota. The surveys will include 30 questions. WPAi will provide the survey results and analysis of results/data of the surveys within.

4. Background and discussion:

CH2M, now Jacobs, has served as the Program Management Consultant (PMC) to the OWNER since November of 2011, with primary responsibilities to plan and implement the FM Area Diversion Project (the PROJECT). As such, the OWNER and CONSULTANT have agreed to enter into a Services Agreement on managing and reporting on the various aspects of the PROJECT. The PMC reports directly to the Executive Director.

In accordance with Section 1 of the Services Agreement by and between the Metro Flood Diversion Authority (the "Authority") and WPA Intelligence ("WPAi") dated November 1, 2022 (the "Agreement"), the Authority and the WPAi agree to engage in the above described services.

See the table below for a summary of this task order's contracting history, including this amendment.

Governance Doc Ref:	Form Ref:	Aconex Reference:	Date:	Revision:
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Table 1 - Summary of Contracting History and Current Contract Action

Original Agreement or Amendment	Budget Change \$	Original or Revised Budget \$	Agreement Execution Date	Project Completion	Comments
SA-A0	0.00	20,000.00	1-Nov-22	31-Dec-22	Initial Scope of work
Total		20,000.00			

5. Financial considerations:

The Budget Cost Proposal is attached or in the Services Agreement.

Cost account code is required for accounting purposes to match the invoicing in Source for the Diversion Authority to reconcile.

Table 2 - Summary of Annual Budget Allocation – Per Year

Original Agreement or Amendment	Cost account code	Estimated Cost (\$)	Budget Allocated (\$)	Actual Paid to date (\$)	Budget Remaining (\$)	Comments
2022	SW-1180	20,000.00	20,000.00	0.00	20,000.00	Within budget
Totals		20,000.00	20,000.00	0.00	20,000.00	

6. Attachments:

- WPAi Services Agreement

The PMC prepared this contracting action and feels the information is accurate, complete, and ready for Executive Director review.

Recommendation: Kris Bakkegard, Director of Engineering recommends approval of this contract.

The Executive Director has approved in Workflow and granted permission to add his name to the document.

Approved by: Joel Paulsen, Executive Director

Date: 10/19/2022

Governance Doc Ref:	Form Ref:	Aconex Reference:	Date:	Revision:
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Executive Director Contracting Recommendation

1. Recommendation for action:

The Executive Director has reviewed and recommended approval of the following Contract Action(s).

2. Summary of Contracting action:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016 and amended December 16, 2021 the Owner's Program Management Consultant (PMC) or Engineer of Record (EOR) is directed to prepare Task Orders and Task Order amendments for existing Master Services Agreements (MSA) and submit them to the Deputy Executive Directors and the Executive Director. The Deputy Executive Directors will provide comments which will be consolidated in one form by the PMC and provided to the Director of Engineering. The Director of Engineering shall review the comments and provide recommendations to the Executive Director for review. The Executive Director shall thereafter submit the Master Services Agreement along with a recommendation to the Finance Committee for review. The Finance Committee will submit its recommendation to for the Master Services Agreement to the Diversion Authority Board for review and approval.

The PMC has prepared the following Contract Action(s):

Program Advisor Services Master Services Agreement 2023 Consulting Services	\$0.00
<ul style="list-style-type: none"> • Renew MSA and extend period of performance to December 31, 2027 	

3. Reason why it is required

Program Advisor Services to provide, but limited to, provide recommendations on the development, procurement, and implementation of the FM Area Diversion Project. Program Advisor Services will provide knowledge, advice, recommendations, and opinions pertaining to aspects of the FM Area Diversion project within the area of the Consultants expertise. The Consultant will attend meetings or otherwise participate in the governmental or quasi-governmental forums as directed by the Owner.

4. Background and discussion:

In accordance with Paragraph 7 of the Master Agreement for Professional Services between the Metro Flood Diversion Authority ("Owner") and Program Advisor Services, LLC ("Consultant") dated January 1, 2023 ("Agreement"), Owner and Consultant agree to above services.

See the table below for a summary of this task order's contracting history, including this amendment.

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Table 1 - Summary of Contracting History and Current Contract Action

Original Agreement or Amendment	Budget Change \$	Original or Revised Budget \$	Agreement Execution Date	Project Completion	Comments
Task Order 01 Amendment 0	\$-	\$650,000.00	12/20/2019	5/31/2021	Initial work Authorization
Task Order 01 Amendment 1	\$175,000.00	\$825,000.00	3/01/2021	5/31/2021	Budgetary Changes
Task Order 01 Amendment 2	\$180,000.00	\$1,005,000.00	6/01/2021	8/31/2021	Budgetary changes and time extension
Task Order 01 Amendment 3	\$0.00	\$1,005,000.00	9/01/2021	12/31/2021	Time extension
Task Order 01 Amendment 4	\$500,000.00	\$1,505,000.00	9/01/2021	12/31/2022	Additional budget and extend POP to December 31, 2022
Task Order 01 Amendment 5	\$0.00	\$1,505,000.00	9/01/2021	12/31/2022	Redistribute budget
Task Order 01 Amendment 6	\$35,000.00	\$1,540,000.00	9/01/2021	12/31/2022	Budgetary changes
Total					

5. Financial considerations:

Cost account code is required for accounting purposes to match the invoicing in Source for the Diversion Authority to reconcile.

Table 2 - Summary of Annual Budget Allocation – Per Year

Original Agreement or Amendment	Cost account code	Estimated Cost (\$)	Budget Allocated (\$)	Actual Paid to date (\$)	Budget Remaining (\$)	Comments
12/20/2019 to 12/31/2021	SW-1150	\$1,005,000.00	\$1,005,000.00	\$954,075.70	\$50,924.30	Remaining budget returned to program
2022	SW-1150	500,000.00	500,000.00	334,869.00	165,131.00	Within allocated annual budget
2023	SW-1150	500,000.00	500,000.00	0.00	500,000.00	
Totals		2,005,000.00	2,005,000.00	1,288,944.70	716,055.30	

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6. Attachments:

- Master Agreement for Professional Services 2023-2027

The PMC prepared this contracting action and feels the information is accurate, complete, and ready for Executive Director review.

Recommendation: Kris Bakkegard, Director of Engineering recommends approval of this contract.

The Executive Director has approved in Workflow and granted permission to add his name to the document.

Approved by: Joel Paulsen, Executive Director

Date: 10/11/2022

Governance Doc Ref:	Form Ref:	Aconex Reference:	Date:	Revision:
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Executive Director Contracting Recommendation

1. Recommendation for action:

The Executive Director has reviewed and recommended approval of the following Contract Action(s).

2. Summary of Contracting action:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016 and amended December 16, 2021 the Owner's Program Management Consultant (PMC) or Engineer of Record (EOR) is directed to prepare Services Agreements and Services Agreement amendments and submit them to the Deputy Executive Directors and the Executive Director. The Deputy Executive Directors will provide comments which will be consolidated in one form by the PMC and provided to the Director of Engineering. The Director of Engineering shall review the comments and provide recommendations to the Executive Director for review. The Executive Director shall thereafter submit this Services Agreement and Services Agreement amendments along with a recommendation to the Finance Committee for review. The Finance Committee will submit its recommendation to the Diversion Authority Board for review and approval.

The PMC has prepared the following Contract Action(s):

GA Group, PC (GA) Services Agreement Amendment 2 Consulting Services	\$48,000.00
<ul style="list-style-type: none"> Extend GA Groups Professional Services to December 31, 2023 Add Budget for 2023 FY 	

3. Reason why it is required

GA Group agrees the following shall be provided when requested by the Authority:

- Monitoring and advocating for the passage, amendment, or defeat of relevant legislation during the regular session and any special session called or reconvened legislative sessions in 2023.
- Advising the Authority regarding potential opportunities to join forces with other legislative stakeholders to help solve public policy issues.
- Advising the Authority on potential legal issues related to legislation.
- Maintaining regular contact with the designated point of contact of the Authority.
- Representing the Authority with relevant executive branch agencies (e.g., the North Dakota Governor's office).
- Representing the Authority relating to interim legislative activities.
- Advising the Authority regarding compliance with state ethics laws.

4. Background and discussion:

The Joint Powers Agreement establishing the Authority and the laws of North Dakota authorize the Authority to retain government relations counsel to advise and represent the Authority on legislative and executive branch

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government relation matters and the Authority wishes to hire GA group as an independent contractor to provide professional services to the Authority.

In accordance with Section 4 of the Government Counsel Services Agreement, Amendment 2 between Metro Flood Diversion Authority (the "Authority") and GA Group, PC (the "GA Group") dated January 1, 2023, the Authority and the GA Group agree to engage in the above describe services.

See the table below for a summary of this task order's contracting history, including this amendment.

Table 1 - Summary of Contracting History and Current Contract Action

Original Agreement or Amendment	Budget Change \$	Original or Revised Budget \$	Agreement Execution Date	Project Completion	Comments
Agreement 0	0.00	60,000.00	02/02/2021	12/31/2021	Initial Scope of Work
Amendment 1	48,000.00	108,000.00	12/14/2021	12/31/2022	Extend work to December 31, 2022. Add budget for 2022
Amendment 2	48,000.00	156,000.00	01/01/2023	12/31/2023	Extend work to December 31, 2023 Add budget for 2023

5. Financial considerations:

Cost account code is required for accounting purposes to match the invoicing in Source for the Diversion Authority to reconcile.

Table 2 - Summary of Annual Budget Allocation – Per Year

Year	Cost account code	Estimated Cost (\$)	Budget Allocated (\$)	Actual Paid to date (\$)	Budget Remaining (\$)	Comments
2021	SW-1180	60,000.00	60,000.00	60,000.00	0.00	
2022	SW-1180	48,000.00	48,000.00	32,229.32	15,770.68	Actual through August 2022
2023	SW-1180	48,000.00	48,000.00	0.00	\$48,000.00	Within allocated budget
Total		156,000.00	156,000.00	92,229.32	63,770.68	

6. Attachments:

- GA Group – Services Agreement – Amendment 2

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The PMC prepared this contracting action and feels the information is accurate, complete, and ready for Executive Director review.

Recommendation: Kris Bakkegard, Director of Engineering recommends approval of this contract.

The Executive Director has approved in Workflow and granted permission to add his name to the document.

Approved by: Joel Paulsen, Executive Director

Date: 10/14/2022

Governance Doc Ref:	Form Ref:	Aconex Reference:	Date:	Revision:
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Executive Director Contracting Recommendation

1. Recommendation for action:

The Executive Director has reviewed and recommended approval of the following Contract Action(s).

2. Summary of Contracting action:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016 and amended December 16, 2021 the Owner's Program Management Consultant (PMC) or Engineer of Record (EOR) is directed to prepare Services Agreements and Services Agreement amendments and submit them to the Deputy Executive Directors and the Executive Director. Deputy Executive Directors will provide comments which will be consolidated in one form by the PMC and provided to the Director of Engineering. The Director of Engineering shall review the comments and provide recommendations to the Executive Director for review. The Executive Director shall thereafter submit this Services Agreement and Services Agreement amendments along with a recommendation to the Finance Committee for review. The Finance Committee will submit its recommendation to the Diversion Authority Board for review and approval.

The PMC has prepared the following Contract Action(s):

Grand Farm Research & Education Initiative, Inc Services Agreement 2022-2023 Autonomous Mowing Solutions	\$25,000.00
<ul style="list-style-type: none"> Identify innovation and technology for automated equipment for project maintenance. 	

3. Reason why it is required

Grand Farm and Authority will meet to identify core challenges related to the innovation and technology for automated equipment for project maintenance. Monthly meeting will be held to discuss opportunities and challenges identified and Grand Farm will provide feedback on potential technologies which exist or are being developed. Grand Farms will assist in coordinating/creating an RFP in the selection of a solution provider to solve the specific challenges identified within the project. Monthly progress reports will be provided that include summaries of conversations with solution providers which occurred during the month as well as an annual report (end of contact) which articulates the outcomes of the work provided throughout the year.

4. Background and discussion:

CH2M, now Jacobs, has served as the Program Management Consultant (PMC) to the OWNER since November of 2011, with primary responsibilities to plan and implement the FM Area Diversion Project (the PROJECT). As such, the OWNER and CONSULTANT have agreed to enter into a Services Agreement on managing and reporting on the various aspects of the PROJECT. The PMC reports directly to the Executive Director.

In accordance with Section 1 of the Services Agreement by and between the Metro Flood Diversion Authority (the "Authority") and Grand farm Research & Education Initiative, Inc ("Grand Farm") dated November 1, 2022 (the "Agreement"), the Authority and the Grand Farm agree to engage in the above described services.

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See the table below for a summary of this task order's contracting history, including this amendment.

Table 1 - Summary of Contracting History and Current Contract Action

Original Agreement or Amendment	Budget Change \$	Original or Revised Budget \$	Agreement Execution Date	Project Completion	Comments
SA-2022-2023	\$0.00	\$25,000.00	1-Nov-22	31-Oct-23	Initial Scope of work
Total		\$25,000.00			

5. Financial considerations:

The Budget Cost Proposal is attached or in the Services Agreement.

Cost account code is required for accounting purposes to match the invoicing in Source for the Diversion Authority to reconcile.

Table 2 - Summary of Annual Budget Allocation – Per Year

Original Agreement or Amendment	Cost account code	Estimated Cost (\$)	Budget Allocated (\$)	Actual Paid to date (\$)	Budget Remaining (\$)	Comments
2022	SW-1150	5,000.00	10,000.00	\$10,000.00	0.00	
2023	SW-1150	20,000.00	20,000.00	\$0.00	20,000.00	
Totals		\$25,000.00	\$30,000.00	\$10,000.00	\$20,000.00	

6. Attachments:

- Services Agreement 2022-2023

The PMC prepared this contracting action and feels the information is accurate, complete, and ready for Executive Director review.

Recommendation: Kris Bakkegard, Director of Engineering recommends approval of this contract.

The Executive Director has approved in Workflow and granted permission to add his name to the document.

Approved by: Joel Paulsen, Executive Director

Date: 10/18/2022

Governance Doc Ref:	Form Ref:	Aconex Reference:	Date:	Revision:
	604 PMC SCA - EDCR		06/17/2022	00



METRO
FLOOD
DIVERSION
AUTHORITY

Diversion Board of Authority Meeting

October 27, 2022

MOU and Agreement Actions for
Consideration

John Shockley

Master Utility Relocation Agreement (MURA)

(ACTION)



MURA Parties	Project	MOU Cost and Summary
Cass Rural Water Users District (CRWUD) & MFDA MURA	SEAI & UMA	The purpose of this Agreement is to ensure a coordinated, time-efficient, and cost-effective process for completing the Utility Relocation Project, for coordinating operations and maintenance activities after completion of the Utility Relocation Project, and for the development of individual Task Orders issued in conjunction with, and subject to, the terms and conditions of the Agreement. For CRWUD to perform utility adjustment work identified in Exhibit A-2 of the MURA, the Authority will pay a lump sum payment of \$4,163,320 to CRWUD no later than January 31, 2023.

Memorandum of Understanding (MOU)

(ACTION)



MOU Parties	Project	MOU Cost and Summary
Nothing for Consideration		

EXECUTED VERSION

MASTER UTILITY RELOCATION AGREEMENT

By and Between

METRO FLOOD DIVERSION AUTHORITY

and

CASS RURAL WATER USERS DISTRICT

Dated as of October 18, 2022

Relating to:

**Utility Relocation in the Southern Embankment and Associated
Infrastructure and the Upstream Mitigation Area
for the Fargo-Moorhead Metropolitan
Area Flood Risk Management Project**

This instrument was drafted by:
Ohnstad Twichell, P.C.
John T. Shockley
P.O. Box 458
West Fargo, North Dakota 58078

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EXHIBIT A - PRIOR PROPERTY INTERESTS MAP, SUMMARIES OF RELOCATION WORK TO BE PERFORMED, TEMPORARY WATER MAIN MAP, AND SOUTHERN EMBANKMENT SEGMENTS MAP

EXHIBIT B – AUTHORITY INVOICING REQUIREMENTS

EXHIBIT C – FEDERAL CERTIFICATIONS

EXHIBIT D – MFR-023

EXHIBIT E – PLAN TO PROTECT IN PLACE

EXHIBIT F – TASK ORDER FORM

EXHIBIT G – FLOWAGE EASEMENT

MASTER UTILITY RELOCATION AGREEMENT

THIS MASTER UTILITY RELOCATION AGREEMENT (the “Agreement”) is made and entered into this ___ day of _____, 2022 (hereinafter referred to as the “Effective Date”), by and between the Metro Flood Diversion Authority, a North Dakota political subdivision, whose street address is 4784 Amber Valley Parkway South, Suite 100, Fargo, ND 58104 (the “Authority”), and Cass Rural Water Users District, a North Dakota political subdivision, whose principal address is 131 Maple St., Kindred, North Dakota 58051 (the “Utility”) (collectively, the Authority and the Utility are referred to as the “Parties”).

RECITALS

WHEREAS, construction of the locally preferred plan for the Fargo-Moorhead Metropolitan Area Flood Risk Management Project (the “Comprehensive Project”) in the Fargo, North Dakota, and Moorhead, Minnesota, Metropolitan Area was authorized by Section 7002(2) of the Water Resources Reform and Development Act of 2014, Public Law 113-121; and

WHEREAS, the Authority, the City of Fargo, North Dakota, and the City of Moorhead, Minnesota, are the Non-Federal Sponsors (“NFS”) for the Comprehensive Project and have entered into a Project Partnership Agreement (“PPA”) on July 11, 2016, and amended as of March 19, 2019, with the United States Army Corps of Engineers (“USACE”) for the construction, operation, and maintenance of the Comprehensive Project; and

WHEREAS, the PPA sets forth a split delivery method for the Comprehensive Project, establishing the respective responsibilities of both the NFS and the USACE; and

WHEREAS, the Authority was created to undertake and fulfill the Non-Federal Sponsors’ obligations under the PPA; and

WHEREAS, pursuant to the PPA, the NFS will be responsible for completing the Upstream Mitigation Area (referred to herein as “UMA” and further defined in Article 1 of this Agreement) and all flood mitigation features in the UMA that are not the USACE’s responsibility to complete; and

WHEREAS, pursuant to Article II of the PPA, the NFS shall be responsible for all real property interests and Relocations required for construction, operation, and maintenance of the Comprehensive Project; and

WHEREAS, the Utility has property interests (hereinafter referred to as “Prior Property Interests”) at the locations generally depicted on that part of **Exhibit A-1** colored in lavender and described in **Exhibits A-2 and A-3**; and

WHEREAS, it will be necessary for the Prior Property Interests to be relocated, protected, removed, or adjusted (hereinafter referred to as the “Utility Relocation Project”) by either the Authority or Utility in coordination with construction of the Comprehensive Project; and

WHEREAS, the Authority and the Utility desire to set forth in writing their mutual understandings and to define the terms and conditions and each Party’s rights and obligations in connection with the Utility Relocation Project; and

WHEREAS, this Agreement is only intended to bind the parties in regard to the portion of the Comprehensive Project south of the Storm Water Diversion Channel and Associated Infrastructure (“SWDCAI”) and shall have no implications for or binding power in regard to the Parties work, efforts, or relations in the SWDCAI. The Parties interactions with one another in the SWDCAI shall be governed by a separate agreement between the Parties.

NOW, THEREFORE, in consideration of the mutual promises contained herein and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby state as follows:

ARTICLE I. DEFINITIONS

Section 1.01 DEFINITIONS. All capitalized and bolded terms used and not otherwise defined herein shall have the meanings given to them in this Agreement and as defined in this Section unless a different meaning clearly applies from the context.

“Age Discrimination Act of 1975” means the Age Discrimination Act of 1975 (42 U.S.C. Sections 6101-6107).

“Authority” means the Metro Flood Diversion Authority, a North Dakota political subdivision created by the Joint Powers Agreement dated June 1, 2016.

“Best Efforts” means acting in **Good Faith** and in accordance with generally accepted commercial practices and using reasonable due diligence to undertake all action contemplated by this Agreement, in accordance with applicable federal and state laws, regulations, and rules; however, the obligation to use **Best Efforts** does not mean a duty to take action that would be in violation of applicable federal or state law.

“Betterment” means any upgrading of **Utility** that is not attributable to or made necessary by the **Project**, made for the benefit of and at the election of the **Utility**. The following are not considered **Betterments**: (a) replacement devices or materials of equivalent standards, though not identical; (b) replacement of devices or materials no longer regularly manufactured with an equivalent or next higher grade or size; (c) any upgrading required by applicable law or regulation; (4) all work done under this **Agreement** to protect or replace the **Treatment Plant, Wells, and Associated Infrastructure** and as more fully described in **Exhibit E**. The list in the immediately preceding sentence does not necessarily cover everything that may be excluded from being a **Betterment**.

“Business Day(s)” means any day that is not a Saturday, a Sunday, or a public holiday under the laws of North Dakota.

“Cass County” means Cass County, North Dakota.

“CFR” means the Code of Federal Regulations.

“Civil Rights Act of 1964” means the Civil Rights Act of 1964 (Pub.L. 88-352, 78 Stat. 241, enacted July 2, 1964).

“Clay County” means Clay County, Minnesota.

“Comprehensive Project” means the Fargo-Moorhead Metropolitan Area Flood Risk Management Project authorized by Section 7002(2) of the Water Resources Reform and Development Act of 2014, as generally described in the Final Feasibility Report and Environmental Impact Statement, Fargo Moorhead Metropolitan Area Flood Risk Management, dated July 2011 and approved in accordance with the Chief’s Report, as amended by the Supplemental Environmental Assessment, Fargo-Moorhead Metropolitan Area Flood Risk Management Project, dated September 2013 and approved by the U.S. Army Engineer, St. Paul, on September 19, 2013, and as amended by the Second Supplemental Environmental Assessment dated August 27, 2018 (2018 SEA), and the Engineering Documentation Report, Fargo-Moorhead Metropolitan Area Flood Risk Management Project, ND and MN, Modifications Through February 2019.

“Comprehensive Project Substantial Completion Date” means the date upon which the Authority’s Engineer issues a certificate that Substantial Completion of the Comprehensive Project has occurred.

“Congress” means the Congress of the United States of America.

“Contract Work Hours and Safety Standards Act” means the Contract Work Hours and Safety Standards Act (40 U.S.C. 3701 et seq.).

“Copeland (Anti-Kickback) Act” means the Copeland Act (18 U.S.C. 874 and 40 U.S.C. 3145).

“Costs” means all costs, expenses, and fees of whatever nature and kind, excluding internal costs that would have been incurred by the Utility regardless of the existence of the Comprehensive Project. The exclusion of “internal costs” does not cover or exclude those portions of salaries paid to Utility employees for the time they spent on matters related to Utility Adjustment Work to the extent allowed by or described in Section 8.02.

“Davis-Bacon Act” means the Davis-Bacon Act of 1931 (40 U.S.C. 3141 et seq.).

“Executive Director” means the Chief Administrative Officer of the Metro Flood Diversion Authority.

“Executive Order No. 11246” means Executive Order No. 11246, dated September 24, 1965.

“Fargo-Moorhead Metropolitan Area” means Fargo, ND, Moorhead, MN, and surrounding communities; it is further defined by the United States Census Bureau as comprising all of Cass County, North Dakota, and Clay County, Minnesota, which includes the cities of Dilworth, MN, West Fargo, ND, and numerous other towns and developments from which commuters travel daily for work, education, and regular activities.

“Fargo-Moorhead Metropolitan Area Southern Embankment – MFR-023, Utility Guidelines and References” or **“MFR-023”** means the Fargo-Moorhead Metropolitan Area Southern Embankment – MFR-023, Utility Guidelines and References drafted by the USACE for the relocation of components in the SEAI. MFR-023 is reproduced in **Exhibit D**. MFR-023 is excluded from Section 1.02(a).

“Federal Water Pollution Control Act Amendments of 1972” means the Federal Water Pollution Control Act Amendments of 1972 (Pub.L. 92-500, 86 Stat. 816, enacted October 18, 1972).

“Final Design Submittal” means the design submittal described in Article VII of this Agreement.

“Good Faith” means observance of reasonable commercial standards of fair dealing in a given trade of business.

“JPA” and/or **“Joint Powers Agreement”** means the **Joint Powers Agreement** dated as of June 1, 2016, by and between the **Member Entities**, as amended from time to time, which created and continued the **Authority**.

“Master Utility Relocation Agreement” means this Master Utility Relocation Agreement by and between the **Authority** and **Utility**.

“Member Entities” shall mean the City of Moorhead, the City of Fargo, Clay County, Cass County, and CCJWRD.

“Metro Flood Diversion Authority” has the same definition as “Authority.”

“Minnesota” means the State of Minnesota.

“Non-Federal Project Costs” means the local cost share of the total cost of the Comprehensive Project not provided by the U.S. Government.

“Non-Federal Sponsors” or **“NFS”** means the entities providing the **Non-Federal Project Costs** for the **Comprehensive Project**, which include the City of Fargo, the City of Moorhead, and the Authority created pursuant to the **JPA**.

“North Dakota” means the State of North Dakota.

“Parties” means the entities to this Agreement, specifically the **Authority** and the **Utility**.

“Post Construction Submittal” means the submittal described in Article VII of this Agreement.

“PPA” means the Project Partnership Agreement executed by and between the Department of the Army and the City of Fargo, North Dakota, the City of Moorhead, Minnesota and the Metro Flood Diversion Authority for construction of the Fargo-Moorhead Metropolitan Area Flood Risk Management Project, dated July 11, 2016.

“Preliminary Design Submittal” means the design submittal described in Section 7.09(a) of this Agreement.

“Prior Property Interest(s)” means any property interest(s) owned by the **Utility** that the **Authority** deems necessary to **Relocate**.

“Project” means the design, construction, finance, operations, and maintenance of the **SEAI** and the **UMA**.

“Project Property” means real property interests acquired for the **Project**, including, but not limited to, land, rights-of-way, easements, licenses, leases, the **SEAI**, and the **UMA**.

“Rehabilitation Act of 1973” means the Rehabilitation Act of 1973 (Pub.L. 93-112, 87 Stat. 355, enacted September 26, 1973).

“Relocate” and **“Relocation”** mean providing facilities for the **Utility** that are functionally equivalent to the facilities identified in **Exhibits A-1, A-2, A-3, and A-4**, which need to be relocated, adjusted, or removed from or protected at their current locations to accommodate construction of the **Project** or presence of the **SEAI**. Providing a functionally equivalent facility may include altering, relocating, ensuring access to, protection in place, protecting with dikes or mounds, lowering, or raising, or replacement and attendant demolition, abandonment, or removal of or other modification of the affected facility or any part thereof.

“RRS” means Red River Control Structure.

“Shop Drawings and Samples” means shop drawings, laying drawings, erection drawings, fabrication drawings, product information, catalog information, samples, mock-ups, plans, test procedures and results, descriptions of services, descriptions of specific means and methods and related documentation.

“Site” means the physical location at which any **Utility Adjustment Construction Work** is being done, has been done, or will be done as part of the **Utility Relocation Project**.

“Southern Embankment and Associated Infrastructure” or **“SEAI”** means the **Diversion Inlet, Wild Rice Control Structure, Red River Control Structure**, associated road raises, earthen dam embankment reaches, as well as any infrastructure or components related thereto, and as generally depicted on **Exhibit A-5**.

“Supplemental Plan” means a plan submitted for approval pursuant to Article III, in the event that **Undisclosed Prior Property Interests** are identified after one or more plans have already been approved pursuant to Article III.

“SWDCAI” means the approximately thirty (30) mile, 20,000 cubic feet per second (cfs) channel and associated features, including the outlet, river and drain inlets, road bridges, railroad bridges, aqueducts, and recreational features, to be constructed as part of the **Comprehensive Project**.

“Task Order” means a document negotiated between and agreed to and executed by the **Authority** and **Utility**, including any amendments, stating the scope of services, times for performance of services, compensation, and any other relevant information for a specific **Utility Relocation Project** or specific **Utility Adjustment Work**.

“Treatment Plant, Wells, and Associated Infrastructure” means the **Utility’s** water treatment plant and water wells located in a portion of the N½ of Section 3, Township 137, Range 49, and all pipelines, pumps, other facilities in the **UMA**.

“Undisclosed Prior Property Interests” mean **Prior Property Interests** not disclosed in Section 3.02 of this Agreement.

“United States Army Corps of Engineers” or **“USACE”** means the United States Army Corps of Engineers.

“Upstream Mitigation Area” or **“UMA”** means the area where the Metro Flood Diversion Authority is required to obtain property rights as mitigation for the temporary storage of floodwaters during Comprehensive Project operations, as shown and described in **Exhibit A-1**.

“U.S. EPA” means the United States Environmental Protection Agency.

“Utility” means Cass Rural Water Users District.

“Utility Adjustment” means each **Relocation** (temporary or permanent), abandonment, protection in place, removal (of previously abandoned **Utility** infrastructure and property as well as of newly abandoned **Utility** infrastructure and property), replacement, reinstallation, or modification of existing **Utility** infrastructure and property necessary to accommodate construction, operation, maintenance or use of the **Project**. The **Utility Adjustment Work** for each crossing of the **Project** right-of-way by **Utility** infrastructure and property that crosses the **Project** right-of-way more than once will be considered a separate **Utility Adjustment**. For any **Utility** infrastructure and property installed longitudinally within the **Project** right-of-way, the **Utility Adjustment Work** for each continuous segment of that **Utility** infrastructure and property located within the **Project** right-of-way will be considered a separate **Utility Adjustment**.

“Utility Adjustment Completion” means that the **Utility Adjustment Construction Work** for a **Utility Adjustment** is sufficiently complete in the opinion of the **Authority** and the **Utility**.

“Utility Adjustment Construction Work” means all **Utility Adjustment Work** related to construction.

“Utility Adjustment Design Work” means all **Utility Adjustment Work** related to design of the **Relocations**.

“Utility Adjustment Work” means all efforts and **Costs** necessary to accomplish the required **Utility Adjustments**, including all coordination, **Utility Adjustment Design Work**, design review, permitting, **Utility Adjustment Construction Work**, inspection and maintenance of records, whether provided by **Metro Flood Diversion Authority** or by the **Utility**.

“Utility Completion Acceptance” means agreement by the **Authority** and the **Utility** that the responsible party has completed its portion of the **Utility Adjustment Construction Work** in accordance with the **Final Design Submittal** and **Task Order** and approved changes during construction for a **Utility Adjustment**.

“Utility Relocation Project” means **Relocating** any **Prior Property Interests** and any **Undisclosed Prior Property Interests** and other work reasonably associated with such **Relocations**.

“WRRS” means Wild Rice River Control Structure.

Section 1.02 TERMS GENERALLY. The definition of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine, and neuter forms. The words “include,” “includes,” and “including” shall be deemed to be followed by the phrase “without limitation.” The word “will” shall be construed to have the same meaning and effect as the word “shall.” Unless the context requires otherwise (a) any definition of or reference to any agreement, instrument, or other document herein shall be construed as referring to such agreement, instrument, or other document as from time to time amended, supplemented, or otherwise modified (subject to any restrictions on such amendments, supplements, or modifications set forth herein), (b) any reference herein to any person shall be construed to include any person’s permitted successors and assigns, (c) the words “herein,” “hereof,” and “hereunder,” and words of similar import, shall be construed to refer to this Agreement in its entirety and not to any particular provision hereof, and (d) all references herein to articles, sections, exhibits, and schedules shall be construed to refer to articles and sections of, and exhibits and schedules to, this Agreement.

Section 1.03 SURVIVAL OF TERMS. The terms of this Agreement shall survive through **Comprehensive Project Substantial Completion** and for successive ten-year terms until one of the **Parties** hereto terminates this Agreement as provided for herein. The provisions of Sections 3.06 (“Utility Property Interests”), 3.07 (“Treatment Plant Grounds – Future Use”), 13.24 (“Indemnification”), and 13.25 (“Access”), and Article VIII (“Payment of Costs”) and Article IX (“Future Rights and Responsibilities”) shall survive the termination of this Agreement and bind the Parties for as long as the **Utility** has property on, over, or across the **Project Property**.

ARTICLE II. PURPOSE OF MASTER UTILITY RELOCATION AGREEMENT

Section 2.01 PURPOSE. The purpose of this Agreement is to ensure a coordinated, time-efficient, and cost-effective process for completing the **Utility Relocation Project**, for coordinating operations and maintenance activities after completion of the **Utility Relocation Project**, and for the development of individual **Task Orders** issued in conjunction with, and subject to, the terms and conditions of this Agreement.

Section 2.02 COORDINATION BETWEEN ENGINEERS. The **Authority** and **Utility** are likely to employ the use of professional engineers in the analysis, design, and completion of designs, plans, and completion of work. Engineers employed by the **Parties** shall maintain open lines of communication, coordinate, and collaborate with engineers employed by other parties described herein.

Section 2.03 COORDINATION WITH USACE. **Utility** shall not communicate directly with the **USACE** regarding any aspect of the **Comprehensive Project** or any other subject-matter referenced in, related to, or arising from this Agreement, without the prior written authorization of the **Authority**, except as required by Section 9.01(a) of this Agreement. The **Authority** shall keep the **Utility** reasonably informed about its communications with the **USACE** regarding **Relocation** of the **Utility’s** infrastructure and property.

ARTICLE III. PROPERTY INTERESTS

Section 3.01 INTENT. It is the intent of the **Parties** hereto that all **Prior Property Interests** shall be identified herein. Specifically, **Prior Property Interests** include pipelines, pumps, wells, and a water treatment plant, and the facilities and equipment used to operate the foregoing. The location of the **Prior Property Interests** are generally depicted on the lavender-colored portion of **Exhibit A-1** and described in **Exhibits A-2, A-3, and A-4**.

Section 3.02 PRIOR PROPERTY INTERESTS. The **Prior Property Interests** to be **Relocated** pursuant to the terms and conditions of this Agreement include, but are not limited to, the **Prior Property Interests** documented in **Exhibit A**.

Section 3.03 UNDISCLOSED PRIOR PROPERTY INTERESTS. If the **Authority**, for any reason, determines **Undisclosed Prior Property Interests** should be **Relocated**, such **Relocation** shall occur pursuant to the terms of this Agreement.

Section 3.04 DISCOVERY OF UNDISCLOSED PRIOR PROPERTY INTERESTS. **Undisclosed Prior Property Interests** identified for **Relocation** prior to request for submission of the first submittal required by Article VII shall be **Relocated** through the same process as if the **Undisclosed Prior Property Interests** were disclosed herein. A separate accounting and recording of costs shall be maintained for **Undisclosed Prior Property Interests** and **Prior Property Interests** disclosed herein. Should **Undisclosed Prior Property Interests** be identified after the submission of one or more submittals pursuant to Article VII the **Utility** shall, within sixty (60) days of written notification of identifying **Undisclosed Prior Property Interests** to be **Relocated**, submit a **Supplemental Plan** meeting the requirements of Article VII, for the **Relocation** of **Undisclosed Prior Property Interests**. Each Party shall have the same rights and responsibilities as they would have if the **Supplemental Plan** were included in previously approved plans, as detailed in Article VII, unless explicitly provided otherwise herein. The **Utility** shall endeavor to submit a **Supplemental Plan** for approval within sixty (60) days. Should **Utility** fail to submit a **Supplemental Plan** by the applicable deadline, and such failure results in the unreasonable delay of **Utility Adjustment Construction Work**, the **Parties** shall follow the dispute resolution process pursuant to Article XI of this Agreement.

Section 3.05 COOPERATION IN PLATTING. The **Authority** intends to plat right-of-way acquired for **Project** purposes. **Utility** shall reasonably cooperate with said platting efforts if requested to do so by the **Authority**.

Section 3.06 UTILITY PROPERTY INTERESTS. The **Utility** owns fee title, easements, and rights-of-way in the **Project Property**. The fee title, easements, and rights-of-way continue in force and effect after the **Effective Date**, except as explicitly provided otherwise by written agreement, though the **Utility's** exercise of its rights under these property interests is subject to Article IX.

Section 3.07 TREATMENT PLANT GROUNDS – FUTURE USE. **Utility** shall not construct any structures within the ring-dike constructed to protect the **Treatment Plant, Wells, and Associated Infrastructure** for residential purposes or any other non-**Utility** purpose. If the **Utility** stops using the area within the ring-dike for **Utility** purposes, the **Authority** shall purchase, at fair

market value based on a mutually agreed to appraisal, all the **Utility's** property interests in that area.

ARTICLE IV. RESPONSIBILITY FOR UNDISCLOSED PRIOR PROPERTY INTERESTS

Section 4.01 UTILITY RESPONSIBILITY. The **Utility** shall bear the costs of **Relocating** all **Undisclosed Prior Property Interests**.

Section 4.02 REQUESTS FOR RELIEF. Within thirty (30) calendar days of **Utility Adjustment Completion**, the **Utility** may file a written request for relief with the **Authority** to request payment or partial payment for costs of the **Relocating Undisclosed Prior Property Interests**. All requests for relief shall include an itemized list of costs, the total amount requested, and justification for **Utility's** failure to identify the **Undisclosed Prior Property Interest**. Requests for relief may be approved, approved in part and denied in part, or denied.

ARTICLE V. RIGHT OF SITE ACCESS

Section 5.01 RIGHT OF SITE ACCESS. To ensure the **Authority** is able to proceed with construction of the **Project** in a timely and efficient manner, as well as to properly monitor and ensure completion of the **Utility Relocation Project**, and to ensure the **Utility**, until the **Utility Relocation Project** is complete, is able to exercise its rights and obligations, the **Authority** and the **Utility** shall have a right-of-way in, on, over, and across any and all **Sites** as well as the right to access, enter, and inspect any **Site**.

Section 5.02 NON-REVOCABLE RIGHT OF THE METRO FLOOD DIVERSION AUTHORITY. Nothing herein shall be construed as limiting or providing for the termination of the rights described herein as it pertains to the **Authority**.

Section 5.03 NO NOTICE REQUIRED. No notice, unless otherwise specified in this Agreement, shall be required for the **Authority** or the **Utility** to exercise the rights described in this Article.

Section 5.04 DELAY FOR SAFETY PURPOSES. If the **Authority** or **Utility** attempts to exercise the rights described in this Article at a **Site** where **Utility Adjustment Relocation Work** or other work relating to the **Project** is ongoing, but doing so would pose a safety hazard, the party attempting to access the **Site** shall be kept from accessing, entering, or inspecting the **Site** in question only for as long as is reasonably required to make the **Site** safe for access, entry, and inspection, as determined by the **Authority** or **Utility**.

Section 5.05 FAILURE TO ALLOW ACCESS, ENTRY, AND INSPECTION. Should the **Authority** be denied the access described in this Article for more than twenty-four (24) hours, other than when the **Authority** deems such a delay appropriate under Section 5.04, and such denial results in the unreasonable delay of **Utility Adjustment Construction Work**, the **Parties** shall follow the dispute resolution process pursuant to Article XI of this Agreement.

ARTICLE VI. REQUIRED REPORTS

Section 6.01 REQUIRED REPORTS. The **Utility** shall provide any reports, analysis, plans, and cost estimates of a technical, engineering, or construction nature identified in a **Task Order** and in **Utility's** possession and pertaining to the **Utility** infrastructure, the **Utility Relocation Project**, or the **Project**, as requested by the **Authority**.

Section 6.02 DEADLINES. All information requested by the **Authority** under Section 6.01 shall be provided before the expiration of a reasonable deadline determined by the **Authority** after consultation with the **Utility** and/or identified in a **Task Order**.

Section 6.03 FAILURE TO TIMELY PRODUCE. Should the **Utility** fail to provide the information requested of it under Section 6.01, and such failure results in the unreasonable delay of **Utility Adjustment Construction Work**, the **Parties** shall follow the dispute resolution process pursuant to Article XI of this Agreement.

Section 6.04 APPEAL OF FEES ASSESSED. Within thirty (30) days of submitting requested information after the due date, the **Utility** may appeal the assessment of fees provided for in Section 6.03, by submitting a written appeal to the **Authority**. Within thirty (30) days of submission of a written appeal of assessed fees explaining the reasons for failure and other mitigating factors which the board should consider when deciding whether to waive the fee, the **Authority** shall, at its own discretion, approve or deny the appeal of assessed fees.

ARTICLE VII. PERFORMANCE AND CONSTRUCTION

Section 7.01 DIVISION OF WORK. Some of the **Utility Adjustment Work** is to be performed solely by the **Utility**, for which the **Authority** shall pay the **Utility** a lump sum. This work is described in **Exhibit A-2**. The remaining **Utility Adjustment Work** is to be performed in one of the following three ways: (a) by the **Utility** subject to a **Task Order**, with the **Costs** expended by the **Utility** to perform the work to be reimbursed by the **Authority** in accordance with the procedures set forth in Article VIII; (b) jointly by the **Utility** and the **Authority** and subject to a **Task Order**, with the **Costs** expended by the **Utility** to perform the work to be reimbursed by the **Authority** in accordance with the procedures set forth in Article VIII; and (c) solely by the **Authority** subject to provisions in Section 7.09. This remaining **Utility Adjustment Work** is described in **Exhibits A-3** and **A-4**.

Section 7.02 EXEMPTION FROM ARTICLE SEVEN. The **Utility Adjustment Work** to be performed solely by the **Utility** and for which the **Authority** shall pay the **Utility** a lump sum is not subject to any of the following provisions and sections in this Article VII, unless specifically stated otherwise. It is the intent of the **Parties** that the **Utility** is to have sole responsibility to design, perform, and complete this work and that it has authority to do so without input or direction or supervision from the **Authority**.

Section 7.03 UTILITY ADJUSTMENT DESIGN WORK. If required by a **Task Order**, the **Utility** shall be responsible for the completion of all **Utility Adjustment Design Work** following issuance of the **Task Order**. Any **Utility Adjustment Design Work** associated with such **Task Order** shall be completed prior to a reasonable deadline identified in the applicable **Task Order**.

Relocation of the Treatment Plant, Wells, and Associated Infrastructure shall be as described in **Exhibits A-2 and A-3 and Exhibit E**.

Section 7.04 UTILITY ADJUSTMENT CONSTRUCTION WORK. All **Utility Adjustment Construction Work** shall be completed prior to a reasonable deadline set by the **Task Order** or as otherwise agreed to by the **Parties**.

Section 7.05 ADDITIONAL RIGHT-OF-WAY AND OTHER PROPERTY INTERESTS OUTSIDE THE PROJECT PROPERTY. Should the **Utility** require additional right-of-way to complete the **Utility Relocation Project**, including that for which the **Utility** receives lump sum from the **Authority**, the **Utility** shall notify the **Authority** of said needs as soon as reasonably possible after discovering the need. The **Authority** shall use its **Best Efforts** to acquire the necessary right-of-way but shall not be responsible for any damages related to time delays associated with the acquisition of additional right-of-way needed to accommodate **Betterments**. In the event the **Utility Relocation Project** directly or indirectly causes the **Utility** to acquire additional property interests, the **Utility** shall consult with the **Authority** prior to determining the price at which they will offer to purchase said property interests. The **Utility** will only offer to purchase additional property interests at a price consented to by the **Authority**.

Section 7.06 ADDITIONAL RIGHT-OF-WAY WITHIN THE PROJECT PROPERTY. Should the **Authority** deem it necessary for the **Utility Relocation Project**, the **Authority** shall grant the **Utility** a right-of-way below, above, and across the **Project Property** so the **Utility** can carry out **Utility Adjustment Work**, including that for which the **Utility** receives a lump sum from the **Authority**, and to properly access, operate, and maintain its facilities.

Section 7.07 TECHNICAL SPECIFICATIONS. The **Utility Relocation Project** must be designed in accordance with the **Fargo-Moorhead Metropolitan (“FMM”) Area Southern Embankment – MFR-023, Utility Guidelines for the Southern Embankment and References (“MFR-023”)** which is hereby incorporated by reference and attached as **Exhibit D** to this Agreement. The requirements set forth in **MFR-023** shall only apply to **Utility Adjustment Work** within the **SEAI**. All **Utility Adjustment Work** in the **UMA** shall be conducted in accordance with Section 7.09 of this Agreement

Section 7.08 COORDINATION FOR UTILITY ADJUSTMENT IN THE UMA. All **Utility Adjustment Work** in the **UMA** shall be designed, constructed, and completed in accordance with federal, state, and local regulations.

Section 7.09 PROPOSALS AND PLANS. Following issuance of a **Task Order** requiring work to be completed by the **Utility** or following the initiation of **Design Work** by the **Authority**, the party responsible for design and construction (the “**Responsible Party**”) shall submit to the other party (the “**Reviewing Party**”), for each **Utility Adjustment**, a **Preliminary Design Submittal**, a **Final Design Submittal**, and a **Post Construction Submittal** for review, comment, and approval by the **Reviewing Party** as defined and at the specific timelines specified in **MFR-023**, and further:

- a. Preliminary Design Submittal. The **Responsible Party** shall complete a **Preliminary Design Submittal** to a minimum of approximately thirty-five percent (35%) level of design completion and define the basis of design for all aspects of each **Utility Adjustment** of the **Utility Relocation Project** and submit such

Preliminary Design Submittal to the **Reviewing Party**. The **Preliminary Design Submittal** shall include calculations demonstrating that the proposed work meets and satisfies the technical requirements contained herein. The **Preliminary Design Submittal** shall also provide sufficient detail to demonstrate compliance with all design and construction requirements as described in **MFR-023**. The **Preliminary Design Submittal** shall include, at a minimum, sketches and/or relocation plans, text defining the general proposed plan, and a scoping estimate of construction costs.

- b. **Final Design Submittal**. The **Responsible Party** shall complete a **Final Design Submittal** including, but not limited to, fully developed design and relocation plan, drawings, specifications, and all other supporting information, design documentation, etc., and shall submit such **Final Design Submittal** to the **Reviewing Party**. The **Final Design Submittal** shall also contain complete applicable technical specifications. In addition to the aforementioned information, the **Final Design Submittal** shall include fully developed design and relocation plans, drawings, specifications, design documentation including calculations for the expected volume of grout needed to fill the annular spaces and all other supporting information, design documentation, and a final estimate of construction costs.
- c. **Task Orders**. **Utility** shall use the form attached hereto as **Exhibit F** for **Task Orders**.
- d. **Post Construction Submittal**. The **Responsible Party** shall complete and provide a **Post Construction Submittal**. **Post Construction Submittals** shall be conducted in accordance with the **MFR-023** for **Utility Adjustment Construction Work** done within the **SEAI**. The **Post Construction Submittal** shall include, but is not limited to:
 1. Acceptance testing documentation and inspection records, including standard proctor and field moisture density results.
 2. Pipe inspection schedule and maintenance plan for future recurring inspections.
 3. Post-Construction Report that includes the amount of grout used for filling the annular space.
 4. As-Built Drawings: Submit As-Built drawings for the complete utility line relocation showing complete detail, including trench dimensions, pipe profile, pipe alignment, valve locations, connection box locations, manholes and all other pertinent as-built information.
 5. As-Built Surveys.
- e. **Review**. The **Reviewing Party** shall complete a full review of each submittal and provide comments and/or approval

within twenty (20) **Business Days** of the date on which the **Reviewing Party** receives a full and complete submittal. Should the **Reviewing Party** reject a submittal, and the **Responsible Party** resubmits a previously submitted submittal, the **Reviewing Party** shall review the submittal and respond within ten (10) **Business Days**. The **Reviewing Party's** review of the re-submittal shall be limited to the portions of the initial submittal deemed insufficient as well as any other portions of the submittal which have been amended or added since the initial submission. In the event that the **Reviewing Party** does not provide comments within the period prescribed by this Agreement, the **Responsible Party** shall provide written notice of the failure to respond. If the **Reviewing Party** does not respond within five (5) **Business Days** of receiving written notification, the submittal shall be deemed approved.

Section 7.10 REQUIREMENT OF APPROVAL. No **Utility Adjustment Construction Work** may begin until the **Reviewing Party** approves the **Final Design Submittal**.

Section 7.11 SHOP DRAWING AND SAMPLE SUBMITTALS. The **Responsible Party** shall submit to the **Reviewing Party** **Shop Drawings and Samples** that detail the **Utility Adjustment Construction Work** to be performed by the **Responsible Party** on the **Utility Relocation Project** within the **Project Property**. The **Reviewing Party** shall review the **Shop Drawings and Samples** in accordance with the procedure and timelines in Section 7.09 for the review of submittals.

Section 7.12 ADJUSTMENTS TO THE PROJECT. Should the planned route or location of the **SEAI** change in a material manner, the **Utility** and the **Authority** shall immediately interface to adjust plans for the **Utility Relocation Project** as necessary. All **Costs** incurred by the **Utility** due to any such change, shall be reviewed and reimbursed by the **Authority** in accordance with and subject to the restrictions in Article VIII of this Agreement.

Section 7.13 ADJUSTMENTS TO THE UTILITY ADJUSTMENT WORK. Any deviations from the **Final Design Submittal** during construction that materially affect the performance or construction of the **Utility Adjustment Work** will be subject to written approval by both **Parties**. The **Responsible Party** will submit the proposed deviations to the **Reviewing Party** for review in accordance with procedure and timelines in Section 7.09. **Utility** property or infrastructure not required to be **Relocated** prior to the deviation from the **Final Design Submittal**, which need to be **Relocated** after deviation from the **Final Design Submittal** shall be treated as **Undisclosed Prior Property Interests** for purposes of assigning responsibility for **Costs**, provided that the deviation is solely due to the fault or oversight of the **Utility**.

Section 7.14 INSPECTION. The **Utility** shall be responsible for inspection of all **Utility Adjustment Construction Work** it has constructed. The **Utility** and **Authority** shall be jointly responsible for inspection of all **Utility Adjustment Construction Work** they have jointly constructed. The **Authority** shall be responsible for inspection of all **Utility Adjustment Construction Work** it has constructed.

Section 7.15 UTILITY COMPLETION. The **Responsible Party** shall provide the **Reviewing Party** with at least sixty (60) calendar days prior written notice of the anticipated date of **Utility Adjustment Completion**. Within thirty (30) **Business Days** of the anticipated date for

Utility Adjustment Completion, the **Utility** and the **Authority** will schedule a final inspection, whereby the **Responsible Party** shall be responsible for holding an inspection of **Utility Adjustment Construction Work** to determine whether the **Utility Adjustment** meets the **Final Design Submittal** and any material changes or modifications made per Sections 7.12 and 7.13. If the **Reviewing Party** finds the construction is not in conformance with the **Final Design Submittal** or any approved material changes or modifications, the **Reviewing Party** will notify the **Responsible Party** of such fact within five (5) **Business Days** of the inspection and the **Responsible Party** will correct such nonconformance in the construction work and re-notify for inspection. Once the **Utility Adjustment** has reached **Utility Adjustment Completion**, the **Reviewing Party** will provide a certificate of **Utility Completion Acceptance**.

Section 7.16 THIRD PARTY CONTRACTORS. Should the **Utility** engage any third-party contractor to fulfill, contribute to, or otherwise act in regard to an obligation assigned to **Utility** in this Agreement, the **Utility** shall abide by all restrictions and requirements provided for in Article 13 and as provided in the federal lobbying restrictions which is attached as **Exhibit C** to this Agreement.

Section 7.17 INVOICING REQUIREMENTS. All invoices provided to the **Authority** pursuant to or arising from this Agreement shall comply with invoicing requirements provided in the **Authority** invoicing requirements which is as attached as **Exhibit B** to this Agreement.

Section 7.18 WARRANTY. The **Authority** warrants that: (1) material it will use to complete **Utility Adjustment Construction Work** and **Utility Relocation Project** will meet the specifications approved with the **Final Design Submittal** described in Section 7.09(b); (2) the material it will use and the workmanship it will provide for the **Utility Adjustment Construction Work** and **Utility Relocation Project** will be free from material defects causing a measurable change in the functionality of the **Utility's** facilities; and (3) the quality of its **Utility Adjustment Construction Work** and **Utility Relocation Project** shall be completed in a diligent and reasonably skillful workmanlike manner. These warranties continue for a period of thirty-six (36) months from the **Utility Completion Acceptance** of each **Utility Adjustment**. The **Authority** shall promptly remedy at its expense any violation of the warranties described above and any damages or injuries caused in satisfying the warranties, compensate the **Utility** for any damages or injuries the **Utility** incurs due to a warranty violation, and indemnify and hold harmless the **Utility** for any such damages or injuries.

ARTICLE VIII. PAYMENT OF COSTS

Section 8.01 NECESSITY TO KEEP COSTS LOW. The **Utility** and the **Authority** each recognize the need to minimize the cost of the **Utility Relocation Project**, while seeking to maintain the now existing quality of service to the **Utility's** customers. The **Utility** and the **Authority** shall be diligent in keeping costs as low as reasonably possible.

Section 8.02 PAYMENT OF COSTS.

- a. The **Authority** shall pay all **Costs** it incurs regarding the **Project**, **Utility Adjustment**, **Utility Adjustment Work**, and the **Utility Relocation Project**.

- b. The **Authority** shall reimburse the **Utility** all reasonable **Costs** the **Utility** has incurred since January 1, 2021, including those incurred in reviewing and negotiating this Agreement, and all reasonable **Costs** the **Utility** will incur in carrying out, dealing with, and responding to matters directly related to the **Utility Adjustment, Utility Adjustment Work, and Utility Relocation Project**. **Costs** incurred by the **Utility** and payable or reimbursable by the **Authority** include those incurred for right-of-way acquisition, design work, engineering, construction, inspection and monitoring (including inspecting and monitoring **Utility Adjustment, Utility Adjustment Work, and the Utility Relocation Project**), legal advice, administration, and insurance that would not have been necessary, obtained, or incurred absent the **Project**. The **Utility's** field personnel shall be billed at a rate of \$75 per hour and its administrator and supervisor time shall be billed at \$90 per hour; both sums are inclusive of wages, overhead, mileage, etc. No additional sums or fees shall be billed for field personnel or administrator, supervisor time, or otherwise, except as specifically provided otherwise herein or pursuant to a **Task Order**.
- c. For performing the work associated with the **Utility Adjustment Work** described in **Exhibit A-2**, the **Utility** shall be paid by the **Authority** via a lump sum payment no later than January 31, 2023. The amount of the payment shall be \$4,163,320.00, which is the amount on the "Engineer's Opinion of Probable Cost" in **Exhibit E**.
- d. The **Utility's** reasonable **Costs** associated with the **Utility Adjustment Work** described in **Exhibit A-3** shall be reimbursed by the **Authority** in the manner required by this Article.

Section 8.03 REPORTING OF COSTS. **Utility** shall submit to the **Authority** for review detailed, itemized invoices consistent with the requirements of **Exhibit B**, detailing costs and expenses allowed under Section 8.02(b) and (d).

Section 8.04 REJECTION OF COSTS. The **Authority** may reject reported costs and expenses submitted pursuant to Section 8.02(b) and (d) to the extent any specific costs or expenses are unreasonable. Notice of rejection of any costs or expenses must be provided to the **Utility** in writing that includes an explanation for the rejection.

Section 8.05 APPEAL OF A DECISION TO REJECT COSTS. The **Utility** may appeal a decision rejecting any cost by providing the **Authority** written notice of the appeal and justification for its expenses within twenty (20) days of its receipt of the rejection notice. Within twenty (20) days of receiving the notice of appeal, the **Authority** shall issue a final determination.

Section 8.06 PAYMENT OF ACCEPTED COSTS. Within thirty (30) days of the determination of the **Authority's** full liability under either an undisputed invoice or a disputed invoice, the **Authority** shall issue a single, full payment of the amount owed to the **Utility** pursuant to the invoice in question. Any failure to make payment owed to the **Utility** when due under this Agreement shall have interest added to the amount owed at the annual rate of six percent (6%). Interest shall not be paid for any time period during which the reasonableness of a **Cost** is dispute.

Section 8.07 BETTERMENTS. In no situation shall any **Party** other than the **Utility** be responsible for costs and expenses of **Betterments** installed during the **Utility Relocation Project**.

ARTICLE IX. FUTURE RIGHTS AND RESPONSIBILITIES

Section 9.01 USE WITHIN THE PROJECT PROPERTY. The **Utility's** use of property rights it may hold within the **Project Property** is subject to the following restrictions and obligations:

- a. Coordination with USACE. Notwithstanding anything in Section 2.03, if the **Utility** deems it necessary to perform any work on **Utility** property located within or on the **Project Property**, beyond operation and maintenance, it shall first consult with the **USACE**.
- b. Maintenance of Utility Property. The **Utility** shall maintain **Utility** property located within the **Project Property**. The **Authority** and **Utility** shall prepare an operation and maintenance agreement that sets forth the roles and responsibility of each **Party**. The **Utility** shall prepare a maintenance and abandonment plan for all utilities located within the **SEAI** and/or **UMA**. All maintenance of the **Utility** property and associated infrastructure shall be conducted in accordance with **MFR-023**.
- c. Maintenance – Notice. Following completion of the **Utility Relocation Project**, the **Utility** shall provide the **Authority** with seven (7) days' written notice of any maintenance it intends to do within the **Project Property**.
- d. Approval for Ground Disturbing Maintenance or Repairs. The **Utility** must submit and obtain the **Authority's** approval for any and all plans for maintenance or repair that requires the ground within the **Project Property** to be disturbed. Approval shall not be unreasonably withheld by the **Authority**. To the extent the **Utility** and the **Authority** agree in writing, certain ground disturbing maintenance may be exempted from the approval requirements of this Section.
- e. Clean Up. The **Utility** shall ensure that after any maintenance or repairs to **Utility** property, the ground within the **Project Property** is returned to the state in which it existed prior to the maintenance or repair that caused the ground within the **Project Property** to be disturbed.
- f. Metro Flood Diversion Authority Access. In the event that **Utility** property malfunctions, destructs, or otherwise begins to cause on-going damage to the **SEAI** and/or the **UMA**, the **Authority** shall have the authority to access the damage-causing **Utility** property within the **Project Property** and take any action necessary to stop on-going damage to the **SEAI**. Before exercising this right, the **Authority** shall, if time and circumstances allow, attempt to notify the **Utility** of the problem and coordinate a response with the **Utility**. If the **Authority** exercises the access right given in this Section, it shall promptly submit to the **Utility** a report explaining the action taken.
- g. Access. The **Authority** shall have unrestricted vehicular and walking access in, over, and across the **Project Property**.

- h. Damage to the SEAI or UMA. Should **Utility** property malfunction, deconstruct, or otherwise cause damage to the **SEAI** and/or the **UMA**, the **Utility** shall take immediate action to stop on-going damage to the **SEAI** and/or the **UMA** and will consult with the **Authority** on how to repair all damage that occurs.
- i. Abandonment. Should the **Utility** abandon or remove a utility line within the **Project Property** and fail to replace the line within three (3) years of removal, the **Utility** shall forfeit and extinguish said property interest. This provision does not apply to any utility line within or under the dikes protecting the **Utility's** treatment plant or to any utility line connecting the treatment plant to any of the **Utility's** wells.

Section 9.02 USE OF EXISTING EASEMENT. In the event **Utility** property is **Relocated** within a currently existing **Utility** easement or right-of-way located within **Project Property**, the **Utility** shall be bound to exercise its rights under said easement, subject to the requirements and obligations contained in this Article. The requirements of this Article shall survive so long as the **Utility** has property located within the **Project Property**.

Section 9.03 RECORD KEEPING. The **Utility** shall maintain or cause to be maintained (by way of contract and enforcement of such contract) a complete set of records detailing all costs it incurs in the **Utility Relocation Project**, in accordance with the recordkeeping and audit requirements of this Agreement.

Section 9.04 FUTURE PERMITS. Should the **Utility** file a formal permit application with the **Authority**, pertaining to a **Utility** line **Relocated** pursuant to this Agreement, with the **Authority** after the **Effective Date**, the **Authority** shall grant, at no cost to the **Utility**, the permit application so long as the permit application meets all reasonable requirements listed in the instructions to said permit application and the proposal would not unreasonably risk harm to the **SEAI** or the **UMA** or interfere with other facilities already contained within the **Project Property**, as determined by the **Authority**. In addition to the permit application granted by the **Authority**, **Utility** shall be responsible for obtaining all other permits necessary and required by the **USACE**. Should an existing **Utility** line located in the **Project Property** be modified in the future, the **Authority**, in its sole discretion, shall determine whether the modification is allowable under a previously existing permit or whether the modification is significant enough in its nature or effect to require the **Utility** to apply for a new permit, which the **Authority** shall grant so long as the permit application meets all reasonable requirements listed in the instructions to said permit application and the modification or addition would not risk harm to the **SEAI** or the **UMA** or interfere with other facilities already contained within the **Project Property**, as determined by the **Authority**.

Section 9.05 DAMAGE TO THE UTILITY. Should any part of the **Project** malfunction, deconstruct, or otherwise cause damage to property owned by the **Utility**, the **Authority** shall take reasonable action to stop on-going damage to the **Utility's** property as soon as reasonably possible and, after consulting with the **Utility**, repair all damage resulting from said malfunction or deconstruction or other related cause.

Section 9.06 LOCATION OF BOUNDARIES. Following completion of the **Utility Relocation Project**, the **Authority** shall provide to the **Utility** information sufficient to allow the **Utility** to readily identify the boundaries of the **Project Property**, the **UMA**, and the **SEAI**.

Section 9.07 MAINTENANCE. Notwithstanding anything to the contrary in this Agreement, the **Authority** shall be responsible for inspecting, maintaining, and repairing any dike or mound constructed to protect the **Treatment Plant, Wells, and Associated Infrastructure**, so long as the need for maintenance or repair is not a direct result of **Utility's** actions or failure to act. **Utility's** "actions or failure to act" do not include normal wear and tear. The **Authority's** duties under this section include grass mowing and weed control at least once per calendar year.

Section 9.08 OWNERSHIP. The **Authority** shall use its **Best Efforts** to acquire fee title to any dike or mound (including the land under such dike or mound) constructed for the specific purpose of protecting the **Utility's** treatment plant and wells. If the **Authority** acquires such title, the same shall be transferred to **Utility**.

Section 9.09 EASEMENT. Water may accumulate inside any dikes constructed to protect the **Utility's** treatment plant and wells. To remove such water, the **Utility** has the right to move it under, through, or over the dike and to release the water onto the **UMA**.

ARTICLE X. DISPUTES WITH CONTRACTORS AND OTHER THIRD PARTIES

Section 10.01 COORDINATION. The **Parties** shall coordinate with respect to any dispute with third parties. Such coordination shall include any potential or ongoing litigation.

ARTICLE XI. DISPUTES AMONG THE UTILITY AND THE METRO FLOOD DIVERSION AUTHORITY

Section 11.01 INTENT AND PROCEDURE. The **Utility** and the **Authority** shall use their **Best Efforts** to ensure that the provisions of this Agreement are fulfilled. The **Parties** agree to act in **Good Faith** to undertake resolution of disputes in an equitable and timely manner and in accordance with the provisions of this Agreement. If disputes cannot be resolved informally by the **Parties** or under other, situation-specific dispute resolution mechanisms contained herein, the following procedure shall be used.

Section 11.02 PROCEDURE TO COMMENCE DISPUTE RESOLUTION PROCESS. The **Parties** agree that in the event of an alleged breach of any of the terms of this Agreement, the **Party** making such allegation shall, except as explicitly provided otherwise herein, provide thirty (30) days written notice to the other **Party** of the alleged breach. The written notice shall contain a reasonable description of the underlying facts and an explanation of why the **Party** providing notice believes those facts constitute a breach. Following transmittal of the notice, the **Party** alleged to have caused the breach shall be given a reasonable time (as provided in Section 11.03 of this Agreement), not less than ten (10) days to correct or remedy the alleged breach, to meet and confer with the other **Party**, and/or to participate in mediation with the other **Party** prior to initiating any litigation, arbitration, or any administrative proceeding, unless the alleged breach has the potential to cause immediate and irreparable harm, in which case the **Party** alleging the harm may initiate litigation prior to complying with the provisions of this Section 11.02 while, at the same time, following the procedures set forth in Sections 11.01, 11.02, and 13.01 of this Agreement as applicable.

Section 11.03 TIME TO CORRECT. The reasonableness of the time afforded to the **Party** alleged to have breached this Agreement pursuant to Section 11.02 of this Agreement to cure the alleged breach and engage in dispute resolution processes shall be determined by considering the circumstances, including the potential harm, injury, or damages that are or may result from the alleged breach and the extent to which the harm, injury, or damages may worsen with the passage of time.

Section 11.04 MEDIATION. If there is a failure between the **Parties** to resolve a dispute on their own, the **Parties** shall first attempt to mediate the dispute. The **Parties** shall agree upon a single mediator, or, if they cannot agree on a mediator, the **Parties** shall select a mediator from the North Dakota Statewide ADR Neutral Roster of Mediators maintained by the State Court Administrator by alternately striking names until one remains. Mediators who focus primarily on family law matters shall not be included on the initial list of mediators. The **Metro Flood Diversion Authority** shall strike the first name, followed by the **Utility**, until one name remains.

Section 11.05 LITIGATION IF DISPUTE NOT RESOLVED. If the dispute is not resolved within thirty (30) days after the end of mediation proceedings, the **Parties** may litigate the matter.

Section 11.06 LEGAL FEES. Each **Party** will be responsible for their own attorney's fees in connection with a dispute under this Agreement.

Section 11.07 WAIVER OF JURY TRIAL. THE **PARTIES** HEREBY KNOWINGLY, IRREVOCABLY, VOLUNTARILY, AND INTENTIONALLY WAIVE ANY RIGHTS THAT ANY MAY HAVE TO A TRIAL BY JURY WITH RESPECT TO ANY ACTION, PROCEEDING, COUNTERCLAIM, OR DEFENSE BASED ON THIS AGREEMENT, OR ARISING OUT OF, UNDER, OR IN ANY CONNECTION WITH THIS AGREEMENT, OR WITH RESPECT TO ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER ORAL OR WRITTEN), OR ACTIONS OF ANY PARTY HERETO RELATING TO THIS AGREEMENT. THIS PROVISION IS A MATERIAL INDUCEMENT FOR ALL MEMBER ENTITIES ENTERING INTO THIS AGREEMENT. THIS PROVISION APPLIES ONLY TO SUITS BETWEEN THE **UTILITY** AND THE **AUTHORITY** ARISING OUT OF OR RELATED TO THIS AGREEMENT AND DOES NOT APPLY TO THIRD-PARTY CLAIMS OR SUITS BY OR ON BEHALF OF THE **PARTIES** FOR **PROJECT PROPERTY** ACQUISITION AND/OR CONSTRUCTION CONTRACT CLAIMS AND DEFENSES.

ARTICLE XII. USE OF EMINENT DOMAIN

Section 12.01 EMINENT DOMAIN. Nothing in this Agreement shall be construed as limiting the **Authority's**, or its **Member Entities'**, or the **Utility's** ability to exercise its powers of eminent domain.

Section 12.02 NULLIFICATION BY EMINENT DOMAIN. Should the **Authority** initiate eminent domain proceedings to accomplish the goals of the **Utility Relocation Project**, the terms of the Agreement shall be null and void at the option of the **Authority**. However, the **Authority** will initiate eminent domain proceedings against the **Utility** only if: (1) the **Utility** has failed to fulfill a duty under this Agreement and that failure has or is likely to cause material and substantial disruption to timely completion of the design or construction of the **SEAI**; and (2) the **Authority** has given the **Utility** at least fourteen (14) days written notice of its intent to initiate eminent

domain proceedings and the **Utility** has failed within those fourteen (14) days to fulfill its duty or to make substantial progress in doing so as reasonably determined by the **Authority**.

Section 12.03 NULLIFICATION AFTER COSTS INCURRED. Should the terms of this Agreement be nullified under Section 12.02 or terminated under Section 13.22 (“Termination”), after the **Utility** has begun work for which it would otherwise be entitled to reimbursement under this Agreement, the **Utility** shall, within thirty (30) days of being served with notice of the nullification or termination, submit a report of its **Costs** to the **Authority** in the same manner it would have submitted a report of **Costs** pursuant to Article VII had the Agreement not be nullified or terminated. In the event of nullification or termination, the **Utility** and the **Authority** shall have all the rights and obligations created by Article VIII of this Agreement.

ARTICLE XIII. MISCELLANEOUS

Section 13.01 NOTICE. All notices under the Agreement will be in writing and: (a) delivered personally; (b) sent by certified mail, return receipt requested; (c) sent by a recognized overnight mail or courier service, with deliver receipt requested; or (d) sent by facsimile or email communication followed by a hard copy and with receipt confirmed by telephone or return receipt (in the case of email communication), to the following addresses:

- a. All notices to the **Authority**, including **Project** correspondence, submittals, and samples, will be marked as regarding the **Project** and will be delivered to the following address or as otherwise directed by the **Authority’s** authorized representative:

Jacobs Engineering Group, Inc.
4784 Amber Valley Parkway South, Suite 200
Fargo, North Dakota 58104
and

Metro Flood Diversion Authority
Attention: Director of Engineering, Kris Bakkegard
4784 Amber Valley Parkway South, Suite 100
Fargo, North Dakota 58104

Metro Flood Diversion Authority
Attention: Executive Director
4784 Amber Valley Parkway South, Suite 100
Fargo, North Dakota 58104

- b. All notices to the **Utility** will be marked as regarding the **Project** and will be delivered to the following address or as otherwise directed by the **Utility’s** authorized representative:

Cass Rural Water Users District
Attention: General Manager
P.O. Box 98
Kindred, North Dakota 58051

701-428-3139

- c. Notices will be deemed received when actually received in the office of the addressee (or by the addressee if personally delivered) or when delivery is refused, as shown on the receipt of the U.S. Postal Service, private courier, or other person making the delivery. Notwithstanding the foregoing, notices sent by facsimile after 4:00 p.m. Central Time and all other notices received after 5:00 p.m. Central Time will be deemed received on the first **Business Day** following delivery.

Section 13.02 ASSIGNMENT. Neither **Party** may transfer or assign this Agreement, nor any rights or obligations under this Agreement, without the express written consent of the other **Party**. A **Party** desiring to transfer or assign rights or obligations under this Agreement shall give thirty (30) days' written notice pursuant to Section 13.01 to the other **Party** of its intent to transfer or assign.

Section 13.03 WORKERS' COMPENSATION. Each **Party** shall be financially responsible for injuries or deaths of its own personnel and, to carry out this duty, each **Party** will maintain workers' compensation insurance covering its own personnel while they are performing any activities contemplated by this Agreement. Each **Party** shall require that each independent contractor or sub-contractor they hire to perform any activities contemplated by this Agreement shall be required to maintain workers compensation insurance covering that contractor's personnel while they are performing any activities contemplated by this Agreement. A **Party**, if requested by the other **Party**, shall provide documentation showing that this Section's requirements for maintaining workers compensation insurance are being or have been complied with. Each **Party** waives the right to pursue a legal action against one another for any workers' compensation benefits paid to its own employee or volunteer or their dependents, even if the injuries are caused wholly or partially by the negligence of any other **Party** or its officers, employees, or volunteers

Section 13.04 INSURANCE.

- (a) The **Utility** shall list the **Authority** as an additional insured on any insurance policy obtained in connection with the **Project**. Promptly after the **Effective Date** and also upon renewal of its policy, the **Utility** shall provide to the **Authority** a certificate of insurance listing the **Authority** as an additional insured under the policy obtained by the **Utility**.
- b. The **Authority** shall list the **Utility** as an additional insured on any insurance policy obtained in connection with the **Project**. Promptly after the **Effective Date** and also upon renewal of its policy, the **Authority** shall provide to the **Utility** a certificate of insurance listing the **Utility** as an additional insured under the policy obtained by the **Authority**.
- c. The duty to list an additional insured requires that the additional insured be included under the following coverages, commercial general liability, automobile liability, and excess liability, for liability or loss arising out of or in any way associated with any act, error, omission, or product of the insuring party, its directors, officers, workforce, contractors, or anyone else for whose actions or products the insuring party may be held responsible, with coverage to an additional insured at least as broad as the policy provides to the insuring party.

- d. Certificates of insurance required under this Section shall contain sufficient information to show that the endorsements, coverages, and insurance amounts required by this Section are in force. If requested by an additional insured, the insuring party shall provide to the additional insured a copy of the endorsement to its insurance policy that implements the requirements of this Section and shall also provide, if requested, a copy of the insurance policy itself.
- e. An additional insured shall be given notice at least thirty (30) days before an insurance policy on which it is an additional insured is canceled or allowed to expire or materially amended or changed. In the event that the policy is terminated for any reason and notice has not been previously given to the additional insureds, the formerly insured shall give notice to the additional insureds as soon as is reasonably possible.
- f. The **Utility** and **Authority** shall each obtain a general liability insurance policy providing no less than two million dollars (\$2,000,000) of coverage in connection with the **Project**.
- g. The insurance obligations under this Section are separate and distinct from any obligations imposed by this Agreement. Carrying insurance as required under this Section does not relieve the **Utility** or the **Authority** of any other obligations they may have under this Agreement.

Section 13.05 NO LIABILITY LIMITATIONS. Nothing in this Agreement shall be deemed a waiver by either Party of any limitation on liability set forth in any statute, including N.D.C.C. §32-12.1-03, as any such statutes may be amended from time to time, or a waiver of any available immunities or defenses.

Section 13.06 RELATIONSHIPS CREATED. This Agreement does not create any agency, partnership, joint venture, or any other relationship between the **Parties**. The **Utility** is solely responsible for its own actions or omissions and the **Authority** is solely responsible for its own actions or omissions.

Section 13.07 GOVERNING LAW. This Agreement shall be controlled by the laws of the **State of North Dakota**. Any action brought as a result of any claim, demand, or cause of action arising under the terms of this Agreement shall be venued in **Cass County** in the **State of North Dakota**, and the **Parties** waive any objection to personal jurisdiction.

Section 13.08 CONFLICT. In the event of a conflict between the **Parties** pertaining to the terms and conditions of this Agreement, this Agreement shall control and govern the relocation of **Utility** infrastructure, lines, and property for purposes of the **SEAI** and the **UMA**, but not the relocation of **Utility** infrastructure, lines, and property for purposes of the **SWDCAL**.

Section 13.09 SEVERABILITY. Each provision, section, sentence, clause, phrase, and word of this Agreement is intended to be severable. If any provision, section, sentence, clause, phrase, and word hereof is held by a court with jurisdiction to be illegal or invalid for any reason whatsoever, such illegality or invalidity shall not affect the validity of the remainder of this Agreement.

Section 13.10 MODIFICATIONS. Any modifications or amendments to this Agreement must be in writing and signed by both **Parties** to this Agreement.

Section 13.11 BINDING EFFECT. This Agreement shall be binding upon and inure to the benefit of the **Parties** hereto and their respective personal representatives, successors, and assigns.

Section 13.12 REPRESENTATION. The **Parties**, having been represented by counsel or having waived the right to counsel, have carefully read and understand the contents of this Agreement, and agree they have not been influenced by any representations or statements made by any other parties.

Section 13.13 HEADINGS. Headings in this Agreement are for convenience only and will not be used to interpret or construe its provisions.

Section 13.14 COUNTERPARTS. This Agreement may be executed in counterparts, each of which shall be deemed to be an original but all of which taken together shall constitute one and the same agreement and shall become effective on the date set out in the Preamble of this Agreement.

Section 13.15 REPRESENTATION OF AUTHORITY. Each **Party** signing this Agreement represents and warrants that he or she is duly authorized and has legal capacity to execute and deliver this Agreement and that the Agreement is a valid and legal agreement binding on such **Party** and enforceable in accordance with its terms.

Section 13.16 FEES. The fees provided for herein shall not be interpreted or deemed to be the **Authority's** sole source of recovery for damages in any way arising from or related to **Utility's** delay, actions, or failure to act. The **Authority** shall have all remedies available to it at law in addition to any fees paid to the **Authority** by **Utility** pursuant to this Agreement.

Section 13.17 ELECTRONIC SIGNATURES. The **Parties** acknowledge and agree that this Agreement may be executed by electronic signature, which shall be considered an original signature for all purposes and shall have the same force and effect as an original signature.

Section 13.18 FEDERAL LOBBYING RESTRICTIONS. Recipients of federal financial assistance may not pay any person for influencing or attempting to influence any officer or employee of a federal agency, member of **Congress**, an officer or employee of **Congress**, or any employee of a member of **Congress** with respect to the award, continuation, renewal, amendment, or modification of a federal grant, loan, or contract. These requirements are implemented for U.S. **EPA** in 40 CFR Part 34, which also describes types of activities, such as legislative liaison activities and professional and technical services, which are not subject to this prohibition. Upon award of this contract, **Utility** shall complete and submit to the **Authority** the certification and disclosure forms in Appendix A and Appendix B to 40 CFR Part 34, which are attached as **Exhibit C** to this Agreement. **Utility** shall also require all subcontractors and suppliers of any tier awarded a subcontract over \$100,000 to similarly complete and submit the certification and disclosure forms pursuant to the process set forth in 40 CFR 34.110.

Section 13.19 DEBARMENT AND SUSPENSION. **Utility** certifies that it will not knowingly enter into a contract with anyone who is ineligible under the 40 CFR Part 32 to participate in the **Project**. Suspension and debarment information can be accessed at <http://www.sam.gov>. **Utility**

represents and warrants that it has or will include a term or conditions requiring compliance with this provision in all of its subcontracts under this Agreement. Upon award of this contract, **Utility** shall complete and submit to the **Authority**, the federal certification form regarding debarment and suspension, which is attached as **Exhibit C** to this Agreement.

Section 13.20 DAVIS-BACON ACT AND OTHER LABOR LAWS. **Utility** shall comply with the following federal labor requirements:

- a. **Davis-Bacon Act**, which requires the payment of prevailing wage rates to all laborers and mechanics on construction projects in excess of \$2,000. **Utility** and the **Authority** acknowledge and agree that the **Davis-Bacon Act** shall apply if the **Authority** is performing **Utility Adjustment Construction Work**. **Utility** and the **Authority** acknowledge and agree that the **Davis-Bacon Act** shall not apply if any party other than the **Authority** is performing **Utility Adjustment Construction Work**.
- b. The **Contract Work Hours and Safety Standards Act**, which requires time and one-half pay for overtime hours worked in excess of forty hours in any workweek.
- c. The **Copeland Act** (Anti-Kickback Act), which prohibits employers from inducing an employee to give up any part of compensation to which he or she is entitled.

Section 13.21 CIVIL RIGHTS OBLIGATIONS. **Utility** shall comply with the following, federal non-discrimination requirements:

- a. Title VI of the **Civil Rights Act of 1964**, which prohibits discrimination based on race, color, and national origin, including Limited English Proficiency (“LEP”).
- b. Section 504 of the **Rehabilitation Act of 1973**, which prohibits discrimination against persons with disabilities.
- c. The **Age Discrimination Act of 1975**, which prohibits age discrimination.
- d. Section 13 of the **Federal Water Pollution Control Act Amendments of 1972**, which prohibits discrimination on the basis of sex.
- e. 40 CFR Part 7, as it relates to the foregoing.
- f. **Executive Order No. 11246**, which requires non-discriminatory practices in hiring and employment.

Section 13.22 CERTIFICATION. **Utility** shall complete and submit to the **Authority**, the federal certification form regarding civil rights, which is attached as **Exhibit C** to this Agreement.

Section 13.23 TERMINATION. This Agreement may be terminated by the **Authority**, at any time and for any reason with three (3) calendar days written notice to the **Utility**. If this Agreement is terminated, Section 12.03 (“Nullification After Costs Incurred”) applies to allow the **Utility** the right to recover its **Costs**.

Section 13.24 INDEMNIFICATION. The **Authority** shall indemnify, save, and hold the **Utility**, a political subdivision of the state of North Dakota, its member entities, directors, officers, employees, and agents harmless from any liability, loss, damage, or expense, including legal fees, arising out of the negligent performance of the **Authority's** obligations under this Agreement and arising out of any intentional acts or negligence in the construction, operation, and maintenance of the **Comprehensive Project**; the **SEAI**; the **UMA**; dikes and roads in the **UMA**; and arising out of the release of any water under Section 9.09 of this Agreement. This duty to indemnify, save, and hold harmless extends not only to acts and negligence by the **Authority**, but also to acts and negligence by anyone for whom the **Authority** is in law responsible, including the agents and contractors of the **Authority**. The **Parties** shall cooperate with each other in the defense of any such action, including providing each other with prompt notice of any such action and providing all material documentation. The **Parties** have a right to retain their own counsel to conduct a full defense of any such action.

Section 13.25 ACCESS. The **Authority** shall provide the **Utility** at all times road access to those parts of the **Treatment Plant, Wells, and Associate Infrastructure** protected by a dike.

Section 13.26 EXHIBITS. All exhibits referred to in this Agreement are a part of the Agreement.

Section 13.27 PAYMENT OF WATER LINE CONNECTION COSTS. The **Utility** and the City of Fargo have agreed to cooperate in the construction of a water pipeline that will connect a city water storage facility on the south side of Fargo to the **Utility's** system so that the **Utility** can supply that storage facility with water. The length of the proposed pipeline is about 13,200 feet. Fargo and the **Utility** have agreed that they will each pay a portion of the costs related to this pipeline connection project. The **Utility** has applied to the North Dakota Department of Water Resources ("DWR"), requesting that DWR pay a portion of the **Utility's** share of the costs for this pipeline connection project. Whatever portion of the **Utility's** costs that DWR does not pay, but no more than fifty percent of those costs, the **Authority** shall pay. For example, if DWR pays seventy-five percent of the **Utility's** costs, the **Authority** shall pay the remaining twenty-five percent. If DWR pays fifty percent of the **Utility's** costs, the **Authority** shall pay the remaining fifty percent. If, as another example, DWR pays forty percent of the **Utility's** costs, the **Authority** say pay fifty percent of the **Utility's** remaining costs. If, as a final example, DWR does not pay any portion of the **Utility's** costs, the **Authority** shall pay fifty percent of those costs. The commitment made in this section by the **Authority** provides a material part of the consideration for this Agreement and the **Utility's** reliance on it is a material and significant reason why the **Utility** is willing to enter the **Agreement**.

Section 13.28 RAPID CLOSURE VALVES. Section 5.5 of **Exhibit D** (MFR-023, Utility Guidelines for the Southern Embankment) contains a requirement that certain pipes have a valve that allows rapid closure in certain events. This requirement is met by installation of new manual isolation valves for rapid emergency closure in accordance with the **Utility's** standard specifications and Section 5.5 of Exhibit D on either side of the dam embankment in locations consistent with the **Utility's** safety requirements and approved by the **USACE**.

(Signatures appear on the following pages.)

IN WITNESS WHEREOF, the Parties executed this Agreement on the date first written above.

AUTHORITY:

Metro Flood Diversion Authority

Joel Paulsen, Executive Director

Chad Peterson, Chair

ATTEST:

Dawn Lindblom, Secretary

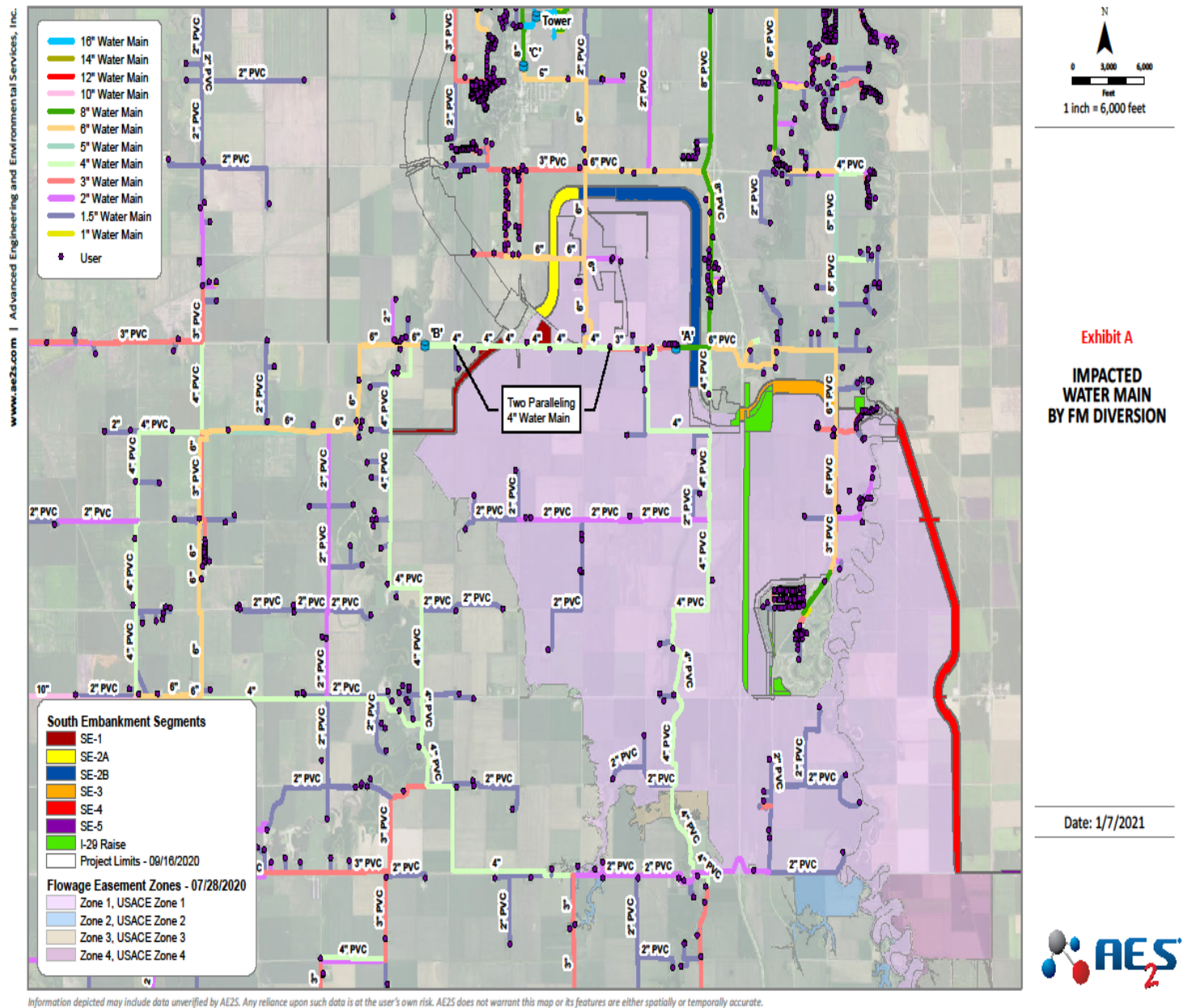
UTILITY:

Jon Zuther, Chairman

ATTEST:

Barry Bowman, Secretary - Treasurer

EXHIBIT A-1



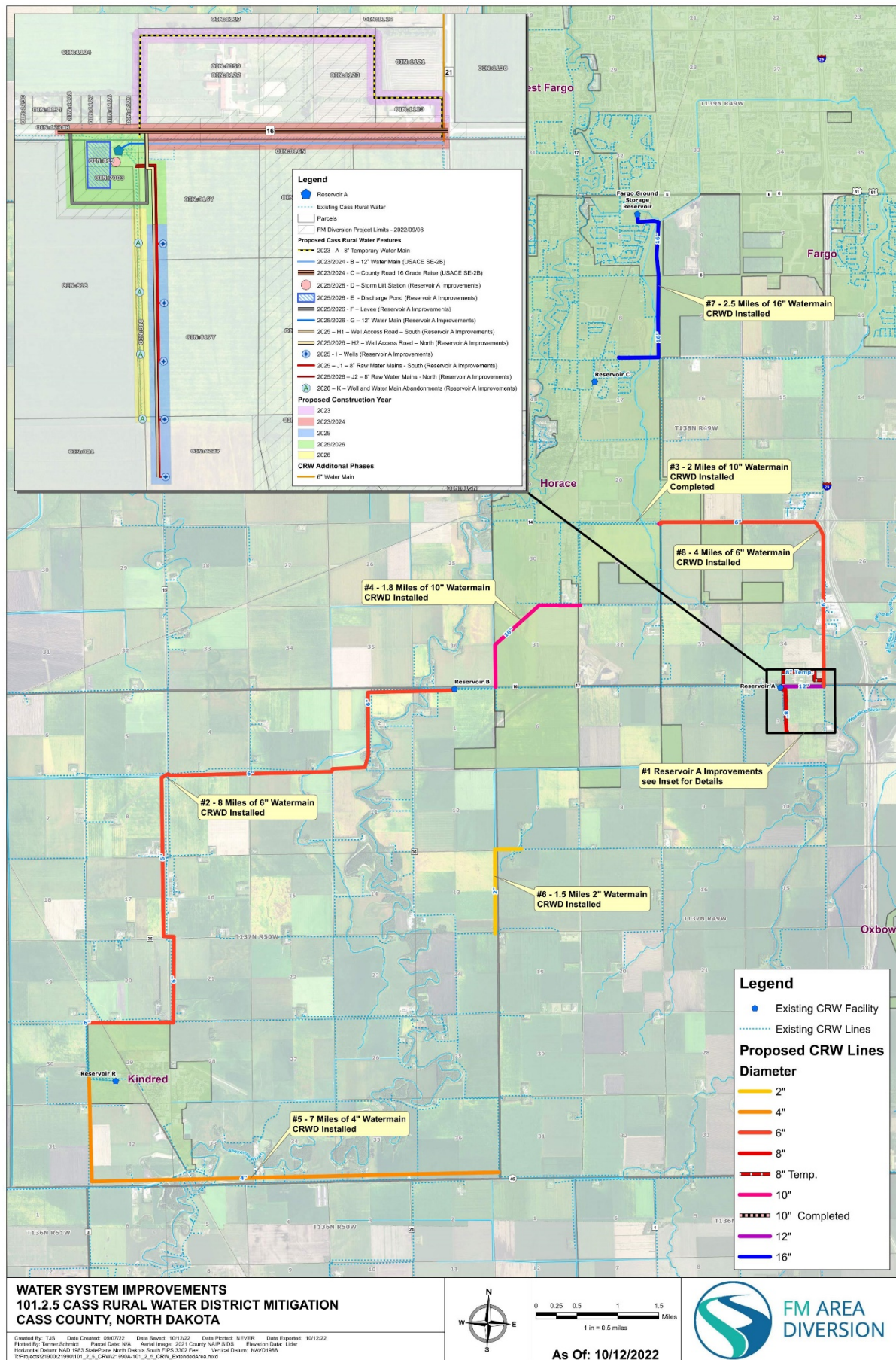


EXHIBIT A-2

**SUMMARY OF RELOCATIONS TO
CASS RURAL WATER USERS DISTRICT'S SYSTEM TO BE PERFORMED BY THE DISTRICT
AND TO BE PAID FOR BY THE METRO FLOOD DIVERSION AUTHORITY VIA A LUMP SUM
PAYMENT TO THE DISTRICT ^{1,2}**

Item Description	Watermain Size / Material	Length	Route	Begin Point	End Point
6" Watermain – 38th Street South and Cass County Highway 14 (Through St Benedicts) – 4 Miles					
	6" PVC or PE	10,560 LF	38 th Street South	Cass County Highway 16	Cass County Highway 14
	6" PVC or PE	10,560 LF	Cass County Highway 14	38 th Street South	57 th Street South
4" Watermain – Kindred Area – 7 Miles					
	4" PVC or PE	2,640 LF	Elm Street	Reservoir 'R'	164 th Ave SE
	4" PVC or PE	7,920 LF	164 th Ave SE	Elm Street	ND Hwy 46
	4" PVC or PE	26,400 LF	ND Hwy 46	164 th Ave SE	170 th Ave SE
2" Watermain – Norman Area – 1.5 Miles					
	2" PVC or PE	7,920 LF	169 th Ave SE	Cass County Highway 18	North 1.5 Miles
10" Watermain – Reservoir B to Reservoir C ⁽¹⁾ - 1.8 Miles					
	10" PVC or PE	7,000 LF	Cass County Highway 16 and OIN 224, 225, 228, 229	Cass County Highway 16/169 th Ave SE Intersection	Cass County Highway 17
⁽¹⁾ Diversion Channel crossing for this Relocation is reimbursable and is not part of the lump sum payment. See Exhibit A-3.					
6" Watermain – Reservoir E to Reservoir B – 8 Miles⁽²⁾					
	6" PVC or PE	5,280 LF	Cass County Highway 18	164 th Ave SE	Cass County Highway 15
	6" PVC or PE	15,840 LF	Cass County Highway 15	Cass County Highway 18	49 th Street SE
	6" PVC or PE	13,200 LF	49 th Street SE	Cass County Highway 15	West Side of Sheyenne River
	6" PVC or PE	5,280 LF	West Side of Sheyenne River	49 th Street SE	Cass County Highway 16
	6" PVC or PE	2,640 LF	Cass County Highway 16	West Side of Sheyenne River	Cass County Highway 36
⁽²⁾ Includes Sheyenne River Crossing and Multiple Railroad Crossings.					

References:

- 1) Selection of Alternative – Cass Rural Water District Reservoir A Water Treatment Plant, Technical Memorandum, by Houston-Moore Group, October 18, 2022 (Revision #2)
- 2) Engineer's Opinion of Probable Cost, Cass Rural Water District, Alternative 3A – Protect In Place Reservoir A, by Houston-Moore Group, Revision #2: October 18, 2022.

EXHIBIT A-3

**SUMMARY OF RELOCATIONS TO CASS RURAL WATER USERS DISTRICT'S (CRWD) SYSTEM
TO BE COMPLETED BY CRWD OR BY CRWD JOINTLY WITH THE METRO FLOOD
DIVERSION AUTHORITY (MFDA), OR SOLELY BY THE MFDA ^{1,2}**

Item Description	Watermain Size / Material	Length	Route	Begin Point	End Point
Construct ring dike around Reservoir A and construct storm sewer lift station within the ring dike. This work is to be performed solely by MFDA. The ring dike is to be constructed as a FEMA certified ring levee.					
Conduct the hydrogeologic study relevant to the siting and design of new well construction. This work is to be performed solely by MFDA.					
Abandon (remove pitless unit, pump, and electrical), plug, and cap, according to North Dakota Dep't of Water Resources' standards, CRWD's existing wells; construct a continuous dike on which five new wells of 12" diameter are to be drilled and located; and construct an access road to and connecting the new wells. This work is to be performed by the MFDA. The dike is to be constructed as a FEMA certified ring levee.					
Construct a temporary 12" watermain from Reservoir A to the watermain on 38 th Street South to provide continued and uninterrupted service to CRWD patrons during construction. This work is to be performed by the MFDA. The location of this temporary watermain is depicted on Exhibit A-4.					
8" Watermain – Connect new wells to the treatment plant with the connection to include two separate well lines with all necessary fittings and valves, including necessary electrical, variable frequency devices, and SCADA, with one line going to the old part of treatment plant and one line to the new part of the treatment plant to replicate existing well field configuration regarding how wells lines connect the wells to the treatment plant. This work is to be performed by MFDA.					
	8" / Fusible Poly	5,300 LF (contemplates two separate lines)	New Well Access Road	Five New Wells of 12" diameter	Reservoir A
12" Watermain – Reservoir A to 38 th Street South (Includes crossing of SE-2B as depicted on Exhibit A-5– 0.5 Miles). This work is to be performed by MFDA.					
	12" / Fusible Poly	3,340 LF ⁽¹⁾	Cass County Highway 16	Reservoir 'A'	38 th Street South
	4" / Gravity Discharge PVC or PE	2,340 LF	Cass County Highway 16	Reservoir 'A'	SE-2B Borrow Ditch
⁽¹⁾ Includes 1,000 LF Crossing of Reach SE-2B					
10" Watermain – Crossing of Diversion Channel – 2,250 LF (Portion of Reservoir 'B' to Reservoir 'C'). ⁽²⁾					
	10" / Fusible Poly	2,250 LF	Diversion Channel Crossing	112th Avenue S	Diversion Channel South Project Right-of-Way

⁽²⁾ Diversion Channel crossing for this Relocation is reimbursable and is not part of the lump sum payment.					
Two 8" Watermain – Crossing of SE-3 – 1,000 LF. This work is to be performed by the MFDA.					
	Two 8" / Fusible Poly	1,000 LF	Cass County Highway 81 (Reach SE-3)	N/A	N/A
16" Watermain – City of Fargo Connection ⁽³⁾ – 2.5 Miles. This work is to be performed by CRWD.					
	16" PVC	2.0 Miles	57 th Street South	Fargo Ground Storage Reservoir (GSR)	76 th Avenue South
	16" PVC	0.5 Miles	76 th Avenue South	57 th Street South	Westerly
⁽³⁾ Reimbursement of Local Share (See Section of 13. 27 of Master Utility Relocation Agreement)					

References:

- 3) Selection of Alternative – Cass Rural Water District Reservoir A Water Treatment Plant, Technical Memorandum, by Houston-Moore Group, October 18, 2022 (Revision #2).
- 4) Engineer's Opinion of Probable Cost, Cass Rural Water District, Alternative 3A – Protect In Place Reservoir A, by Houston-Moore Group, Revision #2: October 18, 2022.

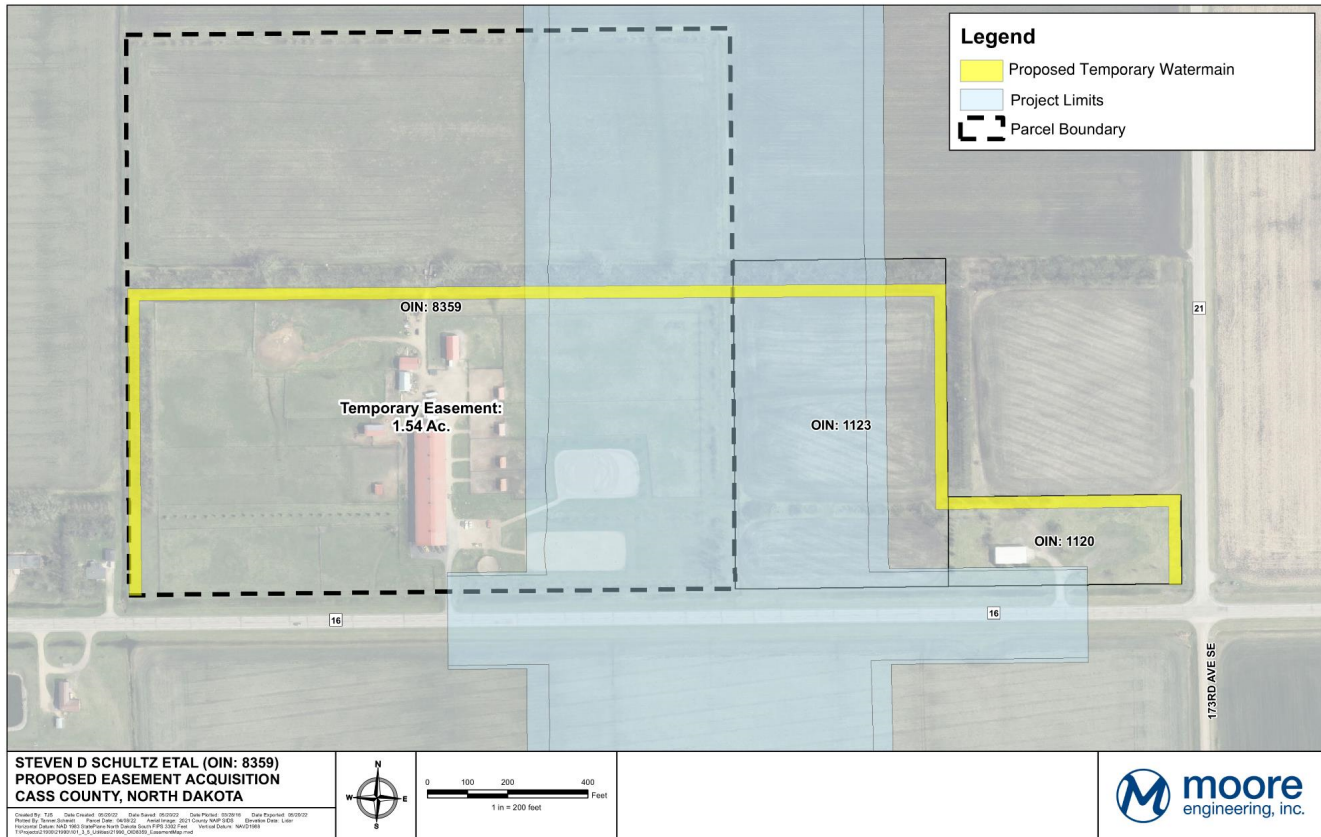


EXHIBIT A-5

MAP OF SOUTHERN EMBANKMENT SEGMENTS

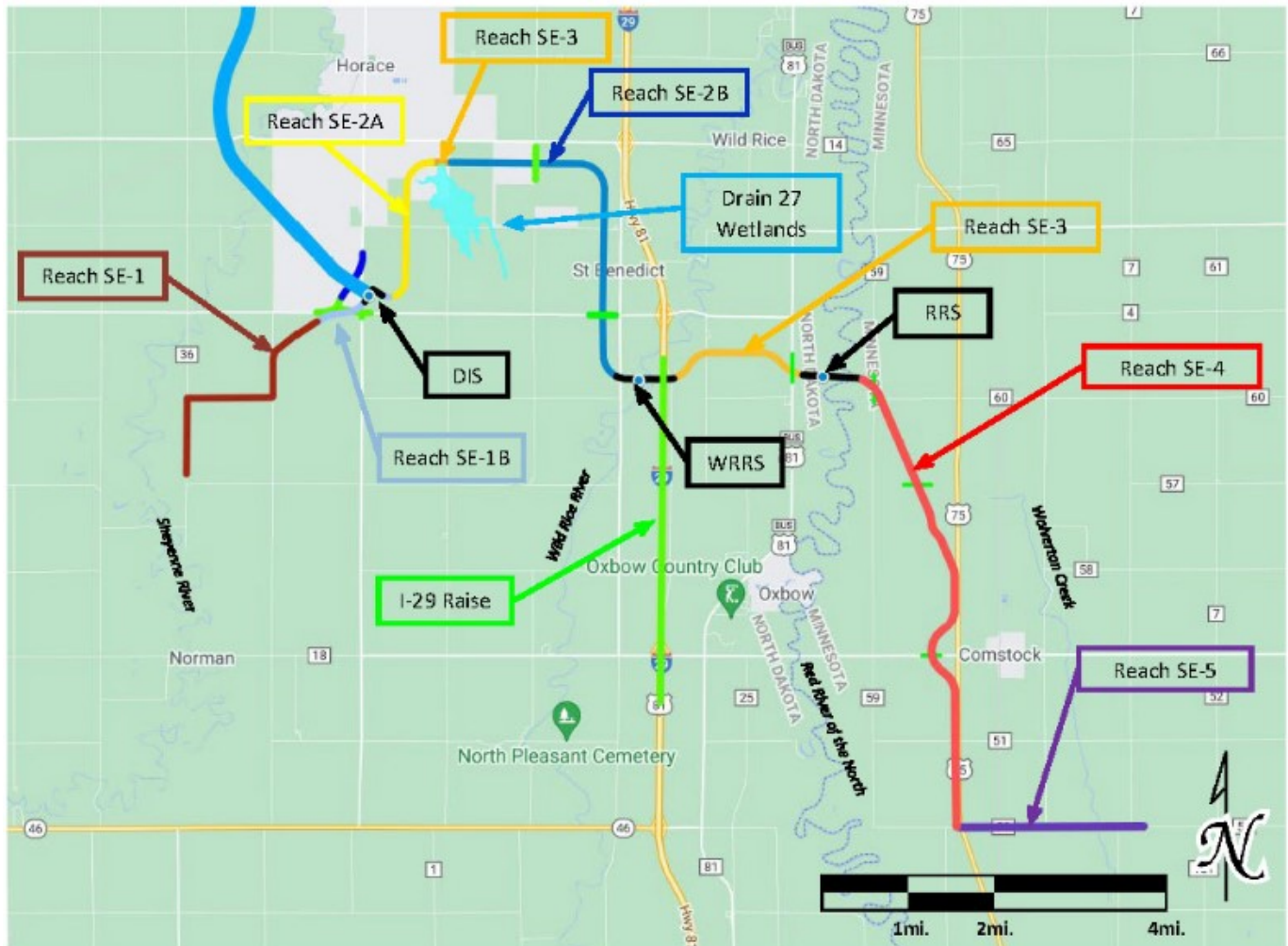


EXHIBIT B

AUTHORITY INVOICING REQUIREMENTS

Cass Rural Water Users District will submit copies of each invoice to:

PaulsenJ@FMDiversion.gov and APInvoicesFMDiv@jacobs.com

Cass Rural Water Users District invoices must be detailed and precise. They must clearly indicate fees and expenses for the current billing period month and include at least the following information:

- i. Cass Rural Water Users District's name and address;
- ii. Cass Rural Water Users District's federal employer identification number;
- iii. Unique invoice number;
- iv. Billing period;
- v. Description of each activity performed for each day in which services were performed;
- vi. Work order number associated with each activity;
- vii. Name, billing rate, and hours worked by each person involved in each activity;
- viii. Total amount of fees and costs "billed to date," include the preceding months;
- ix. Preferred remittance address, if different from the address on the invoice's coversheet; and
- x. All of the work performed during that billing period.

After the Authority receives Cass Rural Water Users District's invoice, Authority will either process the invoice for payment or give Cass Rural Water Users District specific reasons, in writing within fifteen (15) business days, why part of all of Authority's payment is being withheld and what actions Cass Rural Water Users District must take to receive the withheld amount. In the event of disputed billing, only the disputed portion will be withheld from payment and Authority shall pay the undisputed portion. Payment does not imply acceptance of services or that the invoice is accurate. In the event an error is identified following the receipt of payment, Cass Rural Water Users District must credit any payment in error from any payment that is due or that may become due to Cass Rural Water Users District under this Agreement or return the overpayment to Authority within thirty (30) calendar days of the identification of the error.

EXHIBIT C
FEDERAL CERTIFICATION FORMS

CERTIFICATION REGARDING FEDERAL LOBBYING

The undersigned certifies to the best of his or her knowledge and belief that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in any award documents for any of its subcontractors at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subcontractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into a contract with the Authority. By executing this certificate, the undersigned agrees and acknowledges that he/she has been duly authorized to execute this certificate.

Company/Entity Name: _____

Signed: _____

Its: _____

Date: _____

PLEASE RETURN TO:
Metro Flood Diversion Authority
4784 Amber Valley Parkway South, Suite 100
Fargo, ND 58104

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION,
AND OTHER RESPONSIBILITY MATTERS**

This certification is required by the regulations implementing Executive Order 12549, Debarment and Suspension, 13 CFR Part 145. The regulations were published as Part VII of the May 26, 1988 *Federal Register* (pages 19160-19211).

(BEFORE COMPLETING CERTIFICATION, READ INSTRUCTIONS ON PAGE 2)

- (1) The official representative of the party contracting with the Metro Flood Diversion Authority certifies to the best of its knowledge and belief that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for disbarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this application been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application had one or more public transactions, including contracts (Federal, State, or local) terminated for cause or default.
 - (e) Are not presently debarred, suspended, declared ineligible or voluntarily excluded from performing work for the State of North Dakota, the State of Minnesota, the Metro Flood Diversion Authority or any of its Member Entities.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective primary participant shall attach an explanation to this proposal.
- (3) The Official signing this certificate has been and is duly authorized to sign this certificate on behalf of the entity or entities which intend to enter into a contract with the Metro Flood Diversion Authority.

Official Business Name _____

Date: _____

Name and Title of Authorized Representative

PLEASE RETURN TO:

Metro Flood Diversion Authority
4784 Amber Valley Parkway South, Suite 100
Fargo, ND 58104

By: _____
Signature of Authorized Representative

INSTRUCTIONS FOR CERTIFICATION

1. By signing and submitting this certification, the prospective contracting party is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contracting party shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the Metro Flood Diversion Authority's (the "Authority") determination whether to enter into this transaction. However, failure of the prospective contracting party to furnish a certification or an explanation shall disqualify such person from entering into contracts with the Authority.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the Authority determined to enter into a contract with the prospective contracting party. In order to qualify for participation in the U.S. EPA WIFIA program the Authority is required to obtain this certification. If it is later determined that the prospective contracting party knowingly rendered an erroneous certification, in addition to other remedies available to both the Authority and the Federal Government, the Authority may terminate this transaction for cause or default.
4. The prospective contracting party shall provide immediate written notice to the Authority to which this Certificate is submitted if at any time the prospective contracting party learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the Authority for assistance in obtaining a copy of those regulations (13 CFR Part 145).
6. The prospective contracting party agrees by submitting this certification that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the Authority.
7. The prospective contracting party further agrees by submitting this certification that it will require a "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions," from all sub-contractors without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.
8. A contracting party in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contracting party may decide the method and frequency by which it determines the ineligibility of its principals.
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contracting party is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a contracting party in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the Authority may terminate this transaction for cause or default.

ASSURANCE OF COMPLIANCE – CIVIL RIGHTS CERTIFICATE

TITLE VI OF THE CIVIL RIGHTS ACT OF 1964, SECTION 504 OF THE REHABILITATION ACT OF 1973, THE AGE DISCRIMINATION ACT OF 1975, SECTION 13 OF THE FEDERAL WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, 40 CFR PART 7, AND EXECUTIVE ORDER NO. 11246

The undersigned provides this assurance for the purpose of entering into a contract with the Metro Flood Diversion Authority (Authority) related to the Fargo-Moorhead Metropolitan Area Flood Risk Management Project (Project), which is receiving federal financial assistance. Specifically, the US EPA WIFIA Program requires this assurance of all contractors and subcontractors providing services for the Project.

The undersigned assures that it will comply with:

1. Title VI of the Civil Rights Act of 1964, as amended, which prohibits discrimination on the basis of race, color, or national origin including limited English proficiency (LEP);
2. Section 504 of the Rehabilitation Act of 1973, as amended, which prohibits discrimination against persons with disabilities;
3. The Age Discrimination Act of 1975, as amended, which prohibits age discrimination;
4. Section 13 of the Federal Water Pollution Control Act Amendments of 1972, which prohibits discrimination on the basis of sex;
5. 40 CFR Part 7, as it relates to the foregoing; and
6. Executive Order No. 11246.

The undersigned understands that this Assurance is binding on the undersigned, its successors, transferees, and assignees at any time during which federal financial assistance is provided to the Project. The undersigned will ensure that all contractors, subcontractors, or others with whom it arranges to provide services or benefits are not discriminating in violation of items 1-6. Otherwise, the contracts for services can be terminated for cause and the undersigned can be declared ineligible to contract for the Project.

By signing this form, the undersigned is agreeing to the above provisions and that he/she is duly authorized to execute this form.

Signature of Authorized Official

Title

Print Name

Name of Institution or Agency

Date

Street

PLEASE RETURN TO:
Metro Flood Diversion Authority
4784 Amber Valley Parkway South, Suite 100
Fargo, ND 58104

City, State, Zip Code

Office Email Address

EXHIBIT D
MFR-023

EMVP-EC-D

February 10, 2021

MEMORANDUM FOR RECORD**SUBJECT:**

Fargo-Moorhead Metropolitan (FMM) Area Southern Embankment - MFR-023, Utility Guidelines for the Southern Embankment

1. REFERENCES

- a. USACE. Engineering Manual 1110-2-2902 *Conduits, Culverts and Pipes*. 22 May 2020.
- b. USACE. Engineering Pamphlet No. 1110-2-18, *Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures*. 1 May 2019.
- c. ANSI/IEEE C2 – National Electric Safety Code.

2. PURPOSE

Requirements for pipelines¹ and other utility lines crossing the dam are primarily defined in References under paragraph 1. As noted in Chapter 2 of Reference 1a, internal erosion accounts for nearly half of all embankment dam failures with many of those failures occurring along pipelines. These potential failure modes are also discussed at length in Chapter 2 of Ref 1a. Understanding how these failures occur and the risks associated with these failures is key in designing the proposed utility crossings and was the basis of this MFR to minimize risks to the dam and allow the dam to perform as intended.

Ideally, all utilities would be relocated around the Fargo-Moorhead Metropolitan Area (FMM) Southern Embankment (SE) Project and would not cross the dam embankment or be placed within the Project work limits. However, given the length of the Project, (21 miles of dam), utilities will need to cross the line of the protection. Therefore, these guidelines will aid impacted utility owners and the Non-Federal Sponsor (NFS) in developing an approved utility relocation plan. These guidelines are general; each proposed utility relocation within the SE Project work limits shall be reviewed by the United States Army Corps of Engineers (USACE) on a case-by-case basis.

3. PROJECT DESCRIPTION

The FMM SE Project is a “dry dam” consisting of a 21-mile long earthen dam embankment and three gated structures. The SE Project will be constructed to meet USACE dam safety criteria and is to be built under several contracts spanning multiple years. The three gated structures are located at the inlet to the diversion channel near the intersection of Cass County Road 16 (CR

¹ Conduits, pipes, and culverts that convey fluids or gases, or serve as encasements for utility lines, or intercept seepage.

16) and Cass County Road 17 (CR 17) south of Horace, North Dakota; at the Wild Rice River; and at the Red River of the North. These three structures are referred to as the Diversion Inlet Structure (DIS), Wild Rice River Structure (WRRS), and Red River Structure (RRS), respectively.

4. EXISTING UTILITY REMOVAL AND ABANDONMENT

In general, existing utilities within the SE Project work limits and/or that cross the proposed dam embankment alignment shall be removed and or abandoned prior to the USACE issuing a notice to proceed for an awarded construction contract.

Existing utility lines may remain in place until the relocated utility becomes operational or may be temporarily relocated provided its design is coordinated in line with the USACE design and construction schedule. Temporary utility relocations shall be coordinated with the USACE prior to the SE Project 65% plans and specifications and may be placed within the SE Project work limits.

4.1. Overhead Utilities

In general, overhead utility lines and poles shall be removed from the SE Project work limits by the responsible utility owner prior to construction. Above ground appurtenances, utility pedestals and boxes, or any other utility related infrastructure shall also be removed by the utility owner prior to award of the USACE construction contract. Existing overhead power may be allowed to stay in place based upon approval from the USACE.

4.2. Underground Utilities

Responsible utility companies shall disconnect, cap, and abandon existing underground utility lines located within the SE Project work limits. Abandoned underground utility lines will be removed as necessary by the USACE construction contractor.

Any remaining abandoned underground utility lines, abandoned above ground utility lines, and any related utility infrastructure within the SE Project work limits shall be described and listed with enough detail to include as part of the SE Project 65% plans and specifications ahead of contract award.

5. PROPOSED UTILITY CROSSINGS OF THE DAM EMBANKMENT

The paragraphs below provide the general guidance for utilities crossing the FMM SE Project.

5.1. Alignment and Utility Corridor

Utility owners shall develop a plan for relocation of utilities (electric, water, sewer, communication, gas, etc.) that cross or lie within the SE Project work limits. Utility companies shall submit proposed utility relocation plans to the NFS and USACE for review and comment

prior to utility relocation construction. The number of utility crossing locations shall be minimized and the use of utility corridors where multiple utilities cross in the same general location is preferred. Final crossing location and orientation relative to the SE Project alignment shall be approved by the NFS and USACE during SE Project design stages.

Wherever possible, the utilities shall be rerouted to one of the nearest seven proposed utility corridors provided in Table 1 and Figure 1 below.

Table 1: List of Utility Corridors.

ID	Location	Description
1	Diversion Inlet Structure	Shoulder of County Road 16
2	45 th Street S	Shoulder of 45 th Street S
3	County Road 16	Shoulder of County Road 16
4	Wild Rice River Structure	173 rd Ave SE access ramp to Dam
5	Red River Structure	Roadway shoulder of County Road 81
6	Comstock, MN	Roadway shoulder of 160 th Ave S (County Road 2)
7	HWY 75 & 100 th Street Intersection	Roadway shoulder of U.S. Highway (HWY 75)

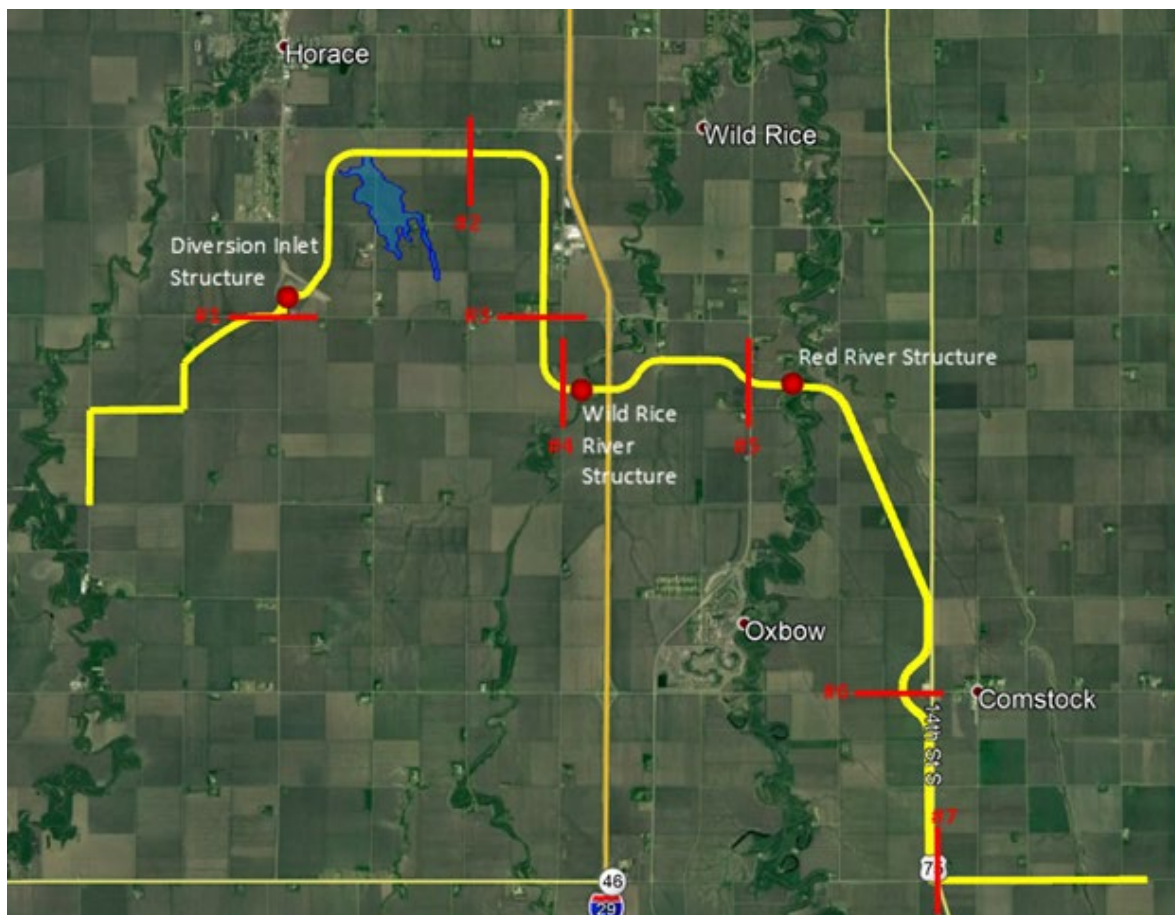


Figure 1: Locations of the utility corridors along the FMM Southern Embankment Project

5.2. Overhead Utilities

Poles, guy wires, and anchors shall be located 25 feet beyond the daylight of the SE Project borrow and local drainage ditches. Overhead work clearance requirements for dam construction shall be determined by Table 232-1 of Ref 1c, and dam embankments shall be considered “road, streets, and other areas subject to truck traffic,” as the dam will be regularly traversed for operation, maintenance, repair, rehabilitation, and emergency operations. Clearance distances shall be selected per voltage levels and the type of cable, conductor, or wire. Section 23 and sections C and D of Ref 1c have methods for calculating the required clearances for routing electrical lines with voltages exceeding 22 kV.

5.3. In-Ground Utilities Crossing the Dam Embankment

Utilities crossing the dam embankment shall be designed according to Ref 1a, as well as the guidance provided below. These guidelines apply to the portion of the utility located within the dam embankment footprint and within the SE Project work limits.

5.3.1. Up and Over Dam Embankment Crossing

Proposed utility crossings above the allowable crossing elevation of 925 feet (NAVD88) will be evaluated on a case by case basis, and drawings/calculations shall be submitted to fully document the design. The following are provided as guidelines:

- (1) Proposed utility crossings shall be aligned to cross as close to perpendicular as possible to the dam embankment centerline at the approved utility corridor crossing. Variations to the crossing angle may be dictated by field conditions and the location of connecting utilities. If possible, crossings shall be located where the existing ground is at its highest elevation. Final crossing location and orientation relative to the dam embankment alignment shall be approved by the NFS and USACE during SE Project design stages.
- (2) In general, non-pipeline utilities (Cable TV, Telecommunications and Underground Power lines) shall cross up and over the top of the dam embankment at an elevation above 925 feet (NAVD88). This elevation includes the 1.5 feet of expected settlement for most of the dam embankment reaches. Calculations are required to show that each utility line has adequate strength/flexibility to withstand the expected loading and settlement.
- (3) For pipelines that need to be protected from freezing (e.g. water lines and sanitary sewer force mains), additional dam embankment fill will be required to meet local requirements for 10 feet minimum cover. Earthen fill is the preferred alternative for frost protection, as it is more reliable than insulation.

- (4) Selecting the most appropriate pipe material for a specific environment is an essential step in reducing the risk associated with the long-term performance of a pipe. A list of applicable pipe materials by function along with potential concerns for each pipe function, is provided in Table 3-2 in Ref 1a.
- (5) Controlled Low-Strength Material (CLSM) backfill must be used to encapsulate pipes through its horizontal alignment when trenched within/through the crest of the dam to reduce the chance of seepage along or into the pipe. See Figure 5-40 of Ref 1a.

For pressurized utilities, the following guidelines also apply:

- (6) Pipeline material and joints shall be pressure rated to withstand all fluid pressures that may be encountered. Recommended viable pipe materials by pipe function are listed in Table 3-2 of Ref 1a.
- (7) Pipelines shall be evaluated for the need for air-release, air vacuum and combination valves at the crest of the dam embankment. If needed, the valves shall be adequately protected from frost.
- (8) Pipe bends shall have appropriately designed thrust restraints. See Section 5.5.13 of Ref 1a.
- (9) Calculations are required to show that each utility line has adequate strength and flexibility to withstand the expected loading and settlement.
- (10) If manholes are required for access to rapid closure valves and testing access points, watertight sealed manholes shall be located a minimum of 25 feet outside the upstream and downstream dam embankment toes.

5.3.2. *Under Dam Embankment Crossing*

Utilities crossing under the dam embankment shall be designed according to Ref 1a, as well as the guidance provided below. These crossings will also be evaluated on a case by case basis, and calculations shall be submitted to fully document the design. There are additional factors that must be considered and addressed in a site-specific engineering evaluation before any such crossing would be approved. Chapter 5 of Ref 1a discusses these factors and concerns. Pressure pipelines are of particular concern because of the damage that can occur to the dam embankment if a line fails in the foundation of the dam embankment. The guidelines in Paragraph 5.3.1 above will apply to crossings under the dam embankment as well as the following additional guidelines.

- (1) If open-cut methods are utilized, the crown of the pipeline must be at least 3 feet

below the bottom of the dam inspection trench and bottom of borrow/drainage ditches associated with the SE Project. This guideline serves to reduce the chance of damaging the utility during construction and/or during future maintenance activities. Utilities susceptible to freezing shall be located a minimum of 10 feet below the ditches or as required by local code.

- (2) If open cut is utilized, the trench shall extend under and 20 feet beyond the proposed dam embankment prism toes. Topsoil shall be stripped from the trench area and set aside separate from the excavated trench material. The utility pipeline will be required to be encased in CLSM (specification attached). The new pipeline shall be placed on supports to allow the CLSM to flow beneath the pipe and completely fill the pipe haunches. See Sections 5.5.7 and 5.5.18.1. of Ref 1a. Supports shall be placed from $L/4$ to $L/5$ from the pipe ends, where L is the pipe segment length. See Section 5.5 in Ref 1a for further detail. CLSM shall be placed in the trench to 1 foot above the crown of the pipe. The remaining trench shall be backfilled with compacted impervious fill from material excavated from the trench, excluding topsoil. Fill shall not be placed on any subgrade that is wet, muddy, frozen, containing frost, or covered with snow. Trenches shall be backfilled in maximum 12-inch (uncompacted) layers and compacted to a density of at least 95-percent of the maximum density obtained by standard proctor (ASTM D698). Fill shall be within the limits of 3 percentage points above the optimum and 1 percentage point below the optimum moisture content of the standard proctor as determined by field moisture density tests. Field moisture density tests shall be either by nuclear method (ASTM D6938) or the rubber balloon method (ASTM D2167). Testing frequency shall be at least one test per 250 lineal foot, for each lift.
- (3) If horizontal directional drilling is utilized, it shall be accomplished pursuant to Section 5.6 of Ref 1a and the attached "Guidelines for Installation of Utilities Beneath Corps of Engineers Levees Using Horizontal Directional Drilling", June 2002, and the St. Paul District's "Guidance Pertaining to Horizontal Directional Drilling Under a Flood Barrier/Channel." The pipe entry and exit locations (pits) must be located so that they are a distance of at least 20 times the embankment height or 300 feet (whichever is greater) from the embankment centerline.
- (4) Utility relocation design shall include watertight sealed manholes on both sides of the dam embankment for access to rapid closure valves (see Section 5.5 below), regular operation and maintenance activities, and to facilitate recurring inspections of pressurized utilities passing under the dam embankment. Watertight sealed manholes shall be located a minimum of 25 feet outside the upstream and downstream embankment toes.

5.4. Casing for Utility Lines

- (1) All pressurized utility lines (sewer, water, and gas) crossing under the dam embankment shall be cased. The use of casing pipe should also be considered for other utility crossings.
- (2) USACE recommends the use of HDPE or steel pipe for casing pipe material. All casing specifications shall be submitted to USACE for review and comment prior to installation.
- (3) In general, if horizontal directional drilling is utilized casing pipe material shall be limited to one that can be joined together continuously, while maintaining sufficient strength to resist the high tensile stresses imposed during the pullback operation.
- (4) Casing shall extend a minimum of 20 feet beyond the proposed dam embankment prism toes if open cut method is utilized. If horizontal directional drilling is utilized casing pipe will extend from entry to exit pit.
- (5) The annular space between the casing and the carrier pipe must be grouted and sealed under the dam embankment prism and extend a minimum of 20 feet beyond the dam embankment prism toes to reduce the likelihood of future seepage or settlement related issues. The design documentation for the grouting must include calculations for the expected volume of grout needed to fill the annular space.

5.5. Rapid Closure Valves

All pressurized pipelines crossing above or below the dam embankment shall have positive shut-off valves installed on either side of the dam embankment. The purpose of the valves is to provide pipeline isolation in the event of leakage, rupture, repairs, or relocation. All pressurized pipes crossing the dam must be designed in a way that allows rapid closure in the event of a rupture to prevent gas or fluid from escaping within or beneath the dam embankment causing internal erosion; and to prevent backflow of floodwater into the benefitted area. The rapid closure valves shall be located a minimum of 25 feet beyond the toes of the dam embankment. If a utility company wants to relocate valves outside of SE Project limits, the utility company must submit a detailed plan with justification to USACE. USACE will review the plan and provide its decision on whether or not to grant a variance. Final valve type used shall be determined on a case by case basis.

5.6. Non-Pipeline Utility Crossings

Cable TV, Telecommunications and Underground Power lines are typically trenched into the ground at depths ranging from 3 to 4 feet below the ground surface. For non-pipeline utilities that will be relocated up and over the dam embankment, the utilities shall be relocated in the dam embankment above the allowable crossing elevation of 925 feet (NAVD 88).

When crossing underneath the dam embankment, the non-pipeline utility may be horizontally directionally drilled pursuant to Paragraph 5.3.2 (3). Any open annular space in the casing pipe must be grouted or filled, as noted in paragraph 5.4 (5) above.

6. UTILITY RELOCATIONS NOT CROSSING THE DAM EMBANKMENT BUT WITHIN PROJECT WORK LIMITS

Utility relocations within the SE Project work limits, but not crossing within the dam embankment or located underneath the dam embankment prism, shall be designed to meet all federal, state, and local requirements. Relocations shall be designed to withstand heavy loading from construction equipment and shall meet minimum frost protection depths as required. Consideration shall be given to prevent excavation of the dam embankment if the utility is required to be replaced or repaired. Utilities running parallel to the SE Project alignment must be located a minimum of 25 feet beyond the daylight of the SE Project borrow and local drainage ditches.

Existing utilities running parallel to the SE Project alignment and located within 25 feet of the daylight of the SE Project borrow and local drainage ditches will be evaluated on a case-by-case basis. The NFS and USACE will make a determination if the utility may remain in place.

7. INSPECTIONS

7.1. Acceptance Testing and Inspection

Pipelines crossing the dam embankment will require acceptance testing as described in Section 5.8 of Ref 1a following standards and guidance for pipe testing per Table 5-4 of Ref 1a. USACE requires that each joint be tested hydrostatically to determine whether it exceeds the maximum joint leakage specified by the pipe's applicable ASTM. Utility companies must submit a plan that outlines their proposed testing. Specifications shall be written to require testing after installation.

7.2. Post-Construction Inspection

A post-construction inspection of pipes within the inspection limits of the dam as determined in Section 6.3 of Ref 1a must be performed no sooner than 30 days after completion of the project to assess backfilling, grading, paving, placement of concrete structures, etc. See Section 5.8.3 of Ref 1a.

7.3. Recurring Inspections

Pipes must be inspected, and their conditions assessed on a recurring basis so that any potential impact to the integrity of a USACE dam can be evaluated regularly. Water distribution and sewer force main testing must include in-line inspection, hydrostatic pressure testing, direct assessment or other technology that is demonstrated to provide an equivalent understanding of the condition

of the pipe. Natural gas testing must include internal inspection tools, pressure tests, or direct assessment to address threats of external corrosion, internal corrosion and stress corrosion cracking; or other inspection technology that is demonstrated to provide an equivalent understanding of the condition of the pipe. Description of inspection methods and design of pipeline to accommodate recurring inspections shall be included in the design documentation.

Some third-party pipes/conduits serve as casings for utilities (e.g., electric, fiber optic) and will cross the dam within a larger casing pipe. Neither the utility conduit nor its larger casing pipe will require regular inspections provided these are designed in accordance with Sections 5.4 (4), 5.4 (5) and 5.6 above.

8. RESPONSIBILITIES

Per the Project Partnership Agreement (PPA), the NFS is required to perform relocations, which includes utilities. The NFS is thus responsible for:

- (1) Coordination with utility owners impacted by the proposed SE Project.
- (2) Development of a schedule to implement the relocations which includes at a minimum design, review, and construction.
- (3) Hold coordination meetings as needed during the design of relocations.
- (4) Development of draft and final demolition and relocation plans and design documentation that will be submitted to the USACE for review and comment, and inclusion into plans and specifications.
- (5) Evaluate USACE comments and coordinate with USACE reviewers to close out comments.
- (6) Depending on the type and location of proposed utilities within the Project work limits, some relocations may need to be constructed prior to dam embankment construction. For utility relocations that will need to be completed prior to the dam embankment construction, final approved relocation plans must be submitted to the appropriate USACE design team no later than 30 days prior to the 65% dam embankment design package submittal date.
- (7) Utility relocation plans shall be transmitted to the USACE Technical Lead.
- (8) Provide construction oversight of utility relocations and abandonments within the Southern Embankment Project footprint. Construction oversight shall be administered by a professional engineer. Construction reporting and documentation shall be in accordance with Section 5.9 of Ref 1a.
- (9) Facilitating recurring inspections of pipelines that are within the SE Project work limits. Schedule for recurring inspections must be coordinated with the Utility companies and USACE. All inspection reports shall be submitted to USACE.
- (10) Future utility relocations and coordination of new utilities after SE Project completion shall be in accordance with the SE Operations and Maintenance manual and pursuant

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to CFR 33 USC 408.

The USACE shall be responsible for:

- (1) Participation in coordination meetings.
- (2) Incorporating demolition and relocation plans into the dam embankment design packages, if applicable.
- (3) Timely review of draft and final demolition and relocation plans during the 65% and 95% dam embankment design packages. These will be reviewed with the dam embankment design packages in accordance with the FMM SE Project review plan.
- (4) For utilities to be relocated under the dam embankment prior to its construction, the USACE shall have 14 days to review the utility relocation documents per submittal. All comments shall be submitted in writing to the NFS and be routed through the USACE Technical Lead. Final utility relocation plans will require written approval from the USACE Design Branch chief prior to construction.
- (5) Utilize construction reporting and documentation for all utilities in the dam foundation for creation of the foundation report for the Southern Embankment.
- (6) Evaluate inspection reports from the NFS to assess the threat the pipe may represent to the structural integrity or operational adequacy of the SE Project, and ensure any recommended actions are communicated to the utility owner through the NFS.

9. DOCUMENTATION REQUIREMENTS

The section below contains the documentation requirements for utilities that are within the SE Project work limits.

9.1. DESIGN SUBMITTAL REQUIREMENTS

The NFS is required to provide submittals of their design documentation, plans, specifications, and all other supporting information for all utility relocations to the USACE for review and acceptance. At a minimum, two submittals shall be provided to the USACE for review. The first review will be a draft submittal that includes, at a minimum, sketches or relocation plans and text defining the general proposed plan. This review will be submitted to the USACE after the dam embankment's 35% project review but prior to the 65% review. The final utility submittal will include the fully developed design and relocation plan, drawings, specifications, design documentation including recurring inspection methods and access points as well as calculations for the expected volume of grout needed to fill the annular spaces, and all other supporting information, etc. This will be submitted to the USACE for approval after the SE Project's 95% review, but prior to the SE Project's final sign off. However, for utilities that will be relocated under the dam embankment prior to its construction, NFS and USACE approval must be obtained before the final ROW drawings are completed for the SE Project to ensure

adequate lands are acquired for the project. Coordinate with the Technical Lead to determine the final ROW submittal date.

9.2. MAINTENANCE AND ABANDONMENT PLAN

The NFS and the utility owners shall prepare an operation and maintenance agreement that at a minimum describes the roles and responsibility of each party. Responsible utility owners shall also prepare a maintenance and abandonment plan for all utilities located within the work limits of the SE Project. The plan shall address applicable facility maintenance, periodic valve testing, leakage, repair (if applicable), and abandonment.

9.3. POST CONSTRUCTION SUBMITTAL REQUIREMENTS

The NFS in coordination with the utility owners is required to provide construction reporting to the USACE in accordance with Section 5.9 of Ref 1a and the following:

- (1) Acceptance testing documentation and inspection records as described in Section 5.8 of Ref 1a, including standard proctor and field moisture density results.
- (2) Pipe inspection schedule and maintenance plan for future recurring inspections.
- (3) Design documentation that includes calculations for the expected volume of grout needed to fill the annular space.
- (4) Post-Construction Report that shows the actual volume of grout used for filling the annular space. This will include documentation that is quantifiable and verifies that the annular space in the pipe has been filled.
- (5) As-Built Drawings: Submit As-Built drawings for the complete utility line relocation showing complete detail, including trench dimensions, pipe profile, pipe alignment, valve locations, connection box locations, manholes and all other pertinent as-built information.
- (6) As-Built Surveys (see requirements listed in AS-BUILT REQUIREMENTS paragraph).

10. UTILITY MARKERS

Crossing identification and markings will be required for each utility that is within the SE Project work limits. Color coded fiberglass service line marker posts shall be provided for all underground utilities at each crossing point on both sides of the embankment. Markers (Length 72 in; width 1 in.) shall identify service lines, valves, and underground property. Marker posts shall be located 50 feet from the toe of the dam embankment.

Additionally, all piping shall be provided with tracer wire or other applicable passive marking system to facilitate utility location by field personnel for future maintenance and repair. For trenched pipe, the tracer wire shall be installed in the trench at a bury depth recommended by the

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manufacturer. For directionally drilled pipes, tracer wire shall be installed along the as-built pipe alignment at a bury depth recommended by the manufacturer.

Above-ground signing shall be included at each crossing with information including project stationing at pipe crossing, top of pipe elevation (including datum), pipe diameter, products that are carried in the pipe, and pipe owner and/or emergency contact.

11. AS BUILT REQUIREMENTS

As-Built plans and As-Built survey data is required for all relocations within the work limits of the SE Project. As-Built drawings shall be submitted in electronic format (drawing set in PDF format and CAD files in a format compatible with Bentley MicroStation). Survey point data (X, Y, Z, description) shall be submitted in ASCII text format. FGDC-compliant metadata files shall be submitted which describes, in general, when the as-built survey was conducted, who conducted the survey, how it was conducted, and the accuracy of the survey data. As-Built drawings and surveys shall be done in the project spatial reference system:

NAD83 (2011), North Dakota State Plane Coordinate System, South Zone
NAVD 88 (GEOID18)
US Survey Feet

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12. CONTACT

Any questions concerning this MFR should be directed to Renee McGarvey, PLA, FMM Technical Lead, St. Paul District.

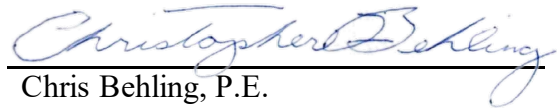
13. SIGNATURES

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ATTACHMENTS

1. Guidance Pertaining to Horizontal Directional Drilling Under a Flood Barrier/Channel
2. Draft Controlled Low-Strength Material (CLSM) Specification
3. Guidelines for Installation of Utilities Beneath Corps of Engineers Levees Using Horizontal Directional Drilling.

ATTACHMENT 1

Guidance Pertaining to Horizontal Directional Drilling Under a Flood Barrier/Channel

GUIDANCE

Pertaining to

Horizontal Directional Drilling Under a Flood Barrier/Channel

The following information and guidance pertains to horizontal directional drilling (HDD) under an engineered flood barrier (i.e floodwall, levee embankment, diversion channel).

The two primary concerns with horizontal directional drilling (HDD) beneath a levee or floodwall are:

1. Hydrofracturing (drilling fluid pressure exceeding the tensile strength of the soil) the foundation soils beneath the flood barrier during drilling operations.
2. Development of a preferential seepage path along the pipeline/utility after installation.

Generally, the COE would require the following information in the permit application for any utilities installed by HDD that pass beneath a flood barrier.

1. Proposed drill path alignment (both plan and profile views).
2. Location of entry and exit points.
3. Proposed depth of cover.
4. Diameter of the borehole, diameter of pipe and type of pipe to be installed, if used, or diameter of utility.
5. Proposed method to fill annulus.
6. Location, elevations, and clearances of all utility crossings and structures.

Based on our recent experience, we feel comfortable with the following recommendations/guidelines:

- Allow the Contractor to proceed without actively monitoring the drill pressures. Suggest that only fresh drilling mud be used. It may not be necessary to insist on this provision depending on the length of flood barrier to be traversed, however it will be easier to maintain a proper viscosity if clean mud is used.
- If “mud motor” HDD technology is used, hold the density of the drilling fluid as close as possible to 8.4 lbs/gallon (or 45seconds/quart in a Marsh Funnel).
- Bentonite can be used to fill the annulus.

- Generally, depth of burial should be at least 10 feet below grade where the utility passes under the flood barrier.
- Fluid jetting methods should not be used as a means of cutting beneath a flood protection project.
- The Contractor will be responsible for repairing any soil fracturing, drilling fluid reaching the surface, etc. as well as any slope failure resulting from the drilling process. The Contractor should note any spots where fluid loss occurs, and the COE should get a record of the amount of fluid loss as well as the location.
- Prior to commencing, the Contractor should explain their method for maintaining directional control during drilling operations. In other words, how will he/she verify where the bit is horizontally and vertically so that it does not accidentally wander beneath the levee foundation any more than absolutely necessary?
- The Contractor should provide an “as-built” drawing upon completion of the directional drilling and installation of the line. This drawing should include alignment & profile data.
- It should be plainly stated that any foundation or flood barrier damage resulting from the directional drilling will be repaired by the Contractor to City/Gov’t specifications at Contractor expense.
- The Contractor should be informed that the suspension of the requirement to actively monitor downhole pressures does not relieve them of the ultimate responsibility of leaving the flood barrier foundation in the same condition, as it was before the horizontal drilling procedure was undertaken.

ATTACHMENT 2

Draft Controlled Low-Strength Material (CLSM) Specification

Fargo Moorhead Metro Flood Reduction Project
CLSM Requirements for Utility Relocations

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Fargo Moorhead Metro Flood Reduction Project
CLSM Requirements for Utility Relocations

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CONTROLLED LOW-STRENGTH MATERIAL (CLSM)
04/12

PART 1 GENERAL

1.1 REFERENCES

All publications referenced shall be the most current version, edition, standard, latest revision, or reapproval unless otherwise stated. The following publications and standards listed below will be referred to only by the basic designation thereafter, and shall form a part of this specification to the extent indicated by the references thereto:

ASTM INTERNATIONAL (ASTM)

ASTM C 33/C 33M	(2011a) Standard Specification for Concrete Aggregates
ASTM C 94	(2011b) Ready-Mixed Concrete
ASTM C 150	(2011) Standard Specification for Portland Cement
ASTM C 220	(1991; R 2009) Standard Specification for Flat Asbestos-Cement Sheets
ASTM C 618	(2008) Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use as a Mineral Admixture in Portland Cement Concrete
ASTM C 685	(2010) Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C 940	(2010a) Expansion and Bleeding of Freshly Mixed Grouts for Preplaced-Aggregate Concrete in the Laboratory
ASTM D 4832	(2010) Preparation and Testing of Controlled Low Strength Material (CLSM) Test Cylinders
ASTM D 5971	(2007) Standard Practice for Sampling Freshly Mixed Controlled Low-Strength Material
ASTM D 6023	(2007) Standard Test Method for Density (Unit Weight), Yield, Cement Content, and Air Content (Gravimetric) of Controlled Low-Strength Material (CLSM)
ASTM D 6103	(2004) Standard Test Method for Flow Consistency of Controlled Low Strength Material (CLSM)

Fargo Moorhead Metro Flood Reduction Project
CLSM Requirements for Utility Relocations

1.2 DESIGN REQUIREMENTS

Controlled Low-Strength Material (CLSM) mixture proportion shall consist of 100 pounds or less of portland cement plus fly ash per cubic yard; pozzolan; sand; water; and a fluidifier, if required to obtain the required slump. The CLSM fill mixture proportion shall have a flow consistency of more than 8 inches. The flow consistency shall be determined in accordance with ASTM D 6103. CLSM fill shall have a compressive strength of 100 psi at 28 days. The compressive strength of the CLSM shall be determined in accordance with ASTM D 4832 after being made and cured in accordance with ASTM D 4832. The mixture proportions shall be reported in accordance with ASTM C 94. If the CLSM is to be placed using a concrete pump, the mixture proportions shall be designed so that it will not segregate in the pump line under pressure or when there is an interruption in flow.

1.3 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for information only. When used, a designation following the "G" designation identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-01 Data

On-Site Batching and Mixing

Water Reducing

Concrete Mixture Proportions

The Contractor shall submit manufacturer's literature from suppliers which demonstrates compliance with applicable specifications for all equipment and materials.

SD-07 Schedules

Placing

The methods and equipment for transporting, handling, and depositing the CLSM backfill and CLSM fill shall be submitted to the Contracting Officer prior to the first placement.

SD-08 Statements

Concrete Mixture Proportions

CLSM mixture proportions shall be the responsibility of the Contractor and shall be designed in accordance with the criteria in paragraph DESIGN REQUIREMENTS. Ten days prior to placement of CLSM, the Contractor shall submit to the Contracting Officer the mixture proportions that will produce CLSM of the qualities required. Mixture proportions shall include the dry weights of cementitious material(s); and saturated surface-dry weights of the fine aggregate; the quantities, types, and names of admixtures; and quantity of water per cubic yard of concrete. All materials included in the mixture proportions shall be of the same type and from the same source as will be used on the project.

Fargo Moorhead Metro Flood Reduction Project
CLSM Requirements for Utility Relocations

SD-09 Reports

CLSM Mixture Proportions Tests

Applicable test reports shall be submitted to verify that the CLSM mixture proportions selected will produce CLSM of the quality specified. The results of all tests and inspections conducted at the project site shall be reported informally at the end of each shift and in writing weekly and shall be delivered to the Contracting Officer within 3 days after the end of each weekly reporting period.

SD-13 Certificates

Cement

Cementitious Material will be accepted on the basis of a manufacturer's certificate of compliance.

Aggregates

Aggregates will be accepted on the basis of certificate of compliance that the aggregates meet the requirements of the specifications under which it is furnished.

PART 2 PRODUCTS

2.1 MATERIALS

2.1.1 Ready-Mixed Concrete

Ready-mixed concrete shall conform to ASTM C 94, except as otherwise specified.

2.1.1.1 Volumetric Batching and Continuous Mixing

Volumetric batching and continuous mixing shall conform to ASTM C 685.

2.1.1.2 On-Site Batching and Mixing

The Contractor shall have the option of using an on-site batching and mixing facility. The method of measuring materials, batching operation, and mixer shall be submitted for review by the Contracting Officer. On-site plant shall conform to the requirements of either ASTM C 94 or ASTM C 685.

2.1.2 Portland Cement

Portland Cement shall conform to ASTM C 150, Type I or II, low alkali.

2.1.3 Pozzolan

Pozzolan shall be Class F or C fly ash conforming to ASTM C 618.

2.1.4 Sand

Sand shall meet the requirements of fine aggregate of ASTM C 33/C 33M.

Fargo Moorhead Metro Flood Reduction Project
CLSM Requirements for Utility Relocations

2.1.5 Fluidifier

The fluidifier shall give the CLSM fill the following salient characteristics:

- a. must have less than 1 percent bleed water in accordance with ASTM C 940
- b. have an initial set time of more than 5 hours in accordance with ASTM C 220 modified by using a Ferioli apparatus
- c. have a flow consistency equal to or more than 8 inches in accordance with ASTM D 6103
- d. have a compressive strength of 100 psi at 28 days in accordance with ASTM D 4832
- e. maintain a homogeneous mixture during pumping
 1. Quantity of admixture(s) required in the mixture proportion is governed by the salient characteristics specified.
 2. The admixture shall be added as directed by the manufacturer, in most cases it added to the CLSM at the job site and mixed for a minimum of 5 minutes at mixing speed.

2.1.6 Water

Water shall be potable water that is fresh, clean, and free from sewage, oil, acid, alkali, salts, or organic matter.

2.2 MIXING AND TRANSPORTING

The CLSM shall be mixed and transported in accordance with ASTM C 94.

PART 3 EXECUTION

3.1 TRENCH PREPARATION

Once the trench has been dug it shall be cleaned of all loose material and debris to the satisfaction of the Contracting Officer before any CLMS fill is placed. The new utility pipeline shall be placed on firm ground at the bottom of the trench and a minimum of 1 foot of CLSM fill shall be placed above the top of the pipeline. The pipeline shall be securely anchored to maintain its position and prevent it from any movement during placement of the CLSM.

3.2 PLACEMENT

3.2.1 General

CLSM placement shall not be permitted when, in the opinion of the Contracting Officer, weather conditions prevent proper placement. When CLSM is mixed and/or transported by a truck mixer, the CLSM shall be delivered to the site of the work and discharge shall be completed within 1-1/2 hours (or 45 minutes when the placing temperature is 85 degrees F or greater unless a retarding admixture is used). The fluidifier shall not be added to the Ready Mix trucks until they have arrived onsite. The fluidifier shall be added to each truck at the proper dosage rate and mixed

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for 5 minutes and no more than 15 minutes before it is placed. CLSM shall be conveyed from the mixer to point of placement as rapidly as practicable by methods which prevent segregation or loss of ingredients.

3.2.2 Consolidation

Consolidation of the CLSM will not be required.

3.3 TESTS

3.3.1 General

The individuals who sample and test CLSM as required in this specification shall have demonstrated a knowledge and ability to perform the necessary test procedures equivalent to ACI minimum guidelines for certification of concrete Field Testing Technicians, Grade I.

3.3.2 Inspection Details and Frequency of Testing

3.3.2.1 Flow Consistency

Flow consistency shall be checked once during each shift that CLSM is produced for each class of concrete required. Samples shall be obtained in accordance with ASTM D 5971 and tested in accordance with ASTM D 6103. Whenever a test result is outside the specifications limits, the CLSM shall not be delivered to the placement and an adjustment should be made in the batch weights of water and fine aggregate. The adjustments are to be made so that the water-cement ratio does not exceed that specified in the submitted CLSM mixture proportion.

3.3.2.2 Compressive-Strength Specimens

At least one set of test specimens shall be made each day on CLSM placed during the day or every 10 cubic yards placed. Additional sets of test cylinders shall be made, as directed by the Contracting Officer, when the mixture proportions are changed or when low strengths are detected. A random sampling plan shall be developed by the Contractor and approved by the Contracting Officer prior to the start of construction. The plan shall assure that sampling is accomplished in a completely random and unbiased manner. A set of test specimens for concrete with strength as specified in paragraph DESIGN REQUIREMENTS shall consist of six cylinders, one tested at 7 days, one tested at 14 days, and two tested at 28 days. Two cylinders shall be tested as directed. Test specimens shall be molded and cured in accordance with ASTM D 4832 and tested in accordance with ASTM D 4832. All compressive strength tests shall be reported immediately to the Contracting Officer.

3.3.3 Density

At least one set of test specimens shall be made each day on CLSM placed during the day or every 20 cubic yards placed. A random sampling plan shall be developed by the Contractor and approved by the Contracting Officer prior to the start of construction. The plan shall assure that sampling is accomplished in a completely random and unbiased manner. Test procedures and calculations shall be in accordance with ASTM D 6023.

3.3.4 Reports

The Contractor shall prepare reports of all tests and inspections conducted

Fargo Moorhead Metro Flood Reduction Project
CLSM Requirements for Utility Relocations

at the project site.

-- End of Section --

ATTACHMENT 3

Guidelines for Installation of Utilities Beneath Corps of Engineers Levees Using Horizontal Directional Drilling

ERDC/GSL TR-02-9

Geotechnical and Structures
Laboratory



**US Army Corps
of Engineers®**
Engineer Research and
Development Center

Guidelines for Installation of Utilities Beneath Corps of Engineers Levees Using Horizontal Directional Drilling

Carlos A. Latorre, Lillian D. Wakeley, and
Patrick J. Conroy

June 2002

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Final report

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Preface

The work documented in this report was performed during May through October 2001 as part of the technology transfer component of the Geotechnical Engineering Research Program (GTERP), specifically in the work unit entitled Applications of Trenchless Technology to Civil Works. Funding for preparation and publication of this report was provided by the U.S. Army Corps of Engineers as part of its ongoing support of civil works research. Mr. Carlos Latorre, U.S. Army Engineer Research and Development Center (ERDC), Geotechnical and Structures Laboratory (GSL), is principal investigator for this work unit. The research team also includes Dr. Lillian D. Wakeley, GTERP Manager (ERDC, GSL), Mr. Patrick J. Conroy, U.S. Army Engineer District (USAED), St. Louis (MVS), and Mrs. Nalini Torres (ERDC, GSL). Mr. Jim Chang, CECW, is GTERP Technical Monitor.

The guidelines and specifications provided in this report are based on work completed previously by Dr. R. David Bennett, formerly GSL, ERDC; and Mr. Joseph M. Morones, State of California, Department of Transportation; and modified with their cooperation by Mr. Latorre. This report was prepared by Messrs. Latorre and Conroy and Dr. Wakeley. The authors gratefully acknowledge technical review of this document by Mr. George Sills, USAED, Vicksburg, Mr. Pete Cali, USAED, New Orleans; and Mr. John Wise, USAED, Fort Worth.

This report was completed at ERDC under the general supervision of Dr. Wakeley, Chief, Engineering Geology and Geophysics Branch, Dr. Robert L. Hall, Chief, Geosciences and Structures Division, GSL, and Dr. Michael J. O'Connor, Director, GSL.

At the time of publication of this report, Dr. James R. Houston was Director of ERDC, and COL John W. Morris III, EN, was Commander and Executive Director.

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1 Introduction

Background

Early methods of installing pipelines and utilities across rivers and streams involved excavation of trenches. After the placement of the pipeline, the trenches were backfilled to protect the pipeline from hazards. These early dredged crossings were generally sited at the channel crossing of the thalweg between bends of the river. Here the river is generally a wide, shallow rectangle. This location is chosen because of its hydraulic stability and the economic limitation of the dredging equipment.

In and across the U.S. Army Engineer Division, Mississippi Valley (MVD), lies the heart of the pipeline transmission network of the United States. Hundreds of individual pipelines traverse from Texas and out of the Gulf of Mexico across the numerous rivers, bayous, and wetlands of Louisiana to service the northeast population centers on the Atlantic coast. Along the leveed banks of the lower Mississippi River, pipeline crossings exist between almost every bendway. The crossings of these earthen flood control structures present a difficult and expensive construction problem resulting from concerns about the integrity of the levee which may be subjected to sliding, piping, and erosion failures.

Horizontal Directional Drilling Method

In the early 1970s, a new process was introduced to install pipelines by use of horizontal directional drilling (HDD) techniques acquired from the oil and gas industry. The method has steadily grown to achieve worldwide acceptance and has been used in over 3,000 installations totaling over 1,288 km (800 miles) of pipelines. Today pipeline installations increasingly rely upon HDD technology as the primary method for crossings of watercourses, wetlands, utility corridors, roads, railroads, shorelines, environmental areas, and urban areas.

The placement of pipelines by the HDD method requires the drilling of a guided pilot bore, generally using a 7.3- to 11.43-cm- (2-7/8- to 4-1/2-in.-) diam drill pipe. At the lead, or downhole, end of the pilot string is a fluid powered cutting tool. The cutting tool is either a drill motor to which a bit is connected or a jet bit with nozzles. Drilling fluid is pumped through the string, and fluid causes the motor to rotate which turns the bit to cut the hole. With jet bits, the velocity from the jet nozzle erodes the hole in front of the drill pipe. Located

behind the drill head is a section of the drill pipe with a small bend or angular deviation. This section, known as a bent sub or bent housing, allows the motor or jet nozzle to be directed. A steering tool is latched onto a locking tool on the drill pipe. In this steering tool are a magnetometer and other devices to determine the azimuth, inclination, and orientation of the tool or tool face. Position determinations are made, and the data from the steering tool are plotted in the field to determine the profile and alignment of the bore. Analysis of this position plot is then used to determine drilling progress and path. At a desired location, the pilot drill pipe exits the ground. The pilot bore is then enlarged by pulling reaming tools back through the bore. Once this operation is completed, the pipeline or conduit is attached to the drill pipe and pulled back through the predrilled bore. This is accomplished as the drill pipe is removed, joint by joint, from the drilled path until the pipeline reaches the ground surface at the entry end of the bore.

One of the primary parameters in horizontal directional drilling is the drilling fluid or mud. The drilling mud is usually comprised of a bentonite and water mixture with the main function to power the downhole cutting tool used to open the bore. Secondary functions of the drilling mud are to serve as a lubricant for the pipeline during installation and, in cases of rock or hard ground bores, to remove cuttings from the bore.

The use of HDD has been restricted, in part, by major misunderstandings of how the HDD process actually functions. It is assumed by many that it is similar to well drilling or tunneling in that an open bore is required. This is true only in hard geologic materials such as rock. The majority of HDD pipeline crossings installed to date have been performed in soft ground comprised chiefly of alluvial deposits of silts, sand, and clay. In these types of soils, the process begins with a small pilot bore from which various cutters are inserted to loosen the soil as it is mixed into a slurry by injection of the drilling mud. Once this slurry pathway has been made large enough, generally 25.4 to 30.5 cm (10 to 12 in.) greater than the diameter of the pipeline, the installation of the pipeline commences by pulling the pipeline back through the soft slurry pathway. Some of the in situ soil and fluid are then compressed into the formation, and the remainder of the soil is actually pumped out of the path.

The information in this report represents some of the experiences of the Corps of Engineer (CE) Districts involving HDD for installation of utilities under levees. The experience of the U.S. Army Engineer District (USAED), St. Louis, in dealing with installation of communications systems was identified as having wide applicability to the Corps. Engineering documentation from two St. Louis District projects, the set of guidelines presented in "Installation of Pipelines Beneath Levees Using Horizontal Directional Drilling" (Staheli et al. 1998), Engineer Manual (EM) 1110-2-1913 (Headquarters, Department of the Army (HQDOA) 2000), and the State of California Department of Transportation (CalTrans) Encroachment Permits, "Guidelines and Specifications for Horizontal Directional Drilling Installations" (Morones 2000), provided the basis for this report. A paper on the subject was presented at the Corps Infrastructure Systems Conference in August 2001.

Problem Identification

Although horizontal directional drilling could offer cost-effective, safe alternatives to installing pipelines with open trenching, the CE has no standard guidelines allowing the installation of pipelines with this construction method. As a result, permitting policies are extremely varied and some districts strictly prohibit the use of this technique. While recommended guidelines for pipeline installation using HDD were developed for use by the CE Districts through this work unit back in 1998, as part of a lengthy and detailed EM, the guidelines were not readily recognized by permitting offices as applicable to the questions they face. Also, there is growing pressure on Corps offices particularly by communications companies to install cables under levees.

Objectives

The objectives are to provide and distribute this information to targeted potential users like the CE District permitting offices and engineers that receive applications from utility companies to install utilities under levees. This report addresses those questions and helps CE offices with the growing pressure they are receiving from private companies to allow them to install cables/pipelines under levees. These guidelines are presented in a quick and organized manner that will provide criteria by which to evaluate proposals (e.g., application review, approving, disapproving, and/or making recommendations) for levee crossings, beneath rivers, and within levee rights-of-way using HDD techniques without endangering the levees; and the use of HDD for pipeline installation in areas where the installation technique might be applicable and capable of providing a tremendous cost savings to the Corps of Engineers and the pipeline industry. These guidelines will also help to demonstrate that, very often, these techniques offer substantial economic and operational advantages over current practices. Last but not least, these guidelines will help us stay involved in the development of this fast and fairly new emerging technology.

Potential Benefits

The pipeline industry would realize a tremendous benefit from the use of HDD in crossing of flood control levees. This benefit would include significant cost reduction in construction and maintenance presently required for levees and adjacent road crossings such as bridges, concrete boxes, earthen cover, and ramps. The use of the technique could also benefit the Corps of Engineers by: (a) eliminating blockage of levee crown from buried pipelines, pipeline bridges, or conduit boxes, (b) eliminating differential settlement imposed on levees by the construction of buried pipelines, pipeline bridges, or conduit boxes, (c) improving the operation and safety of grass cutting and other maintenance equipment on the levees, and (d) reducing risk of rupture of pipelines located above or near ground surface on levee slopes, (e) reducing disruption in urban areas, and (f) providing better public acceptance and increasing environmental consciousness.

Potential Problem

While considering any alteration request, the District's prime objective is to protect the integrity of the flood protection systems. In the case of HDD, designers must be aware and take into account during the design stage the following:

- a.* Hydrofracture during installation.
- b.* Preferred seepage path after construction.

To allow third parties to utilize HDD techniques, the District needed methods and processes to prevent these problems from occurring.

2 HDD Guidelines and Specifications

Permit Application Submittal

The permit application package should contain the following information in support of the permit application.

- a.* Location of entry and exit point.
- b.* Equipment and pipe layout areas.
- c.* Proposed drill path alignment (both plan and profile view).
- d.* Location, elevations, and proposed clearances of all utility crossings and structures.
- e.* Proposed depth of cover.
- f.* Soil analysis.
- g.* Product material (HDPE/steel), length, diameter-wall thickness, reamer diameter.
- h.* Detailed pipe calculations, confirming ability of product pipe to withstand installation loads, and long-term operational loads.
- i.* Proposed composition of drilling fluid (based on soil analysis) viscosity and density.
- j.* Drilling fluid pumping capacity, pressures, and flow rates proposed.
- k.* State right-of-way lines, property, and other utility right-of-way or easement lines.
- l.* Elevations.
- m.* Type of tracking method/system.

- n. Survey grid establishment for monitoring ground surface movement (settlement or heave) because of the drilling operation.
- o. Contractor's work plan (see page 11 in this document).

All additional permit conditions shall be set forth in the special provisions of the permit.

Table 1 outlines recommended depths for various pipe diameters:

Table 1 Recommended Minimum Depth of Cover¹	
Diameter	Depth of Cover
50 mm (2 in.) to 150 mm (6 in.)	1.2 m (4 ft)
200 mm (8 in.) to 350 mm (14 in.)	1.8 m (6 ft)
375 mm (15 in.) to 600 mm (24 in.)	3.0 m (10 ft)
625 mm (25 in.) to 1,200 mm (48 in.)	4.5 m (15 ft)
¹ These depths do not apply for crossing under flood protection projects. (Permission to reprint granted by California Department of Transportation, Office of Encroachment Permits, January 10, 2001).	

The permittee/contractor shall, prior to and upon completion of the directional drill, establish a Survey Grid Line and provide monitoring.

Upon completion of the work, the permittee shall provide an accurate as-built drawing of the installed pipe.

Soil Investigations

A soil investigation should be undertaken. This investigation must be suitable for the proposed complexity of the installation to confirm ground conditions.

Soil analysis

Common sense must be utilized when requiring the extensiveness of the soil analysis. A soil analysis is required in order to obtain information on the ground conditions that the contractor will encounter during the HDD operation.

If the contractor can go to the project site and complete an excavation with a backhoe to 0.03 m (1 ft) below the proposed depth of the bore, that is a soil investigation. In all cases when an excavation is made in creating an entrance and exit pit for an HDD project, that is also an example of a soil investigation. The HDD process is in itself a continual and extensive soil analysis as the pilot bore is made. As the varying soils and formations are encountered, the drilling slurry will change colors, therefore providing the contractor with continual additional information.

The purpose and intent of the soil analysis is to assist the contractor in developing the proper drilling fluid mixture and to ensure the CE and the Levee Board that the contractor is aware of the conditions that do exist in the area of the proposed project. This prepares the contractor in the event they should encounter a zone of pretectionics and that they would need additives or preventive measures in dealing with inadvertent returns (hydrofractures).

The discretion on the extensiveness of the soil analysis is left to each individual CE District permitting office and/or Levee Board, respectfully, for their respective areas. The HDD inspector/geotechnical engineer plays a large role in assisting the District Permitting Office and Levee Board in making decisions on the extensiveness. Each individual HDD inspector/geotechnical engineer has a general knowledge of the soil conditions in their area of responsibility.

In many circumstances, the soil information has already been prepared, either by the CE District, Levee Board, or by City and County Entities. This information, if available, should be provided to the requesting permittee.

Determination of soil investigations

The CE District Geotechnical Engineer (DGE) should determine the extensiveness of the Soil Investigation to be performed based on the complexity of the HDD operation. DGE may recommend, according to the guidelines listed below, a combination of or modification to the guideline to fit the following respective areas:

- a. Projects less than 152 mm (500 ft) in length, where the product or casing is 20 cm (8 in.) or less in diameter.¹
 - (1) A field soil sampling investigation to a depth of 0.3 m (1 ft) below the proposed drilling.
 - (2) Subsurface strata, fill, debris, and material.
- b. Projects less than 244 m (800 ft) in length, where the product or casing is 36 cm (14 in.) or less in diameter.¹
 - (1) A field soil sampling investigation to a depth of 0.3 m (1 ft) below the proposed drilling.
 - (2) Subsurface strata, fill, debris, and material.
 - (3) Particle size distribution (particularly, percent gravel and cobble).
- c. Projects where the product or casing is 41 cm (16 in.) or greater in diameter. A geotechnical evaluation by a qualified soil engineer is necessary to determine the following:¹

¹ Does not apply when crossing a flood protection project.

- (1) Subsurface strata, fill, debris, and material.
 - (2) Particle size distribution (particularly percent gravel and cobble).
 - (3) Cohesion index, internal angle of friction, and soil classification.
 - (4) Plastic and liquid limits (clays), expansion index (clays), soil density.
 - (5) Water table levels and soil permeability.
- d. Projects where the product or casing is 61 cm (24 in.) or greater in diameter, or when project crosses flood control projects. A geotechnical evaluation by a qualified soil engineer is required to determine the following:
- (1) Subsurface strata, fill, debris, and material.
 - (2) Particle size distribution (particularly, percent gravel and cobble).
 - (3) Cohesion index, internal angle of friction, and soil classification.
 - (4) Plastic and liquid limits (clays), expansion index (clays), soil density, and standard penetration tests.
 - (5) Rock strength, rock joint fracture and orientation, water table levels, and soil permeability.
 - (6) Areas of suspected and known contamination should also be noted and characterized.

Boreholes or test pits should be undertaken at approximately 75- to 125-m (250- to 410-ft) intervals where a proposed installations greater than 305 m (1,000 ft) in length and parallel to an existing road. Additional boreholes or test pits should be considered if substantial variations in soil conditions are encountered.

Should the soil investigation determine the presence of gravel, cobble, and/or boulders, care should be exercised in the selection of drilling equipment and drilling fluids. In such ground conditions, the use of casing pipes or washover pipes may be required or specialized drilling fluids utilized. Fluid jetting methods used as a means of cutting **should only be considered** where soils have a high cohesion such as stiff clays. Jetting should not be allowed when crossing under a flood protection project.

Preconstruction and Site Evaluation

The following steps should be undertaken by the permittee/contractor in order to ensure safe and efficient construction with minimum interruption of normal, everyday activities at the site:

- a. Notify owners of subsurface utilities along and on either side of the proposed drill path of the impending work through USA alert (the one-call program). All utilities along and on either side of the proposed drill path are to be located.
- b. Obtain all necessary permits or authorizations to carry construction activities near or across all such buried obstructions.
- c. Expose all utility crossings using a hydroexcavation, hand excavation, or other approved method (potholing) to confirm depth.
- d. Arrange construction schedule to minimize disruption (e.g., drilling under major highways and/or river crossings).
- e. Determine and document the proposed drill path, including horizontal and vertical alignments and location of buried utilities and substructures along the path.

The size of excavations for entrance and exit pits should be of sufficient size to avoid a sudden radius change of the pipe and consequent excessive deformation at these locations. Sizing the pits is a function of the pipe depth, diameter, and material. All pits, over 1.52 m (5 ft) in depth must abide by Occupational, Safety, and Health Administration (OSHA) regulations.

Prior to commencement of the project, the area should be physically walked over and visually inspected by District Geotechnical Engineer, the driller, and members of the Levee Board for potential entry/exit sites. The following should be addressed:

- a. When on CE/Levee Board property, it should be established whether or not there is sufficient room at the site for: entrance and exit pits; HDD equipment and its safe unimpeded operation; support vehicles; fusion machines; aligning the pipe to be pulled back in a single continuous operation.
- b. Suitability of soil conditions should be established for HDD operations. (The HDD method is ideally suited for soft subsoils such as clays and compacted sands. Subgrade soils consisting of large grain materials like gravel, cobble, and boulders make HDD difficult to use and may contribute to pipe damage.)
- c. The site should be checked for evidence of substructures, such as man-hole covers, valve box covers, meter boxes, electrical transformers, conduits or drop lines from utility poles, and pavement patches. HDD may be a suitable method in areas where the substructure density is relatively high.

Installation Requirements

The permittee shall ensure that appropriate equipment is provided to facilitate the installation: in particular, the drill rig shall have sufficient pulling capacity to meet the required installation loads determined by the detailed pipe calculations. The drill rig should have the ability to provide pull loads, push loads, torque, and the permittee shall ensure that they are monitored during the drilling operation. The permittee shall ensure the drill rod can meet the bend radii required for the proposed installation (a general rule of thumb is 100 times, in feet, the diameter of the installed pipe in inches).

During construction, continuous monitoring and plotting of pilot drill progress shall be undertaken. This is necessary to ensure compliance with the proposed installation alignment and allow for the undertaking of appropriate course corrections that would minimize “dog legs,” should the bore begin to deviate from the intended bore path. The actual path of the pilot hole should be plotted against the design drill path.

Monitoring shall be accomplished by manual plotting based on location and depth readings provided by the onboard locating/tracking system or by hand-held walkover tracking systems. These readings map the bore path based on information provided by the locating/tracking system. Readings or plot points shall be undertaken on every drill rod.

For installations where tight control of alignment and grade is required, readings shall be undertaken every 1.0 to 1.5 m (3 to 5 ft). At the completion of the bore, an as-built drawing shall be provided. Prior to commencement of a directional drilling operation, proper calibration of the sonde equipment shall be undertaken.

Monitoring of the drilling fluids such as the pumping rate, pressures at the drill rig and pressures in the annular space behind the drill bit (when drilling under flood control projects), viscosity, and density during the pilot bore, back reaming, and/or pipe installation stages shall be undertaken to ensure adequate removal of soil cuttings and the stability of the borehole is maintained. Excess drilling fluids shall be contained at entry and exit points until recycled or removed from the site. Entry and exit pits should be of sufficient size to contain the expected return of drilling fluids and soil cuttings.

The permittee shall ensure that all drilling fluids are disposed of in a manner acceptable to the appropriate local, state, or federal regulatory agencies. When drilling in contaminated ground, the drilling fluid shall be tested for contamination and disposed of appropriately. Restoration of damage to a levee caused by hydrofracture or any other aspect of the directional drilling operation shall be the responsibility of the permittee. Plans for all restoration or repair work shall be submitted for approval by the Levee District or Corps of Engineers District.

To minimize heaving during pullback, the pullback rate shall be determined by which maximizes the removal of soil cuttings and which minimizes compaction of the ground surrounding the borehole. The pullback rate shall also

minimize overcutting of the borehole during the back reaming operation to ensure that excessive voids are not created and result in postinstallation settlement.

The permittee shall, prior to and upon completion of the directional drill, establish a Survey Grid Line and provide monitoring as outlined in their submitted detailed monitoring plan. Subsurface monitoring points shall be established along the HDD centerline and along any flood protection project that the HDD crosses under to provide early indications of settlement, since large voids may not materialize during drilling as a result of pavement bridging.

Should settlement occur, all repairs would be the responsibility of the permittee. To prevent future settlement should the drilling operation be unsuccessful, the permittee shall ensure the backfill of any void(s) with grout or backfilled by other means. Plans for all restoration or repair work shall be submitted for approval.

Considerations

The following considerations must be taken into account.

- a. Different ground conditions:* The availability of adequate geotechnical information is invaluable in underground construction; it acts to reduce the risk born by the permittee/contractor. However, even in the presence of good geotechnical data, unexpected ground conditions may be encountered. The Contractor's plan should describe the response to different ground conditions.
- b. Turbidity of water and inadvertent returns:* During construction, events like drill bit lockup or being off the design drill path may lead to work stoppage. The permittee/contractor should offer a mechanism to mutually address and mitigate these problems if and when they should arise. For example, contingency plans for containment and disposal of inadvertent returns or hydrofractures.

Permittee/contractor responsibilities

The permittee/contractor should provide the following items: construction plan, site layout plan, project schedule, communication plan, safety procedures, emergency procedures, company experience record, contingencies plan, and drilling fluid management plan.

Construction plan requirements. The permittee shall identify in the construction plan:

- a. Location of entry and exit pits.*
- b. Working areas and their approximate size.*

- c.* Proposed pipe fabrication and layout areas.
- d.* State right-of-way lines, property lines.
- e.* Other utility right-of way and easement lines.
- f.* Pipe material and wall thickness.
- g.* Location of test pits or boreholes undertaken during the soil investigation.
- h.* Identify the proposed drilling alignment (both plan and profile view) from entry to exit.
- i.* Identify all grades and curvature radii.
- j.* All utilities (both horizontal and vertical).
- k.* Structures with their clearances from the proposed drill alignment.
- l.* Confirm the minimum clearance requirements of affected utilities and structures.
- m.* Required minimum clearances from existing utilities and structures.
- n.* Diameter of pilot hole, and number and size of prereams/backreams.
- o.* Access requirements to site (if required).
- p.* Crew experience.
- q.* Type of tracking equipment.

Locating and tracking. The permittee shall describe the method of locating and tracking the drillhead during the pilot bore. Systems include walkover, wire-line, or wireline with wire surface grid. The locating and tracking system shall be capable of ensuring the proposed installation can be installed as intended.

Typical walkover sondes have an effective range of 10 to 15 m, depending on the Electro-magnetic properties of the soil and the extent of local magnetic interference. Depending on the profile of the borehole, the driller may lose contact with the sondes over certain sections of the alignment. As much as practically possible, the sonde should maintain contact with the drill bit. If the “blind” section is expected to be too long or in the vicinity of a buried object, the project engineer may specify the use of a wire-line system or a magnetic navigation tool.

The locating and tracking system shall provide the following information:

- a.* Clock and pitch information.
- b.* Depth.

- c. Beacon temperature.
- d. Battery status.
- e. Position (x,y).
- f. Azimuth: Where direct overhead readings (walkover) are not possible.

Figure 1 shows a universal housing that will work with any drill-string on all HDD rigs. The placement of the sonde should be before the backreamer. This housing can be utilized in the initial pilot bore. After exiting, the cutting head can be removed and the reamer installed. This housing chamber can utilize any of the sonde batteries manufactured, regardless of manufacturer. There is also a 6-cm (2.5 in.) mini-sonde combination available for smaller rigs.

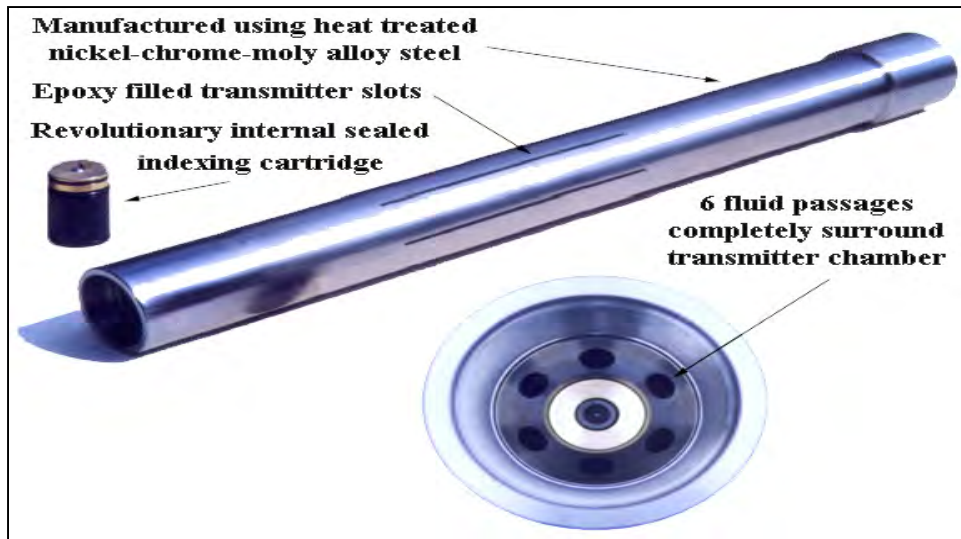


Figure 1. Universal housing for drill-string on HDD rigs (Permission to reprint granted by California Department of Transportation, Office of Encroachment Permits, January 10, 2001)

Drilling fluids management plan. The following information should be provided as part of the drilling fluid management plan. The proposed viscosities for soil transportation to the entry and exit pits are:

- a. Pumping capacity and pressures must be estimated.
- b. Source of fresh water for mixing the drilling mud must be identified. (Necessary approvals and permits are required for sources such as streams, rivers, ponds, or fire hydrants.)
- c. Method of slurry containment must be described and detailed.
- d. Method of recycling drilling fluid and spoils (if applicable) must be explained.

- e. Method of transporting drilling fluids and spoils offsite must be described.

Drilling fluid pressures in the borehole should not exceed that which can be supported by the foundation soils. Calculation of maximum allowable pressures shall be done for all points along the drill path, taking into account the shear strength of the foundation soils, the depth of the drill path, the bore diameter, and the elevation of the groundwater table. Drilling fluids serve the following functions:

- a. Remove cuttings from the bottom of the hole and transport them to the surface.
- b. Hold cuttings in suspension when circulation is interrupted.
- c. Release cuttings at the surface.
- d. Stabilize the hole with an impermeable cake.
- e. Cool and lubricate the drill bit and drill string.
- f. Control subsurface pressures.
- g. Transmit hydraulic horsepower.
- h. Cool the locating transmitter sonde preventing burnout.

Previous experience. The permittee's contractor should provide a list of projects completed by his company, location, project environment (e.g., urban work, river crossing), product diameter, and length of installation. The permittee's contractor should also provide a list of key personnel.

Safety. The drilling unit should be equipped with an electrical strike safety package. The package should include warning sound alarm, grounding mats (if required), and protective gear. The permittee/contractor should have a copy of the company safety manual that includes:

- a. Operating procedures that comply with applicable regulations, including shoring of pits and excavations when required.
- b. Emergency procedures for inadvertently boring into a natural gas line, live power cable, water main, sewer lines, or a fiber-optic cable, which comply with applicable regulations.
- c. Emergency evacuation plan in case of an injury.

Contingency plans. The Contingency plan should address the following:

- a. Inadvertent return, spill (e.g., drilling fluids, and hydraulic fluids), including measures to contain, clean, and repair the affected area.

- b.* Cleanup of surface seepage of drilling fluids and spoils (i.e., hydrofracture).

Communication plan. The communication plan should address the following:

- a.* The phone numbers for communication with owner or his representative on the site.
- b.* Identification of key person(s) who will be responsible for ensuring that the communications plan is followed.
- c.* Issues to be communicated including safety, progress, and unexpected technical difficulties.

Traffic control.

- a.* When required, the permittee/contractor is responsible for supplying and placing warning signs, barricades, safety lights, and flags or flagmen, as required for the protection of pedestrians and vehicle traffic.
- b.* Obstruction of the roadway, on major road, should be limited to off-peak hours.

Additional Requirements

Information that may be required, include other permits, bonding, and certification as listed in the following sections.

Additional permits

- a.* Obtaining water (i.e., hydrants, streams, etc.)
- b.* Storage, piling, and disposal of material.
- c.* Water/bentonite disposal.
- d.* Any other permits required carrying out the work.

Bonding and certification requirements

- a.* Payment bond (if required).
- b.* Performance bond (if required).
- c.* Certificate of insurance.
- d.* WCB certificate letter.

- e. ACSA certificate of recognition.

Drilling Operations

The following points provide general remarks and rules of thumb related to the directional boring method.

- a. Only operators who have “Proof of Training” by the North American Society of Trenchless Technology (NASTT) should be permitted to operate the drilling equipment in CE/Levee Board property.
- b. Drilling mud pressure in the borehole should not exceed that which can be supported by the foundation soils to prevent heaving or a hydraulic fracturing of the soil (i.e., hydrofracture). Allowing for a sufficient cover depth does not necessarily guarantee against hydrofracture. Sound, cautious drilling practice minimizes the chance of hydrofracture occurrence. Also, measuring mud pressures in the annular space behind the drill bit and comparing these mud pressures with the calculated maximum allowable pressures help minimize the occurrence of hydrofracture. Typical bore depth of 0.75 to 1.0 m gives pipes with an Outside Diameter (O.D.) of 50-200 mm a minimum cover of 0.65 m. While circumstances may dictate greater depths, shallower depths are not recommended.
- c. The drill path alignment should be as straight as possible to minimize the fractional resistance during pullback and to maximize the length of the pipe that can be installed during a single pull.
- d. It is preferable that straight tangent sections be drilled before the introduction of a long radius curve. Under all circumstances, a minimum of one complete length of drill rod should be utilized before starting to level out the borehole path.
- e. The radius of curvature is determined by the bending characteristics of the product line, and it is increasing with diameter.
- f. Entrance angle of the drill string should be between 8 and 20 deg, with 12 deg being considered optimal. Shallower angles may reduce the penetrating capabilities of the drilling rig, while steeper angles may result in steering difficulties, particularly in soft soils. A recommended value for the exit angle of the drill string is within the range of 5 to 10 deg.
- g. Whenever possible, HDD installation should be planned so that back reaming and pulling for a leg can be completed on the same day. If necessary, it is permissible to drill the pilot hole and preream one day, and complete both the final ream and the pullback on the following day.
- h. If a drill hole beneath a levee must be abandoned, the hole should be backfilled with grout or bentonite to prevent future subsidence.

- i. Pipe installation should be performed in a manner that minimizes the over-stressing and straining of the pipe. This is of particular importance in the case of a polyethylene pipe.

Equipment setup and site layout

- a. Sufficient space is required on the rig side to safely set up and operate the equipment. The workspace required depends on the type of rig to be used. A small rig may require as little as 3- by 3-m working space, while a large river crossing unit requires a minimum of 30- by 50-m working area. A working space of similar dimensions to that on the rig side should be allocated on the pipe side, in case there is a need to move the rig and attempt drilling from this end of the crossing.
- b. If at all possible, the crossing should be planned to ensure that drilling proceed downhill, allowing the drilling mud to remain in the hole, minimizing inadvertent return.
- c. Sufficient space should be allocated to fabricate the product pipeline into one string, thus enabling the pullback to be conducted in a single continuous operation. Tie-ins of successive strings during pullback may considerably increase the risk of an unsuccessful installation.

Drilling and back-reaming

- a. Drilling mud should be used during drilling and back reaming operations. Using water exclusively may cause collapse of the borehole in unconsolidated soils. While in clays, the use of water may cause swelling and subsequent jamming of the product.
- b. Heaving may occur when attempting to back-ream a hole that is too large. This can be avoided by using several prereams to gradually enlarge the hole to the desired diameter.
- c. A swivel should be included between the reamer and the product pipe to prevent the transfer of rotational torque to the pipe during pullback.
- d. In order to prevent over stressing of the product during pullback, a weak link, or break-away pulling head, may be used between the swivel and the leading end of the pipe. More details regarding breakaway pulling heads can be found in paragraph entitled “Break-away Pulling Head.”
- e. The pilot hole must be back-reamed to accommodate and permit free sliding of the product inside the borehole. A rule of thumb is to have a borehole 1.5 times the outer diameter of the product. This rule of thumb should be observed particularly with the larger diameter installations (≥ 250 -mm O.D.). Some recommended values for final preream diameter

as a function of the product O.D. are given in Table 2. These values should be increased by 25 percent if excessive swelling of the soil is expected to occur or the presence of boulders/cobbles is suspected.

- f. The conduit must be sealed at either end with a cap or a plug to prevent water, drilling fluids, and other foreign materials from entering the pipe as it is being pulled back.
- g. Pipe rollers, skates, or other protective devices should be used to prevent damage to the pipe from the edges of the pit during pullback, eliminate ground drag, or reduce pulling force and subsequently reduce the stress on the product.
- h. The drilling mud in the annular region should not be removed after installation but permitted to solidify and provide support for the pipe and neighboring soil.

Table 2 Recommended Back-Ream Hole Diameter (after Popelar et al. 1997)	
Nominal Pipe Diameter, mm	Back-Ream Hole Diameter, mm
50	75 to 100
75	100 to 150
100	150 to 200
150	250 to 300
200	300 to 350
250	350 to 400
≥300	At least 1.5 times product OD

Drilling Fluid - Collection and Disposal Practices

The collection and handling of drilling fluids and inadvertent returns, along with the need to keep drilling fluids out of streams, streets, and municipal sewer lines, have been among the most debated topics. These points include:

- a. Drilling mud and additives to be used on a particular job should be identified in the permit package, and their Material Safety Data Sheets (MSDS) should be provided to the Permit Office.
- b. Excess drilling mud slurry shall be contained in a lined pit or containment pound at exit and entry points, until recycled or removed from the site. Entrance and exit pits should be of sufficient size to contain the expected return of drilling mud and spoils.
- c. Methods to be used in the collections, transportation, and disposal of drilling fluids, spoils, and excess drilling fluids should be in compliance with local ordinances, regulations, and environmentally sound practices in an approved disposal site.

- d. The slurry should be tested for contamination and disposed of in a manner which meets government requirements when working in an area of contaminated ground.
- e. Precautions should be taken to keep drilling fluids out of the streets, manholes, sanitary and storm sewers, and other drainage systems, including streams and rivers.
- f. Recycling drilling fluids is an acceptable alternative to disposal.
- g. All diligent efforts should be made by contractor to minimize the amount of drilling fluids and cuttings spilled during the drilling operation, and complete cleanup of all drilling mud overflows or spills shall be provided.

There are legitimate concerns associated with the fluid pressures used for excavation during the horizontal directional drilling process and the risk of hydraulic fracturing. Reasonable limits must be placed on maximum fluid pressures in the annular space of the bore to prevent inadvertent drilling fluid returns to the ground surface. However, it is equally important that drilling pressures remain sufficiently high to maintain borehole stability, since the ease in which the pipe will be inserted into the borehole is dependent upon borehole stability. Limiting borehole pressures are a function of pore pressure, the pressure required to counterbalance the effective normal stresses acting around the bore (depth), and the undrained shear strength of the soil.

Tie-Ins and Connections

Trenching may be used to join sections of conduits installed by the directional boring method. An additional pipe length, sufficient for joining to the next segment, should be pulled into the entrance pit. This length of the pipe should not be damaged or interfere with the subsequent drilling of the next leg. The contractor should leave a minimum of 1 m of conduit above the ground on both sides of the borehole.

Alignment and Minimum Separation

The product should be installed to the alignment and elevations shown on the drawings within the prespecified tolerances (tolerance values are application dependent, for example, in a major river crossing, a tolerance of ± 4 m from the exit location along the drill path center line may be an acceptable value). This tolerance is not acceptable when installing a product line between manholes. Similarly, grade requirements for a water forcemain are significantly different from those on a gravity sewer project.

When a product line is installed in a crowded right-of-way, the issue of safe minimum separation distance arises. Many utility companies have established regulations for minimum separation distances between various utilities. These

distances needed to be adjusted to account for possible minor deviation when a line product is installed using HDD technology. As a rule of thumb, if the separation distance between the proposed alignment and the existing line is 5 m or more, normal installation procedures can be followed. If the separation is 1.5 m or less, special measures, such as observation boreholes are required. The range between 1.5 and 5 m is a “gray” area, typically subject to engineering judgment (a natural gas transmission line is likely to be treated more cautiously than a storm water drainage line).

Break-Away Pulling Head

Recent reports from several natural gas utility companies reveal concerns regarding failure experienced on HDPE pipes installed by horizontal directional drilling. These failures were attributed to deformation of the pipe due to the use of excessive pulling force during installation. A mitigation measure adopted by some gas companies involves the use of break-away swivels to limit the amount of force used when pulling HDPE products. Some details regarding these devices and their applications are given below.

- a. The weak link used can be either a small diameter pipe (but same SDR) or specially manufactured break-away link. The latter consists of a breaking pin with a defined tensile strength incorporated in a swivel. When the strength of the pin is exceeded it will break, causing the swivel to separate. A summary of pulling head specifications is given in Table 3 (all products are SDR 11). Note that the values provided in Table 3 could be considered conservative.

Table 3		
Pulling Head Specifications		
Pipe Diameter (in.)¹	Diameter of Break-Away Swivel (in.)	Maximum Allowable Pulling Force (lb)²
1-1/4	7/8	850
2	1-1/4	1,500
4	1 3/8	5,500
6	2-1/2	12,000
8	3	18,500
¹ To convert inches to centimeters, multiply by 2.54.		
² To convert pounds to kilograms, multiply by 0.4535.		

- b. The use of break-away swivels is particularly warranted when installing small diameter HDPE pipes (up to 10-cm (4 in.) O.D.). Application of such devices in the installation of larger diameter products is not currently a common practice.
- c. If the drilling equipment-rated pulling capacity is less than the safe load, the use of a weak link may not be required.

- d. Exceeding the product elastic limit can be avoided simply by following good drilling practices, namely: regulating pulling force; regulating pulling speed; proper ream sizing; and using appropriate amounts of drilling slurry fluid.

Protective Coatings

In an HDD installation, the product may be exposed to extra abrasion during pullback. When installing a steel pipe, a form of coating which provides a corrosion barrier as well as an abrasion barrier is recommended during the operation, the coating should be well bonded and have a hard smooth surface to resist soil stresses and reduce friction, respectively. A recommended type of coating for steel pipes is mill applied Fusion Bonded Epoxy.

Site Restoration and Postconstruction Evaluation

All surfaces affected by the work shall be restored to their preconstruction conditions. Performance criteria for restoration work will be similar to those employed in traditional open excavation work. If required, the permittee/contractor shall provide a set of as-built drawings including both alignment and profile. Drawings should be constructed from actual field readings. Raw data should be available for submission at any time upon request. As part of the “As-Built” document, the contractor shall specify the tracking equipment used, including method or confirmatory procedure used to ensure the data were captured.

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14. ABSTRACT Applications for permits to drill beneath levees are increasing in permitting offices of the U.S. Army Corps of Engineer Districts. This report provides a basis for consistent and science-based consideration of these permit applications. It describes methods of horizontal directional drilling (HDD) beneath levees and lists the types of geotechnical and other data that are essential to judging the safety of proposed drilling for infrastructure modifications and installation of utilities. Critical considerations include setback distances, levee toe stability, thickness and integrity of the top stratum, and other geotechnical parameters. Data provided for vertical and horizontal permeabilities, top stratum thickness, hydraulic gradient at levee toe, and other parameters are based on experience in the U.S. Army Engineer Districts, Vicksburg and St. Louis, and the California Department of Transportation. In appropriate geotechnical settings with appropriate operational care, utilities can be installed beneath flood-control levees using HDD without compromising the integrity and function of the levee.					
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EXHIBIT E
PLAN TO PROTECT IN PLACE



Technical Memorandum

Date: October 18, 2022 (Revision #2)
To: Kris Bakkegard, Director of Engineering
From: Jeffrey Ebsch, PE, Project Manager
Subject: Selection of Alternative – Cass Rural Water District Reservoir A Water Treatment Plant

Introduction

The Metro Flood Diversion Authority (MFDA) is planning to mitigate flooding for the Fargo-Moorhead (FM) metropolitan area by constructing a flood diversion project. This diversion is expected to result in additional flooding on the upstream side of the Southern Embankment (SE) in an area labeled the “Upstream Mitigation Area” (UMA) during low frequency flood events. Cass Rural Water District’s (CRWD) Reservoir A Water Treatment Plant (WTP) is located in the UMA and will be impacted by flooding. The existing system is shown in Figure 1.

Three alternatives were evaluated to determine options for the Reservoir A WTP. A Technical Memorandum was prepared on March 4, 2022, by the FMFA’s Engineer, Houston Moore Group (HMG). This 3/4/22 TM compared all three (3) alternatives, including justified work items, map of proposed improvements and estimated costs. The three (3) alternatives evaluated were:

Alternative 1: Relocate Reservoir A WTP
Alternative 2: Abandon Reservoir A WTP; Expand Capacity at Reservoir E
Alternative 3A: Protect in Place Reservoir A WTP

On February 23, 2022, representatives of CRWD and the MFDA met to review the three alternatives. Alternative 3A was selected by the representatives of CRWD as being the preferred alternative. The information will be presented at CRWD’s upcoming board meeting for approval.

The purpose of this Technical Memorandum is to provide a summary of the list of improvements included with Alternative 3A – Protect in Place Reservoir A Water Treatment Plant. A summary of the improvements that were determined to be justified and a detailed Engineer’s Opinion of Probable Costs has been developed. At the end of the Technical Memorandum is a list of reference documents which were developed leading up to this alternative selection.

Selected Alternative 3A – Protect in Place Reservoir A (Protect Reservoir A Water Treatment Plant with Ring Levee; New Wells at Reservoir A)

Alternative 3A includes protecting the Reservoir A Water Treatment Plant where it is currently located. Ring levees would be built and adjustments would be made to the well site, including installation of new wells. A 10-inch main would be constructed from the Reservoir A WTP and extend east along Cass County Highway 16 across the Southern Embankment (SE) to the dry side (downstream side) of the SE. This main will be upsized to 12-inch fusible poly pipe for the portion of the main crossing the SE, assuming the crossing will be within the freeboard of the dam (i.e., “up and over”), in order to maintain the hydraulic capacity of this main. An existing 4” gravity discharge pipe, which currently discharges to the Wild Rice River, will be re-routed with a discharge point in the borrow ditch. The borrow ditch will be constructed on the west side of the SE, south of County Road 16.

This alternative includes proposed improvements to correct issues created in the system by protecting the treatment plant and the removal of water mains from the UMA. This alternative also includes improvements to provide resiliency and redundancy to the CRWD transmission and distribution system. Alternate 3A is shown in Figure 4.

1. Transmission pipeline from Reservoir A to dry side connection across Southern Embankment (0.5 Miles of 12-Inch Watermain; Crossing of SE-2B)
 - a. 0.5 miles of 12-inch Fusible Watermain
 - i. The watermain will be constructed as an “up and over” of the dam.
 - ii. The watermain will be upsized to 12” fusible poly pipe.
 - b. Connections will be at Reservoir A WTP and existing 8” Watermain at Intersection of Cass County Highway 16 and 38th Street South
 - c. 4” Gravity discharge pipe from Reservoir A WTP will be re-routed to the borrow ditch on the west side of the Southern Embankment.
2. Expand Transmission capacity from Reservoir E to Reservoir B (8 miles of 6-inch Watermain)
 - a. 8 Miles of 6-Inch Watermain, to improve capacity from Reservoir E Water Treatment Plant to Reservoir B
 - b. Improvements include the following segments:
 - i. 1 Mile of 6-inch Watermain along Cass County Highway 18/52nd Street SE north of Kindred, from 164th Ave SE east to 165th Avenue SE
 - ii. 3 Miles of 6-Inch Watermain along Cass County Highway 15/165th Avenue SE, from Cass County Highway 18 north to 49th Street SE
 - iii. 2.5 Miles of 6-Inch Watermain along 49th Street SE, from Cass County Highway 15 east to the west side of the Sheyenne River
 - iv. 1.0 Miles of 6-Inch Watermain along the west side of the Sheyenne River, from 49th Street SE north to Cass County Highway 16
 - v. 0.5 Miles of 6-Inch Watermain along Cass County Highway 16, from the west side of the Sheyenne River east to Cass County Highway 36/168th Avenue SE
3. Transmission pipeline from Reservoir B to Reservoir C (Phase 1) – County Road 14 and County Road 17 (2 miles of 10-inch Watermain)
 - a. 2-miles of 6-inch Watermain were Justified
 - b. 2-miles of 10-inch Watermain have already been installed. This improvement was reimbursed by the FMDA.

- c. The costs for this improvement were not included in the Engineer's Opinion of Probable Cost because it has already been completed.
 - d. The improvement that was installed included the following segments of pipe:
 - i. 1 Mile of 10-Inch Watermain along Cass County Highway 14 (100th Avenue S), from 57th Street S west to Cass County Highway 17 (170th Avenue SE)
 - ii. 1 Mile of 10-Inch Watermain along Cass County Highway 17 (170th Avenue SE), from 100th Avenue S south to 112th Avenue S
- 4. Transmission pipeline from Reservoir B to Reservoir C (Phase 2) – from Intersection of County Road 16/81st Street South, across Diversion Channel, to Cass County Highway 17 (1.8 miles of 10-inch Watermain; crossing of Diversion Channel)
 - a. 1.8 Miles of 10-Inch Watermain
 - b. Crossing of Diversion Channel, Downstream (NW) of the Diversion Inlet Structure
 - c. Connections will be to the two existing 4-Inch Mains at intersection of County Highway 16 and 81st Street South and the newly installed 10" Watermain at intersection of Cass County Highway 17 and 112th Avenue South.
- 5. Pipeline Improvements to Serve Areas Impacted by the Abandonment of Transmission and service Pipelines within the Impacted UMA – Kindred Area (7 miles of 4-inch Watermain)
 - a. 7 miles of 4-Inch Watermain
 - b. Improvements include the following segments:
 - i. 0.5 Miles of 4-Inch Watermain along Elm Street from Reservoir R west to 164th Avenue SE (west side of Kindred, ND)
 - ii. 1.5 miles of 4-Inch Watermain along 164th Avenue SE, from Elm Street (1 mile west of Kindred) south to ND Highway 46
 - iii. 5 miles of 6-inch Watermain along ND Highway 46, from 164th Avenue SE east to 170th Avenue SE
- 6. Pipeline Improvements to Serve Areas Impacted by the Abandonment of Transmission and service Pipelines within the Impacted UMA – Norman Area (1.5 miles of 2-inch Watermain)
 - a. 1.5 Miles of 2-Inch Watermain
 - b. Improvements include the following segments:
 - i. 1.5 Miles of 2-Inch Watermain along 169th Avenue SE, from Cass County Highway 18 north 1.5 Miles
- 7. Expand CRWD Service with City of Fargo Water (2.5 Miles of 16-inch Watermain)
 - a. Local Share Costs (25%) have been included. 75% cost share from DWR have been deducted.
 - i. The ND DWR approved funding of 75% of the pre-construction (design/bidding) costs of this improvement at their Commission Meeting in October 2021.
 - ii. A future Construction cost share request will be submitted to the DWR for 75% cost share of Construction expenses, in Spring or Summer 2022.
 - b. 2.5 Miles of 16-Inch Watermain
 - c. Improvements include the following segments:
 - i. Watermain will begin at the Fargo Ground Storage Reservoir (GSR), which is located south of 52nd Avenue S and west of Veteran's Boulevard
 - ii. 2.0 Miles of 16-Inch Watermain along 57th Street S, from the Fargo GSR south to 76th Avenue S

- iii. 0.5 Miles of 16-Inch Watermain along 76th Avenue S, from 57th Street S west 0.5 Miles
- 8. Transmission Pipeline Improvements along County Highway 21 and County Highway 14, Including Through St. Benedict's (4 miles of 6-inch Watermain)
 - a. 4 Miles of 6-Inch Watermain
 - b. Improvements include the following segments:
 - i. 2 miles of 6-inch Watermain along 38th Street South (County Highway 21), from Cass County Highway 16/124th Avenue S north through St Benedicts to Cass County Highway 14/100th Avenue S
 - ii. 2 miles of 6-inch Watermain Along Cass County Highway 14, from 38th Street S west to 57th Street S
- 9. Crossing of Southern Embankment Section SE-3 at Cass County Highway 81 (3,000 LF of (2) Parallel 8-Inch Watermains)
 - a. 3,000 LF of (2) Parallel 8-Inch Watermains (6,000 LF Total Length) Along West Side of Cass County Highway 81
 - b. Crossing of Southern Embankment Section SE-3 and Borrow Ditch, at a point approximately 500 feet west of Cass County Highway 81.
 - c. This improvement is not shown on the attached Figure 4.

The estimated total project cost of Alternative 3A is \$15,802,639. An Engineer's Opinion of Probable Cost has been included.

References

The following documents were developed and form the basis for the evaluation and alternative selection.

AE2S Technical Memorandums

- 1) Technical Memorandum, RE: CRWD Upper Mitigation Area Infrastructure Improvements, From Brian Bergantine, PE, AE2S, May 27, 2021
- 2) Updates to Technical Memorandum, RE: CRWD Upper Mitigation Area Infrastructure Improvements, From Brian Bergantine, PE, AE2S, November 29, 2021

HMG Technical Memorandums and Letters

- 1) Technical Memorandum RE: Review of Technical Memorandum re: CRWD – Upper Mitigation Area Infrastructure Improvements Dated May 27, 2021, from Tyrel Clark, PE, HMG, October 11, 2021
 - a. Purpose: Evaluation of Distribution System Improvements
- 2) Technical Memorandum RE: Review of Technical Memorandum re: CRWD – Upper Mitigation Area Infrastructure Improvements Dated May 27, 2021, from Tyrel Clark, PE, HMG, October 11, 2021
 - a. Purpose: Evaluation of Water Treatment Plant Improvements
- 3) Technical Memorandum, RE: Review of Technical Memorandum RE: CRWD – Upper Mitigation Area Infrastructure Improvements dated May 27, 2021, from Tyrel Clark, PE, HMG, December 14, 2021
 - a. Purpose: Updated Evaluation of Distribution System Improvements (Updates to 10/11/21 TM)
- 4) Letter to FMDA RE: Reservoir A Water Treatment Plant Alternatives Analysis, Cass Rural Water District, From Jeffrey Ebsch, PE, HMG, December 17, 2021
 - a. Purpose: Include Summary of Alternative 3 and Improvements Justified Through Policy Based Considerations
- 5) Technical Memorandum RE: 16 Inch Watermain – City of Fargo to CRWD Reservoir C, From Jeffrey Ebsch, PE, HMG, February 18, 2022
 - a. Purpose: Documentation of Information Regarding Proposed 16 Inch Watermain Connection to City of Fargo
- 6) Technical Memorandum, RE: Summary of Alternatives – Technical Memorandum RE: CRWD – Upper Mitigation Area Infrastructure Improvements dated May 27, 2021 (Revised November 29, 2021), from Tyrel Clark, PE, HMG, March 4, 2022
 - a. Purpose: Summary of Alternatives for Reservoir A Water Treatment Plant
- 7) Technical Memorandum, RE: Review of Technical Memorandum RE: CRWD – Upper Mitigation Area Infrastructure Improvements dated May 27, 2021, from Tyrel Clark, PE, HMG, March 4, 2022
 - a. Purpose: Summary of Justified Improvements for the Three Alternatives

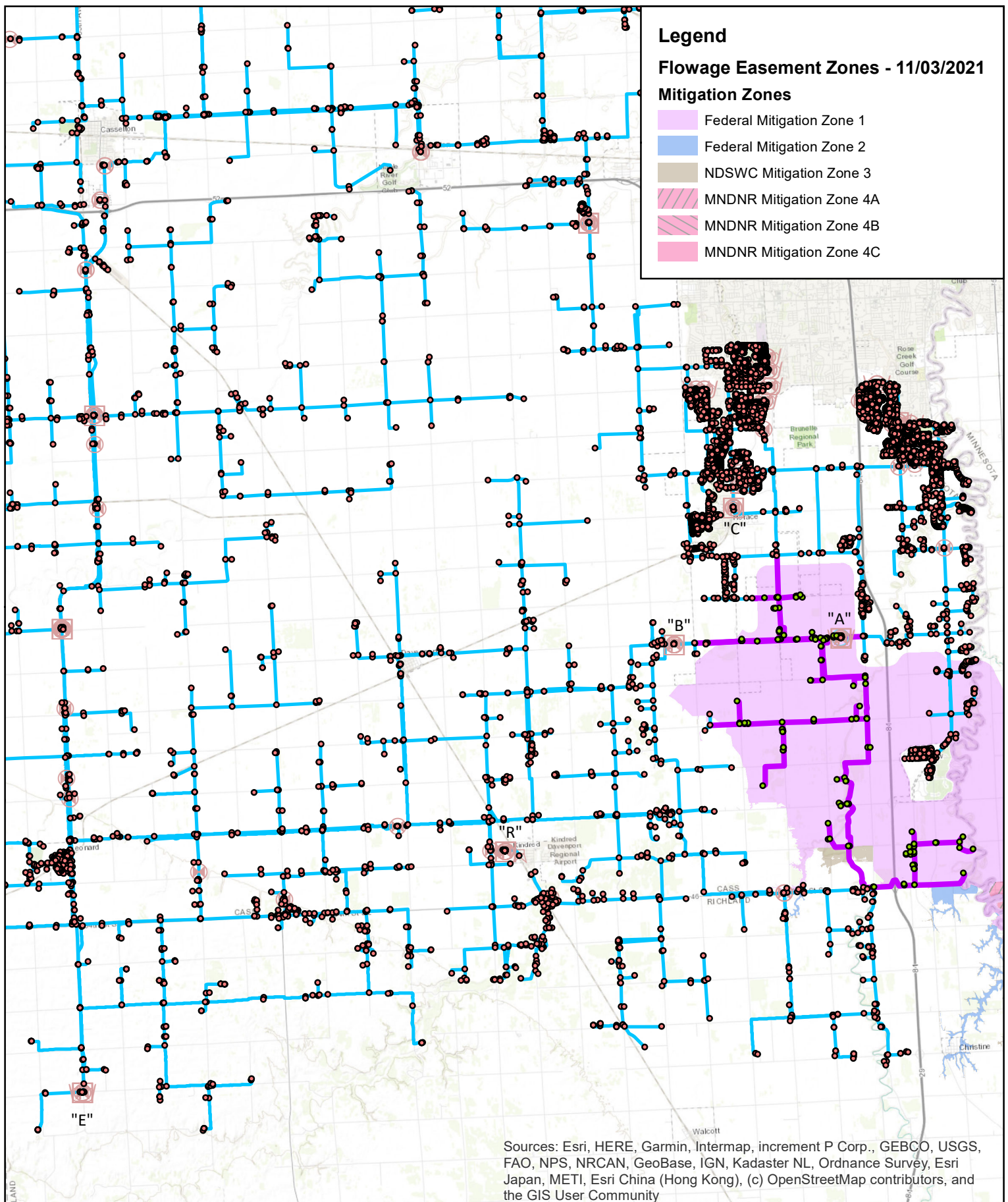
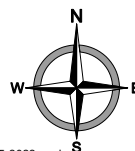


FIGURE 1 - EXISTING SYSTEM
CASS RURAL WATER DISTRICT
CASS COUNTY, NORTH DAKOTA

Created By: MAZ Date Created: 2/11/20 Date Saved: 01/07/22 Date Plotted: NEVER Date Exported: 02/11/22
 Plotted By: maria.zaske Parcel Date: Aerial Image: Elevation Data: Lidar
 Horizontal Datum: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet Vertical Datum: NAVD1988
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moore
 engineering, inc.

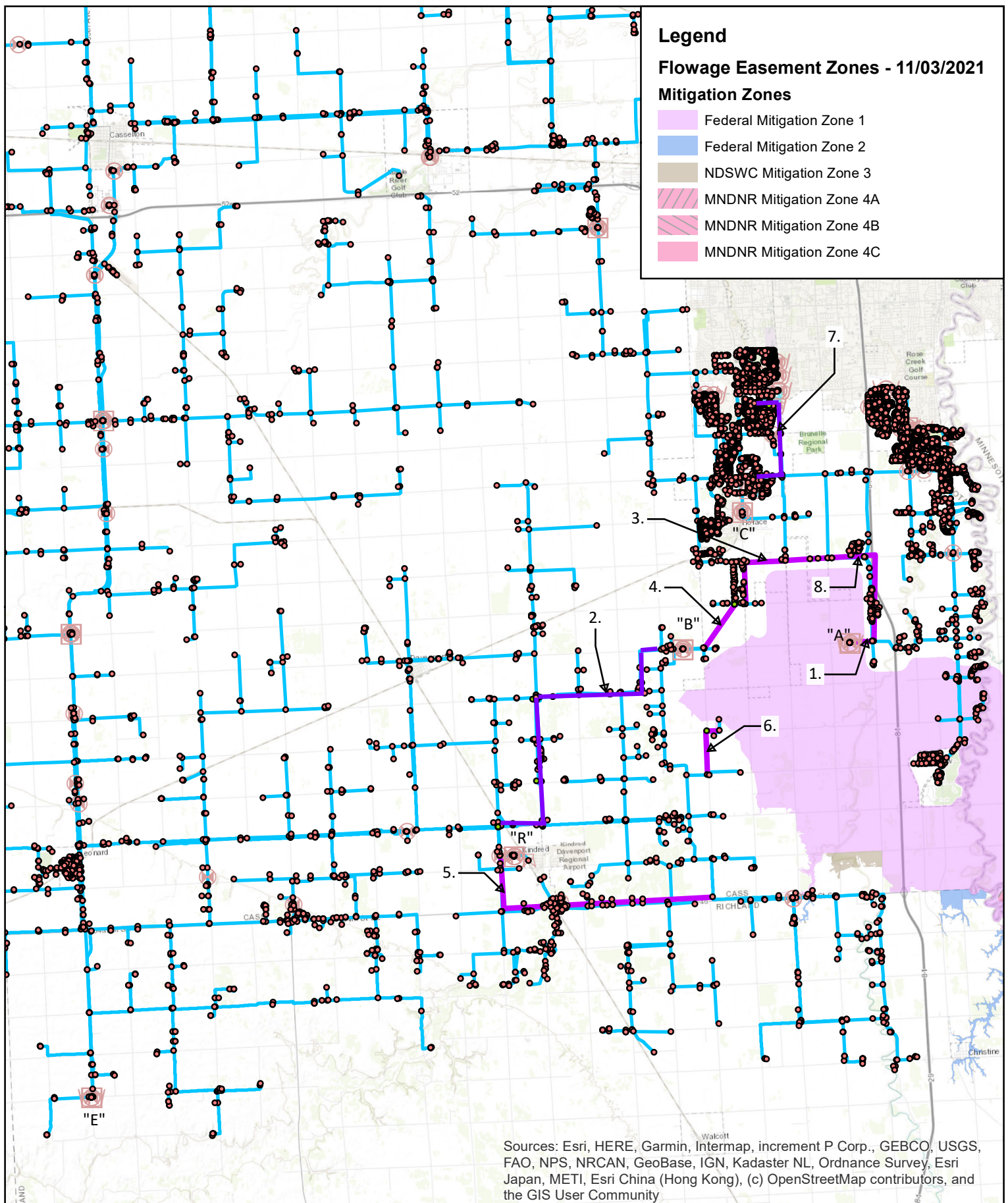
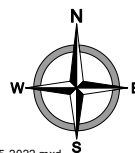


FIGURE 4 - ALTERNATIVE 3A
CASS RURAL WATER DISTRICT
CASS COUNTY, NORTH DAKOTA

Created By: MAZ Date Created: 2/11/20 Date Saved: 01/07/22 Date Plotted: NEVER Date Exported: 02/11/22
 Plotted By: maria.zaske Parcel Date: Aerial Image: Elevation Data: Lidar
 Horizontal Datum: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet Vertical Datum: NAVD1988
 Q:\Projects\16000\16400\16478\1-Plan B\CRW - Model Review\20220110-ModelDownload\CRWD_MODEL_RES_A_01-05-2022.IWDB\CRWD_Model_Res_A_01-05-2022.mxd



moore
 engineering, inc.

ENGINEER'S OPINION OF PROBABLE COSTDate Created: 3/2/22
Revision #2: 10/18/22**CASS RURAL WATER DISTRICT
ALTERNATIVE 3A - PROTECT IN PLACE RESERVOIR A
CASS COUNTY, ND**

BID ITEM NO. & DESCRIPTION			UNIT	QUANTITY	UNIT PRICE	TOTAL
<u>Base Bid</u>						
203	101	COMMON EXCAVATION-TYPE A	CY	11,500	\$ 4.25	\$48,875
203	109	TOPSOIL	CY	23,500	\$ 4.25	\$99,875
203	140	BORROW-EXCAVATION	CY	455,800	\$ 7.25	\$3,304,550
210	405	FOUNDATION PREPARATION-BOX CULVERT	EA	1	\$ 100,000.00	\$100,000
216	100	WATER	M GAL	4,710	\$ 33.00	\$155,430
251	300	SEEDING CLASS III	ACRE	29.2	\$ 770.00	\$22,484
251	2000	TEMPORARY COVER CROP	ACRE	29.2	\$ 66.00	\$1,927
253	101	STRAW MULCH	ACRE	58.4	\$ 265.00	\$15,476
261	112	FIBER ROLLS 12IN	LF	35,300	\$ 2.25	\$79,425
261	113	REMOVE FIBER ROLLS 12IN	LF	17,700	\$ 0.40	\$7,080
302	120	AGGREGATE BASE COURSE CL 5	TON	14,000	\$ 17.00	\$238,000
302	356	AGGREGATE SURFACE COURSE CL 13	TON	291	\$ 45.00	\$13,095
401	50	TACK COAT	GAL	4,440	\$ 2.30	\$10,212
401	60	PRIME COAT	GAL	5,895	\$ 3.00	\$17,685
401	70	FOG SEAL	GAL	943	\$ 3.50	\$3,301
430	43	SUPERPAVE FAA 43	TON	8,310	\$ 40.00	\$332,400
430	5818	PG 58H-34 ASPHALT CEMENT	TON	532	\$ 550.00	\$292,600
606	1010	10FT X 10FT PRECAST RCB CULVERT	LF	792	\$ 1,500.00	\$1,188,000
606	5010	10FT X 10FT PRECAST RCB END SECTION	EA	8	\$ 37,500.00	\$300,000
702	100	MOBILIZATION	L SUM	1	\$ 300,000.00	\$300,000
709	151	GEOSYNTHETIC MATERIAL TYPE R1	SY	24,600	\$ 1.75	\$43,050
714	1005	PIPE CONC REINF 42IN CL III	LF	176	\$ 305.00	\$53,680
760	5	RUMBLE STRIPS - ASPHALT SHOULDER	MILE	1.79	\$ 1,100.00	\$1,969
762	113	EPOXY PVMT MK 4IN LINE	LF	18,900	\$ 0.30	\$5,670
		LIFT STATION	L SUM	1	\$ 600,000.00	\$600,000
		TRAFFIC CONTROL	L SUM	1	\$ 5,000.00	\$5,000
		PERMANENT SIGNING	L SUM	1	\$ 2,000.00	\$2,000

**Watermain from Wells to Reservoir A; New Wells (1 Mile of 8-Inch Pipe Connecting New Wells to Reservoir A;
New Wells; All Work at Reservoir A)**

8-INCH FUSIBLE WATERMAIN (WATERMAIN FROM NEW WELLS TO RESERVOIR A AND BETWEEN WELLS)	LF	5,300	\$ 65.00	\$344,500
8-INCH WATERMAIN FITTINGS & VALVES	L SUM	1	\$ 50,000.00	\$50,000
NEW WELL	EA	5	\$ 200,000.00	\$1,000,000

1. Transmission Pipeline Improvements from Reservoir A to Dry Side Connection Across Southern Embankment (0.5 Miles of 12-Inch Fusible Watermain from Reservoir A East to SE-2B; Crossing of SE-2B)

4-INCH WATERMAIN (GRAVITY DISCHARGE - RESERVOIR A TO BORROW DITCH)	LF	2,340	\$ 12.00	\$28,080
12-INCH FUSIBLE WATERMAIN (RESERVOIR A TO SE-2B)	LF	2,340	\$ 130.00	\$304,200
INSULATION BOARD (RESERVOIR A TO SE-2B)	CF	4,680	\$ 25.00	\$117,000
12-INCH FUSIBLE WATERMAIN (CROSSING REACH SE-2B - "UP AND OVER SOUTHERN EMBANKMENT")	LF	1,000	\$ 250.00	\$250,000
12-INCH WATERMAIN CONNECTIONS	EA	2	\$ 18,000.00	\$36,000

2. Expand Transmission Capacity from Reservoir E to Reservoir B (8 Miles of 6-Inch Pipe)

6-INCH WATERMAIN (Open Cut)	LF	38,016	\$22.00	\$836,352
6-INCH BORING (10%)	LF	4,224	\$44.00	\$185,856
6-INCH WATERMAIN CONNECTIONS	EA	2	\$10,000.00	\$20,000
SHEYENNE RIVER CROSSING	EA	1	\$70,000.00	\$70,000
RR CROSSING #1	EA	1	\$70,000.00	\$70,000
RR CROSSING #2	EA	1	\$70,000.00	\$70,000
RR CROSSING #3	EA	1	\$70,000.00	\$70,000

3. Transmission Pipeline Improvements from Reservoir B to Reservoir C (Phase 1) (2 Miles of 10-Inch Pipe, Along County Road 14 and 17)

* The Engineer's Opinion of Probable Cost for this improvement has not been included for this improvement. This improvement has already been completed and CRWD's costs were reimbursed by the MFDA.

10-INCH WATERMAIN	LF	10,560		
10-INCH WATERMAIN CONNECTIONS	EA	2		

4. Transmission Pipeline from Reservoir B to Reservoir C (Phase 2) (1.8 Miles of 10-Inch Pipe; County Road 16 to County Road 17;**Crossing of Diversion Channel)**

10-INCH WATERMAIN (COUNTY ROAD 16 TO COUNTY ROAD 17)	LF	7,000	\$	42.00	\$294,000
CROSSING OF DIVERSION CHANNEL - 10-INCH WATERMAIN (HORIZONTAL DIRECTIONAL DRILLING)	LF	2,250	\$	665.00	\$1,496,250
10-INCH WATERMAIN CONNECTIONS	EA	2	\$	15,000.00	\$30,000

5. Impacted by Abandonment (7 miles of 4-inch Pipe, Kindred Area)

4-INCH WATERMAIN (EXISTING IMPROVMENT)	LF	36,960	\$	12.00	\$443,520
4-INCH WATERMAIN CONNECTIONS	EA	2	\$	8,000.00	\$16,000

6. Impacted by Abandonment (1.5 miles of 2-inch Pipe, Norman Area)

2-INCH WATERMAIN (EXISTING IMPROVMENT)	LF	7,920	\$	7.60	\$60,192
2-INCH WATERMAIN CONNECTIONS	EA	2	\$	6,000.00	\$12,000

7. Expand CRWD Service with City of Fargo Water (2.5 Miles of 16-Inch Pipe)

16-INCH WATERMAIN (OPEN CUT)*	LF	11,880		\$23.13	\$274,725
16-INCH BORING (10%)*	LF	1,320		\$46.13	\$60,885
TIE-IN COST*	EA	1		\$11,125.00	\$11,125

*Unit Cost = Average of Cost presented to DWR with 10/14/21 cost share request and unit cost included in 11/29/21 Tech Memo from AE2S.
75% DWR Cost Share deducted; costs presented herein are the local share (25%).

8. Transmission Pipeline Improvements from Reservoir A (4-miles of 6-Inch Pipe, From County Road 16 Through St. Benedict's)

6-INCH WATERMAIN (EXISTING IMPROVMENT)	LF	15,840	\$	22.00	\$348,480
6-INCH WATERMAIN (EXISTING IMPROVEMENT, ST BENEDICT)	LF	5,280	\$	60.00	\$316,800
6-INCH WATERMAIN CONNECTIONS	EA	2	\$	10,000.00	\$20,000

9. Crossing of SE-3 at Cass County Highway 81 (3,000 LF of 8-Inch Pipe; 2 Pipes; Crossing of SE-3)

8-INCH FUSIBLE WATERMAIN (CROSSING REACH SE-3 - "UP AND OVER SOUTHERN EMBANKMENT")	LF	6000		120	\$720,000
8-INCH WATERMAIN CONNECTIONS	EA	2		12000	\$24,000

Construction Subtotal	\$14,821,749
20% Engineering & Construction Administration (Watermain Improvements Only)	\$1,515,993
Land Acquisition (\$9,000/Acre (Full Acquisition - Flowage Easement))	\$225,000
Permits, Environmental and Cultural Clearance	\$73,000
Electric Service Line	\$30,000
15% Contingency	\$2,223,262

TOTAL PROJECT COST	\$18,889,004
BASE ROAD IMPROVEMENTS (COUNTY ROAD 16 ROAD RAISE)	\$3,086,365
Opinion of Total Probable Project Cost - Alt. 3A	\$15,802,639

ENGINEER'S OPINION OF PROBABLE COST
CASS RURAL WATER DISTRICT
ALTERNATIVE 3A - PROTECT IN PLACE RESERVOIR A
CASS COUNTY, ND

Date Created: 3/2/22
Revision #2: 10/18/22

(1) MFDA OR CRWD = MFDA OR CRWD LED (REIMBURSEMENT TO CRWD FOR
ITEMS LED AND PAID FOR BY CRWD)
(2) CRWD = LED AND PAID FOR BY CRWD, LUMP SUM PAYMENT TO CRWD

BID ITEM NO. & DESCRIPTION			QUANTITY		TOTAL	COST		TOTAL
			(1) MFDA OR CRWD	(2) CRWD		(1) MFDA OR CRWD	(2) CRWD	
			CTY RD 16 ROAD RAISE (SE-2B)/ RING LEVEE/ STORM LIFT STN/ DIST IMP	DISTRIBUTION IMPROVEMENTS	UNIT PRICE	CTY RD 16 ROAD RAISE (SE-2B)/RING LEVEE/STORM LIFT STN/ DIST IMP	DISTRIBUTION IMPROVEMENTS	TOTAL
			UNIT					
203	101	COMMON EXCAVATION-TYPE A	CY	11,500				
203	109	TOPSOIL	CY	23,500				
203	140	BORROW-EXCAVATION	CY	455,800				
210	405	FOUNDATION PREPARATION-BOX CULVERT	EA	1				
216	100	WATER	M GAL	4,710				
251	300	SEEDING CLASS III	ACRE	29.2				
251	2000	TEMPORARY COVER CROP	ACRE	29.2				
253	101	STRAW MULCH	ACRE	58.4				
261	112	FIBER ROLLS 12IN	LF	35,300				
261	113	REMOVE FIBER ROLLS 12IN	LF	17,700				
302	120	AGGREGATE BASE COURSE CL 5	TON	14,000				
302	356	AGGREGATE SURFACE COURSE CL 13	TON	291				
401	50	TACK COAT	GAL	4,440				
401	60	PRIME COAT	GAL	5,895				
401	70	FOG SEAL	GAL	943				
430	43	SUPERPAVE FAA 43	TON	8,310				
430	5818	PG 58H-34 ASPHALT CEMENT	TON	532				
606	1010	10FT X 10FT PRECAST RCB CULVERT	LF	792				
606	5010	10FT X 10FT PRECAST RCB END SECTION	EA	8				
702	100	MOBILIZATION	L SUM	1.00				
709	151	GEOSYNTHETIC MATERIAL TYPE R1	SY	24,600				
714	1005	PIPE CONC REINF 42IN CL III	LF	176				
760	5	RUMBLE STRIPS - ASPHALT SHOULDER	MILE	1.79				
762	113	EPOXY PVMT MK 4IN LINE	LF	18,900				
		LIFT STATION	L SUM	1				
		TRAFFIC CONTROL	L SUM	1				
		PERMANENT SIGNING	L SUM	1				
Watermain from Wells to Reservoir A; New Wells (1 mile of 8-inch Pipe Connecting New Wells to Reservoir A; New Wells; All Work at Reservoir A)								
		8-INCH FUSIBLE WATERMAIN (WATERMAIN FROM NEW WELLS TO RESERVOIR A AND BETWEEN WELLS)	LF	5,300				
		8-INCH WATERMAIN FITTINGS & VALVES	L SUM	1				
		NEW WELL	EA	5				

1. Transmission Pipeline Improvements from Reservoir A to Dry Side Connection Across Southern Embankment (0.5 Miles of 12-inch Fusible Watermain from Reservoir A East to SE-2B; Crossing of SE-2B)										
4-INCH WATERMAIN (GRAVITY DISCHARGE - RESERVOIR A TO BORROW DITCH)	LF	2,340	2,340	\$	12.00	\$	28,080	\$	-	\$28,080
12-INCH FUSIBLE WATERMAIN (RESERVOIR A TO SE-2B)	LF	2,340	2,340	\$	130.00	\$	304,200	\$	-	\$304,200
INSULATION BOARD (RESERVOIR A TO SE-2B)	CF	4,680	4,680	\$	25.00	\$	117,000	\$	-	\$117,000
12-INCH FUSIBLE WATERMAIN (CROSSING REACH SE-2B - "UP AND OVER SOUTHERN EMBANKMENT")	LF	1,000	1,000	\$	250.00	\$	250,000	\$	-	\$250,000
12-INCH WATERMAIN CONNECTIONS	EA	2	2	\$	18,000.00	\$	36,000	\$	-	\$36,000
2. Expand Transmission Capacity from Reservoir E to Reservoir B (8 Miles of 6-Inch Pipe)										
6-INCH WATERMAIN (Open Cut)	LF	38,016	38,016		\$22.00	\$	-	\$	836,352	\$836,352
6-INCH BORING (10%)	LF	4,224	4,224		\$44.00	\$	-	\$	185,856	\$185,856
6-INCH WATERMAIN CONNECTIONS	EA	2	2		\$10,000.00	\$	-	\$	20,000	\$20,000
SHEYENNE RIVER CROSSING	EA	1	1		\$70,000.00	\$	-	\$	70,000	\$70,000
RR CROSSING #1	EA	1	1		\$70,000.00	\$	-	\$	70,000	\$70,000
RR CROSSING #2	EA	1	1		\$70,000.00	\$	-	\$	70,000	\$70,000
RR CROSSING #3	EA	1	1		\$70,000.00	\$	-	\$	70,000	\$70,000
3. Transmission Pipeline Improvements from Reservoir B to Reservoir C (Phase 1) (2 Miles of 10-Inch Pipe, Along County Road 14 and 17)										
* The Engineer's Opinion of Probable Cost for this improvement has not been included for this improvement. This improvement has already been completed and CRWD's costs were reimbursed by the MFDA.										
10-INCH WATERMAIN	LF	10,560	10,560			\$	-	\$	-	\$0
10-INCH WATERMAIN CONNECTIONS	EA	2	2			\$	-	\$	-	\$0
4. Transmission Pipeline from Reservoir B to Reservoir C (Phase 2) (1.8 Miles of 10-inch Pipe; County Road 16 to County Road 17; Crossing of Diversion Channel)										
10-INCH WATERMAIN (COUNTY ROAD 16 TO COUNTY ROAD 17)	LF	7,000	7,000	\$	42.00	\$	-	\$	294,000	\$294,000
CROSSING OF DIVERSION CHANNEL - 10-INCH WATERMAIN (HORIZONTAL DIRECTIONAL DRILLING)	LF	2,250	2,250	\$	665.00	\$	1,496,250	\$	-	\$1,496,250
10-INCH WATERMAIN CONNECTIONS	EA	2	2	\$	15,000.00	\$	-	\$	30,000	\$30,000
5. Impacted by Abandonment (7 miles of 4-inch Pipe, Kindred Area)										
4-INCH WATERMAIN	LF	36,960	36,960	\$	12.00	\$	-	\$	443,520	\$443,520
4-INCH WATERMAIN CONNECTIONS	EA	2	2	\$	8,000.00	\$	-	\$	16,000	\$16,000
6. Impacted by Abandonment (1.5 miles of 2-inch Pipe, Norman Area)										
2-INCH WATERMAIN	LF	7,920	7,920	\$	7.60	\$	-	\$	60,192	\$60,192
2-INCH WATERMAIN CONNECTIONS	EA	2	2	\$	6,000.00	\$	-	\$	12,000	\$12,000
7. Expand CRWD Service with City of Fargo Water (2.5 Miles of 16-Inch Pipe)										
16-INCH WATERMAIN (OPEN CUT) *	LF	11,880	11,880		\$23.13	\$	274,725	\$	-	\$274,725
16-INCH BORING (10%) *	LF	1,320	1,320		\$46.13	\$	60,885	\$	-	\$60,885
TIE-IN COST *	EA	1	1		\$11,125.00	\$	11,125	\$	-	\$11,125
*Unit Cost = Average of Cost presented to DWR with 10/14/21 cost share request and unit cost included in 11/29/21 Tech Memo from AE2S. 75% DWR Cost Share deducted; costs presented herein are the local share (25%).										
8. Transmission Pipeline Improvements from Reservoir A (4-Miles of 6-Inch Pipe, From County Road 16 Through St. Benedicts)										
6-INCH WATERMAIN	LF	15,840	15,840	\$	22.00	\$	-	\$	348,480	\$348,480
6-INCH WATERMAIN (ST. BENEDICT'S)	LF	5,280	5,280	\$	60.00	\$	-	\$	316,800	\$316,800
6-INCH WATERMAIN CONNECTIONS	EA	2	2	\$	10,000.00	\$	-	\$	20,000	\$20,000
9. Crossing of SE-3 at Cass County Highway 81 (3,000 LF of 8-Inch Pipe; 2 Pipes; Crossing of SE-3)										
8-INCH FUSIBLE WATERMAIN (CROSSING REACH SE-3 - "UP AND OVER SOUTHERN EMBANKMENT")	LF	6,000	6,000		\$120.00	\$	720,000	\$	-	\$720,000
8-INCH WATERMAIN CONNECTIONS	EA	2	2		\$12,000.00	\$	24,000	\$	-	\$24,000
Construction Subtotal						\$	11,958,549	\$	2,863,200	\$14,821,749
20% Engineering & Construction Administration (Watermain Improvements Only)						\$	943,353	\$	572,640	\$1,515,993
Land Acquisition (\$9,000/Acre) (Full Acquisition - Flowage Easement))								\$	225,000	\$225,000
Permits, Environmental and Cultural Clearance								\$	73,000	\$73,000
Electric Service Line						\$	30,000			\$30,000
15% Contingency						\$	1,793,782	\$	429,480	\$2,223,262
TOTAL PROJECT COST						\$	14,725,684	\$	4,163,320	\$18,889,004
BASE ROAD IMPROVEMENTS (COUNTY ROAD 16 ROAD RAISE)										\$3,086,365
Opinion of Total Probable Project Cost - Alt. 3A							77.96%		22.04%	\$15,802,639

EXHIBIT F
TASK ORDER FORM

(Vendor name)
(Scope title)
Task Order (XX)

In accordance with the Master Utility Relocation Agreement between **Metro Flood Diversion Authority** (“Authority”) and Cass Rural Water Users District (“Utility”), dated _____ (“Agreement”), Authority and Utility agree as follows:

1. Background Data

- A. Effective Date of Task Order: _____ Date
- B. Authority: _____ Metro Flood Diversion Authority
- C. Utility: _____ Cass Rural Water Users District
- D. Specific Project (title): _____ Title
- E. Specific Project (description): _____ Description 1 line

2. Services

The services to be provided by the Utility under this Task Order are as follows (Further details in Exhibit A):

Design and Construction Support:

3. Authority Responsibilities

The Authority has those responsibilities set forth in the Agreement.

4. Additional Services

Additional services that may be authorized or necessary under this Task Order are: None

5. Task Order Schedule

In addition to any schedule provisions in the Agreement or elsewhere, the Parties shall meet the following schedule:

<u>Service</u>	<u>Estimated Completion Time</u>
(description)	(Date)

6. Payments (if applicable)

- A. The Budget Cost Proposal is in Exhibit B.
- B. Authority shall pay Utility for services rendered as follows:
- i. In accordance with Article 8 (“Payment of Costs”) of the Agreement.
- C. Utility will notify Authority when 80 percent of the subtask budget is expended.
- D. Utility will submit an amendment for additional compensation when 90 percent of subtask budget is expended or confirm to Authority that this Task Order can be completed for the remaining budget.

- E. Utility will not perform work beyond 100 percent of a subtask budget without Authority's written authorization.
- F. The terms of payment are set forth in the Agreement.

7. Consultants retained as of the Effective Date of the Task Order

A. (details)

8. Modifications to the Agreement and Exhibits

Exhibit A – Specific services for each subtask.

Exhibit B – Budget Cost Proposal

9. Attachments

None.

10. Other Documents Incorporated by Reference

None.

11. Terms and Conditions

Execution of this Task Order by Authority and Utility shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Utility is authorized to begin performance upon its receipt of a copy of this Task Order signed by Authority.

The Effective Date of this Task Order is (date).

Authority:

Metro Flood Diversion Authority

Joel Paulsen, Executive Director

Utility:

Cass Rural Water Users District

By: _____

Its: _____



METRO
FLOOD
DIVERSION
AUTHORITY

Diversion Authority Board Meeting

OCTOBER 27, 2022

Executive Director Report

Joel Paulsen

Happenings

Media & Event Highlights

- Project won three P3 Awards
 - Public Sector Promoter/Procurer of the Year (MFDA)
 - Best Financial Structure (Agentis Capital)
 - Legal Advisor of the Year (Ashurst)

Major Project Accomplishments

- Second gate hung at Wild Rice River Structure
- SE-1 completed

P3 Updates

- Released for Construction plans issued for part of the stormwater diversion channel construction
- Started construction on Reach 1



**JOINT RESOLUTION
CWSRF LOAN RESOLUTION**

Metro Flood Diversion Authority (the “Authority”)

Member _____ introduced the following resolution and moved its adoption:

Cass County Joint Water Resource District (“CCJWRD”)

Manager _____ introduced the following resolution and moved its adoption:

**RESOLUTION AUTHORIZING THE ISSUANCE AND SALE OF
\$51,634,000 METRO FLOOD DIVERSION AUTHORITY CLEAN WATER STATE
REVOLVING FUND LOAN BOND, SERIES 2022, AND ISSUANCE OF THE
TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT(S) AND
DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANTS**

RECITATIONS

1. Defined terms used herein but not otherwise defined have the meaning given in the Master Indenture of Trust dated June 10, 2021 between the Authority, CCJWRD, the City of Fargo, as Fiscal Agent, and the Bank of North Dakota, as Trustee, as amended and supplemented, including by the Supplemental Indenture of Trust (CCJWRD 2021A Supplemental Indenture), dated June 10, 2021, and the Supplemental Indenture of Trust No. 2 (CWSRF Loan Bond Supplemental Indenture) dated _____, 2022 (together, the “Master Indenture of Trust”).
2. The Authority hereby recites that by resolution of its governing body, the Authority has:
 - A. Found and determined that it is necessary for the Authority to construct and/or improve the CWSRF Projects.
 - B. Authorized to be issued by CCJWRD a series of Improvement Warrants designated the Temporary Authority Loan Improvement Warrant of 2021 of the Cass County Joint Water Resource District in the principal amount of \$90,000,000 and the Definitive Authority Loan Improvement Warrant to provide security for the Holders of the Authority Loans, including, without limitation, that the Authority Loan Minimum Debt Service Coverage Ratio shall be satisfied.
 - C. CCJWRD, the City of Fargo, the City of Moorhead, Cass County, and Clay County have entered into a Joint Powers Agreement creating the Authority and providing for the issuance of Debt Obligations by the Authority for the Comprehensive Project.
 - D. The Authority, CCJWRD, the City of Fargo, as Fiscal Agent, and the Bank of North Dakota as Trustee, have entered into the Master Indenture of Trust.

- E. Article XLVI of the Master Indenture of Trust provides for Supplemental Indentures to be issued in connection with the issuance of Debt Obligations for the Comprehensive Project.
 - F. Pursuant to Section 7.01(m) of the Joint Powers Agreement, the Authority is authorized to issue the WIFIA Loan Bond.
 - G. Pursuant to Section 11.05 of the Joint Powers Agreement, the Authority has authorized the issuance of the Temporary Authority Loan Improvement Warrant by CCJWRD.
 - H. Pursuant to Section 11.05 of the Joint Powers Agreement, the Authority has authorized the issuance of the Definitive Authority Loan Improvement Warrant by CCJWRD.
- 3. Directed its Director of Engineering to prepare a report as to the general nature, purpose and feasibility of the CWSRF Projects and an estimate of the probable cost of the CWSRF Projects.
 - 4. After receiving and approving the engineer's report, directed the engineer to prepare detailed plans and specifications for construction of the CWSRF Projects.
 - 5. Approved the engineer's detailed plans and specifications for construction of the CWSRF Projects and caused a copy of such plans and specifications to be filed in the office of the Authority's Executive Director.
 - 6. By publication, advertised for bids for construction of the CWSRF Projects.
 - 7. Opened and made public the bids, entered them in the minutes of the meeting of the Governing Body at which they were considered and caused them to be kept by the Executive Director.
 - 8. After requiring the engineer to make a careful and detailed statement of the estimated cost of the CWSRF Projects, awarded the contract to the lowest responsible bidder and approved the contractor's performance bond.
 - 9. Applied to the North Dakota Department of Environmental Quality (DEQ), Division of Municipal Facilities (the "Department") and the North Dakota Public Finance Authority (the "ND PFA") for financial assistance to finance all or a portion of the cost of the CWSRF Projects, which application has been approved.
 - 10. Performed all other acts required by the Constitution and laws of North Dakota prerequisite to the issuance and sale of revenue bonds for the purpose of providing money to pay for the cost of the CWSRF Projects in the manner required of the Authority by law with full power and authority conferred on it as a political subdivision of North Dakota.

RESOLUTION

Be it jointly resolved, by the governing bodies of the Authority and CCJWRD:

Section 1. All acts performed, resolutions, motions or ordinances adopted or passed, and all publications incidental to the construction and financing of the CWSRF Projects, whether or not reflected in the official minutes and records of the Authority, are hereby ratified and confirmed, and all resolutions and other acts or proceedings of the Authority which are in any way inconsistent with this CWSRF Loan Resolution are hereby amended to the extent necessary to give full force and effect to this CWSRF Loan Resolution.

Section 2. It is hereby found and determined to be necessary for the Authority to issue \$51,634,000 in principal amount of its Metro Flood Diversion Authority Clean Water State Revolving Fund Loan Bond, Series 2022 (the “CWSRF Loan Bond”), pursuant to North Dakota Century Code (“N.D.C.C.”) Ch. 40-35 and the Master Indenture of Trust. The CCJWRD consents to issuance by the Authority of the CWSRF Loan Bond.

Section 3. Offer and Acceptance. The Governing Body of the Authority, in response to its application for financial assistance from the Department and the ND PFA, has received an offer from the ND PFA, subject to the approval of the Industrial Commission of North Dakota, to purchase the CWSRF Loan Bond at a price equal to the principal amount plus accrued interest, if any, to the date of purchase, which offer is more fully set out in a loan agreement to be entered into between the Authority and the ND PFA (the “CWSRF Loan Agreement”). It is hereby found and determined that the offer of the ND PFA to purchase the CWSRF Loan Bond is reasonable and advantageous to the Authority and is hereby accepted, and the CWSRF Loan Agreement, in substantially the form presented to the Authority at this meeting, is hereby accepted and authorized to be executed on behalf of the Authority by its Executive Director and Chair (the “Authorized Officers”), with such modifications as may be approved by the Authorized Officers. The Authorized Officers are authorized and directed to execute the CWSRF Loan Agreement and to deliver it to the ND PFA, which execution and delivery shall be conclusive evidence of the approval of any modifications with respect to the CWSRF Loan Agreement.

Section 4. Form. The CWSRF Loan Bond issued under this CWSRF Loan Resolution shall be designated the Metro Flood Diversion Authority Clean Water State Revolving Fund Loan Bond, Series 2022, and shall be issued to the Authority in the form of a single registered CWSRF Loan Bond in substantially the form as attached hereto as **Exhibit A**.

Section 5. Terms. The Authority authorized the issuance of the CWSRF Loan Bond in the aggregate principal amount not to exceed \$51,634,000, dated the date of delivery. The CWSRF Loan Bond shall be issued in the form of a single registered CWSRF Loan Bond as set forth in Section 4. The CWSRF Loan Bond issued shall be payable on September 1 in installments of principal, with interest at the rate of One and One-Half Percent (1.50%) per year (plus an administrative fee as set out in the CWSRF Loan Agreement), on the dates and in the amounts set forth below. Provided, that interest will be based on funds actually advanced, and the schedule below and attached to the CWSRF Loan Bond form will be revised to reflect the actual principal amount loaned to the Authority at the completion of the CWSRF Projects.

<u>Year</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Year</u>	<u>Amount</u>	<u>Interest Rate</u>
2027	\$1,279,000	1.50%	2042	\$1,715,000	1.50%
2028	1,300,000	1.50	2043	1,745,000	1.50
2029	1,325,000	1.50	2044	1,780,000	1.50
2030	1,350,000	1.50	2045	1,820,000	1.50

2031	1,380,000	1.50	2046	1,855,000	1.50
2032	1,405,000	1.50	2047	1,890,000	1.50
2033	1,435,000	1.50	2048	1,930,000	1.50
2034	1,460,000	1.50	2049	1,970,000	1.50
2035	1,490,000	1.50	2050	2,005,000	1.50
2036	1,520,000	1.50	2051	2,045,000	1.50
2037	1,550,000	1.50	2052	2,090,000	1.50
2038	1,585,000	1.50	2053	2,130,000	1.50
2039	1,615,000	1.50	2054	2,175,000	1.50
2040	1,645,000	1.50	2055	2,215,000	1.50
2041	1,680,000	1.50	2056	2,250,000	1.50

Section 6. Interest. Interest shall be payable semiannually on each March 1 and September 1, commencing on the first March 1 or September 1 following the first loan advance. The principal of and interest on the CWSRF Loan Bond shall be payable to the registered holder thereof at the address appearing on the registration books of the registrar in any coin or currency of the United States of America, which on the respective dates of payment is legal tender for the payment of public or private debts or by check or draft delivered to the registered holder thereof at the address appearing on the registration books of the registrar or by wire transfer.

Section 7. Registration. The CWSRF Loan Bond shall be registered as to both principal and interest and shall be initially registered in the name of and payable to the ND PFA. While so registered, principal of and interest on the CWSRF Loan Bond shall be payable at the office of the Bank of North Dakota, in Bismarck, North Dakota (the "Registrar"), or such other place as may be designated by the ND PFA in writing, delivered to the Registrar. The Registrar shall establish and maintain a register for the purpose of recording the names and addresses of the registered holders or assigns, and the date of such registration.

Section 8. Assignment. The CWSRF Loan Bond are transferable upon the books of and at the principal office of the Registrar, by the registered holder thereof, in person or by their attorney duly authorized in writing upon surrender thereof, together with a written instrument of transfer satisfactory to the Registrar, duly executed by the registered owner or their attorney. Upon request of the registered holder or transferee, and upon surrender of the CWSRF Loan Bond, the Authority shall execute and deliver one or more other CWSRF Loan Bond of an aggregate principal amount equal to the principal amount of the CWSRF Loan Bond then remaining unpaid and maturing at the same time or times as the then unpaid principal installments thereof, with each CWSRF Loan Bond dated so that neither gain nor loss in interest shall result from such transfer. Each CWSRF Loan Bond shall be dated as of the last interest payment date preceding the date of transfer to which interest on the CWSRF Loan Bond has been paid or made available for payment, unless the date of transfer is an interest payment date to which interest has been paid or made available for payment, in which case the CWSRF Loan Bond shall be dated as of the date of transfer. The surrendered CWSRF Loan Bond shall be promptly canceled by the Registrar. The Registrar shall not be required to perform any of the duties set out in this section as of the record date as established by N.D.C.C. § 21-03.1-02(4). No service charge shall be made for such transfer or exchange, but the Registrar may require payment of a sum sufficient to cover any tax, fee or governmental charge or other expense incurred by the Authority or Registrar with respect to such transfer or exchange.

Section 9. Execution and Delivery. The CWSRF Loan Bond shall forthwith be prepared under the direction of an Authorized Officer of the Authority and when so prepared shall be executed on behalf of the Authority by the manual or facsimile signatures of the Authorized Officers of the Authority and shall be authenticated by the manual signature of the Registrar. When the CWSRF Loan Bond have been so executed and authenticated, they shall be delivered by an Authorized Officer of the Authority to the ND PFA.

Section 10. Redemption. The CWSRF Loan Bond is subject to redemption on any interest payment date with the written consent of the ND PFA.

Section 11. Draws of CWSRF Loan Bond Proceeds. The CWSRF Loan Bond Proceeds are irrevocably appropriated to pay expenses necessarily incurred in the construction and completion of the CWSRF Projects and to pay costs associated with the issuance of the CWSRF Loan Bond. Draws on the CWSRF Loan Bond, in the form of Requisitions for Payment, shall be submitted by the Authority to the Department from time to time in accordance with procedures established by the Department. Requisitions for Payment approved by the Department shall be forwarded to the ND PFA for approval and funding.

Section 12. Authorization of Temporary Authority Loan Improvement Warrant(s). The CCJWRD has: (i) issued its Temporary Authority Loan Improvement Warrant RTAL-1 in the amount of \$90,000,000 to provide security to the Holders of Authority Loans as set forth in the Master Indenture of Trust, the WIFIA Loan Agreement, and the CWSRF Loan Agreement; and (ii) delivered the Temporary Authority Loan Improvement Warrant RTAL-1 to the Trustee for deposit into the Temporary Authority Loan Improvement Warrant Account until the Temporary Authority Loan Improvement Warrant is refunded either by (i) a subsequent Temporary Authority Loan Improvement Warrant or (ii) the Definitive Authority Loan Improvement Warrant.

Section 13. Authorization of the Definitive Authority Loan Improvement Warrant. It is hereby found and determined to be necessary for CCJWRD to issue a Definitive Authority Loan Improvement Warrant in the amount of \$90,000,000 to provide security to the Holders of Authority Loans as set forth in the Master Indenture of Trust and the WIFIA Loan Agreement. CCJWRD is hereby authorized (i) to issue the Definitive Authority Loan Improvement Warrant of the Cass County Joint Water Resource District in the principal amount of \$90,000,000 and (ii) to deliver the Definitive Authority Loan Improvement Warrant to the Trustee for deposit into the Definitive Authority Loan Improvement Warrant Account.

Section 14. Findings in Connection with the Issuance of the Temporary Authority Loan Improvement Warrant. It is hereby found, determined, and declared that:

- (a) CCJWRD has duly created and has ordered, received, and approved plans and estimates of the cost for the construction of the improvements within FM Flood Risk Management District No. 1;
- (b) The CCJWRD Managers determined the necessity of constructing the Comprehensive Project, and, where applicable, by petition or after giving the owners of property liable to be specially assessed therefor the opportunity provided by law to protest against the construction of the Comprehensive Project, it was determined that no such protests sufficient to divest CCJWRD with reference to the

making of the improvements consisting of the Comprehensive Project had been filed and no such petition had been received;

- (c) CCJWRD possesses and has power to exercise through the CCJWRD Managers full and exclusive jurisdiction over all utilities, streets, and places related to the improvements within FM Flood Risk Management District No. 1;
- (d) The total cost of the Comprehensive Project in excess of any other monies on hand and appropriate for the payment of such cost, including reimbursing other monies of CCJWRD for any amounts temporarily advanced to meet immediate expenses of the improvements within FM Flood Risk Management District No. 1 is now estimated to be approximately Two Billion Seven Hundred Fifty Million Dollars (\$2,750,000,000);
- (e) The total benefits to all lots, tracts, and parcels of land liable to be specially assessed for benefits resulting from the improvements in FM Flood Risk Management District No. 1 will be in excess of the cost of the improvements within FM Flood Risk Management District No. 1 to be assessed against the properties as herein provided; and
- (f) All acts, conditions, and things required by the constitution and laws of the State of North Dakota to be done, to exist, to happen, and to be performed preliminary to the issuance of the Temporary Authority Loan Improvement Warrant RTAL-1 for the improvements within FM Flood Risk Management District No. 1 have been done, do exist, have happened, and have been performed in regular and due form, time, and manner as so required.

Section 15. Covenant to Complete Levy of Authority Loan Special Assessments. CCJWRD hereby covenants and agrees from time to time with the Holders of the WIFIA Loan Bond and CWSRF Loan Bond herein authorized or referred to, that it will do and perform all acts and things necessary for the completion of the CWSRF Projects and for the valid and final levy of Authority Loan Special Assessments upon all properties with FM Flood Risk Management District No. 1 identified in Section 16 of this CWSRF Loan Resolution to be benefitted by the Comprehensive Project, in an aggregate amount as described in the Master Indenture of Trust, which Authority Loan Special Assessments shall be payable as the CCJWRD Managers shall determine in accordance with the Master Indenture of Trust and applicable law to be collectible for a period of years commencing not later than the WIFIA Debt Service Commencement Date, with interest on installments thereof from time to time remaining unpaid at a rate determined by the CCJWRD Managers in accordance with the North Dakota Century Code, as amended, and that should any of such Temporary Authority Loan Special Assessments be at any time determined to be invalid or unenforceable for any reason, it will take all such further actions and proceedings as may be required by law to make such assessment a valid and binding lien upon the properties within FM Flood Risk Management District No. 1.

Section 16. Allocation of Special Assessments. CCJWRD hereby covenants that it will levy Special Assessments for FM Flood Risk Management District No. 1 in the following tranches and allocations or as otherwise required by the Master Indenture of Trust:

(Remainder of page intentionally left blank.)

District Designation	Principal Amount	Years Levied	Amounts of Principal Per Year of Payment*
FM Flood Risk Management District No. 1 Non-P3 Special Assessments (Non-P3 Improvement Warrant(s))	\$180,000,000	Commencing on Construction Period Net Revenues Sunset Date for a period of 30 years	In accordance with Non-P3 Improvement Warrant(s)
FM Flood Risk Management District No. 1 P3 Special Assessments (P3 Improvement Warrant(s))	\$599,098,000	Commencing on Construction Period Net Revenues Sunset Date for a period of 30 years	In accordance with P3 Improvement Warrant(s)
FM Flood Risk Management District No. 1 Authority Loan Special Assessments (Authority Loan Improvement Warrant(s))	\$90,000,000	Commencing on WIFIA Debt Service Commencement Date for a period of 30 years	\$5,000,000 each year of levy
Total	\$870,000,000		

Section 17. Temporary Authority Loan Improvement Warrant RTAL-1. The Temporary Authority Loan Improvement Warrant RTAL-1 matures three (3) years from the date of Original Issue thereof and bears interest from the date of issue until paid at a rate of the WIFIA Loan Bond plus one hundred and fifty basis points (150 BPS) per annum. The principal of and interest on each Temporary Authority Loan Improvement Warrant shall be payable at the office of the Trustee.

Section 18. Form of the Temporary Authority Loan Improvement Warrant. A fully executed copy of the Temporary Authority Loan Improvement Warrant RTAL-1 is attached hereto as **Exhibit B**.

Section 19. Automatic Issuance and Exchange for Temporary Authority Improvement Warrant. In the event the Temporary Authority Loan Improvement Warrant RTAL-1 matures prior to refunding thereof by the Definitive Authority Loan Improvement Warrant, a Temporary Authority Loan Improvement Warrant of 2024 of the Cass County Joint Water Resource District Temporary Authority Loan Improvement Warrant RTAL-2, in the same principal amount of, and on the same terms, aside from maturity date, as, the Temporary Authority Loan Improvement Warrant RTAL-1 shall be issued by CCJWRD without further authorization of the CCJWRD Managers. The maturity of the Temporary Authority Loan Improvement Warrant RTAL-2 shall be three (3) years from the date of Original Issuance, and CCJWRD will exchange said Temporary Authority Loan Improvement Warrant RTAL-2 with the Temporary Authority Loan Improvement Warrant RTAL-1 in the Temporary Authority Loan Improvement Warrant Account to continue to serve as security for the Holders of the Authority Loans. In the event the Temporary Authority Loan Improvement Warrant RTAL-2 matures prior to refunding thereof by the Definitive Authority Loan Improvement Warrant, a Temporary Authority Loan Improvement Warrant of 2027 of the Cass County Joint Water Resource District Temporary Authority Loan Improvement

Warrant RTAL-3, in the same principal amount of, and on the same terms, aside from maturity date, as, the Temporary Authority Loan Improvement Warrant RTAL-2 shall be issued by CCJWRD without further authorization of the CCJWRD Managers. The maturity of the Temporary Authority Loan Improvement Warrant RTAL-3 shall be three (3) years from the date of Original Issuance, and CCJWRD will exchange said Temporary Authority Loan Improvement Warrant RTA-2 with the Temporary Authority Loan Improvement Warrant RTAL-3 in the Temporary Authority Loan Improvement Warrant Account to continue to serve as security for the Holders of the Authority Loans. All terms, conditions, and covenants set forth in this CWSRF Loan Resolution that are applicable to the Temporary Authority Loan Improvement Warrant will apply to the subsequent temporary improvement warrants issued pursuant to this Section.

Section 20. Timing of Exchange of the Temporary Authority Loan Improvement Warrant(s) for the Definitive Authority Loan Improvement Warrant. CCJWRD will refund and replace the Temporary Authority Loan Improvement Warrant with the Definitive Authority Loan Improvement Warrant upon the earlier of the following:

- (a) Within thirty (30) calendar days of receiving notice from the Developer of the anticipated Project Substantial Completion Date pursuant to Section 16.3(a)(ii) of the Project Agreement; or
- (b) Within one hundred eighty (180) days prior to the anticipated Construction Period Net Revenue Sunset Date.

Section 21. Authority Loan Deficiency Tax Levy with Respect to the Temporary Authority Loan Improvement Warrant. With respect to the Temporary Authority Loan Improvement Warrant Account, CCJWRD hereby recognizes its obligation with respect to the Temporary Authority Loan Improvement Warrant RTAL-1, and if so issued Temporary Authority Loan Improvement Warrant RTAL-2 and if so issued Improvement Warrant RTAL-3 drawn against the Temporary Authority Loan Improvement Warrant Account, as set forth in Section 61-16.1-36, North Dakota Century Code (“N.D.C.C.”), that whenever all Authority Loan Special Assessments, Required Temporary Debt Service Revenue and Construction Period Net Revenues, and taxes, if any, theretofore collected for the EPA Project and CWSRF Projects are insufficient to pay principal of or interest then due on the Authority Loans prior to the effective date of the Definitive Authority Loan Improvement Warrant, the Cass County Commission, wherein CCJWRD lies, shall advance to the Temporary Authority Loan Improvement Warrant Account an amount sufficient to pay the deficiency in the Temporary Authority Loan Improvement Warrant Account. In the event the Temporary Authority Loan Improvement Warrant Account should at any time be insufficient to pay principal or interest due, the Cass County Commission shall thereupon levy a tax upon all taxable property in Cass County, unlimited as to rate, for the payment of such deficiency. Nothing herein contained shall be deemed to limit the power of CCJWRD, under the provisions of N.D.C.C. § 61-16.1-36, to levy a general tax in anticipation of a deficiency considered likely to occur in the Temporary Authority Loan Improvement Warrant Account within thirteen (13) months; and it is hereby declared to be the policy of CCJWRD that the Cass County Commission will annually review the current requirements and resources of the Temporary Authority Loan Improvement Warrant Account, at the time of the preparation of and hearing on the budget, in accordance with the provisions of N.D.C.C. Chapter 61-16.1 and the JPA, to the end that provision may be made in each annual budget for any deficiency in the Temporary Authority Loan Improvement Warrant Account which is deemed likely to occur within thirteen (13) months. Such taxes levied in accordance with the provisions of this paragraph in payment of a deficiency,

or in anticipation of a deficiency, shall be paid upon collection into the Temporary Authority Loan Deficiency Tax Levy Sub-Account of the Temporary Authority Loan Improvement Warrant Account and applied as provided in the Master Indenture of Trust.

Section 22. Findings in Connection with the Issuance of the Definitive Authority Loan Improvement Warrant. It is hereby found, determined, and declared that:

- (a) CCJWRD has duly created and has ordered, received, and approved plans and estimates of the cost for the construction of the improvements within FM Flood Risk Management District No. 1;
- (b) The CCJWRD Managers determined the necessity of constructing the Comprehensive Project, and, where applicable, by petition or after giving the owners of property liable to be specially assessed therefor the opportunity provided by law to protest against the construction of the Comprehensive Project, it was determined that no such protests sufficient to divest CCJWRD with reference to the making of the improvements consisting of the Comprehensive Project had been filed and no such petition had been received;
- (c) CCJWRD possesses and has power to exercise through the CCJWRD Managers full and exclusive jurisdiction over all utilities, streets, and places related to the improvements within FM Flood Risk Management District No. 1;
- (d) The total cost of the Comprehensive Project in excess of any other monies on hand and appropriate for the payment of such cost, including reimbursing other monies of CCJWRD for any amounts temporarily advanced to meet immediate expenses of the improvements within FM Flood Risk Management District No. 1 is now estimated to be approximately Two Billion Seven Hundred Fifty Million Dollars (\$2,750,000,000);
- (e) The total benefits to all lots, tracts, and parcels of land liable to be specially assessed for benefits resulting from the improvements in FM Flood Risk Management District No. 1 will be in excess of the cost of the improvements within FM Flood Risk Management District No. 1 to be assessed against the properties as herein provided; and
- (f) That all acts, conditions, and things required by the constitution and laws of the State of North Dakota to be done, to exist, to happen, and to be performed preliminary to the issuance of the Temporary Authority Loan Improvement Warrant RTAL-1 for the improvements within FM Flood Risk Management District No. 1 have been done, do exist, have happened, and have been performed in regular and due form, time, and manner as so required.

Section 23. Definitive Authority Loan Improvement Warrant. In anticipation of the collection of the Authority Loan Special Assessments, as set forth herein and in Section 3.03 of the WIFIA Loan Bond Resolution to be levied for the payment of the cost of the Comprehensive Project financed by the issuance of the Definitive Authority Loan Improvement Warrant drawn on the Definitive Authority Loan Improvement Warrant Account, CCJWRD will issue its Definitive Authority Loan Improvement Warrant RTAL-1 in accordance with this Resolution, the Master Indenture of Trust, and Sections 3.07 and 4.01 of the WIFIA Loan Bond Resolution.

Section 24. Form of the Definitive Authority Loan Improvement Warrant. The Definitive Authority Loan Improvement Warrant shall be typewritten and photocopied in substantially the form attached hereto as Exhibit C.

Section 25. Authority Loan Deficiency Tax Levy with Respect to the Definitive Authority Loan Warrant. With respect to the Definitive Authority Loan Improvement Warrant Account, CCJWRD hereby recognizes its obligation with respect to the Definitive Authority Loan Improvement Warrant as set forth in N.D.C.C. § 61-16.1-36, that whenever all Authority Loan Special Assessments, Net Pledged Revenues, and taxes, if any, theretofore collected for the EPA Project are insufficient to pay principal of or interest then due on the Authority Loans after the effective date of the Definitive Authority Loan Improvement Warrant, the Cass County Commission, wherein CCJWRD lies, shall advance to the Definitive Authority Loan Improvement Warrant Account an amount sufficient to pay the deficiency in the Definitive Authority Loan Improvement Warrant Account. In the event the Definitive Authority Loan Improvement Warrant Account should at any time be insufficient to pay principal or interest due, the Cass County Commission shall thereupon levy a tax upon all taxable property in Cass County, unlimited as to rate, for the payment of such deficiency. Nothing herein contained shall be deemed to limit the power of CCJWRD under the provisions of N.D.C.C. § 61-16.1-36, to levy a general tax in anticipation of a deficiency considered likely to occur in the Definitive Authority Loan Improvement Warrant Account within thirteen (13) months; and it is hereby declared to be the policy of CCJWRD that the Cass County Commission will annually review the current requirements and resources of the Definitive Authority Loan Improvement Warrant Account, at the time of the preparation of and hearing on the budget, in accordance with the provisions of N.D.C.C. Chapter 61-16.1 and the JPA, to the end that provision may be made in each annual budget for any deficiency in the Definitive Authority Loan Improvement Warrant Account which is deemed likely to occur within thirteen (13) months. Such taxes levied in accordance with the provisions of this paragraph in payment of a deficiency, or in anticipation of a deficiency, shall be paid upon collection into the Authority Loan Deficiency Tax Levy Sub-Account of the Definitive Authority Loan Improvement Warrant Account and applied as provided in Section 7.01 of the WIFIA Loan Bond Supplemental Indenture.

Section 26. Authority Loan Fund. There is hereby created a special fund of the Authority designated as the Authority Loan Fund, which shall be held and administered by the Trustee separate and apart from all other funds of the Authority and continued and maintained by the Trustee in accordance with the Master Indenture of Trust.

Section 27. Rates, Fees and Charges. The Authority covenants that it will impose and maintain sales taxes, fees and charges in connection with the operation of the CWSRF Projects which are projected to generate Required Temporary Debt Service Revenues, Construction Period Net Revenues and Net Pledged Revenues at least equal to 1.10 times the average annual principal and interest payments on the CWSRF Loan Bond and any outstanding or additional revenue bonds of the Authority which comply with Section 30 of this CWSRF Loan Resolution. If the Required Temporary Debt Service Revenues, Construction Period Net Revenues and Net Pledged Revenues fail to meet this level, the Trustee shall promptly increase its rates, fees and charges to a level so that the Required Temporary Debt Service Revenues, Construction Period Net Revenues and Net Pledged Revenues are projected to meet the required level.

Section 28. Reserve Account. A separate SRF Loan Reserve Account is established within the Authority Loan Reserve Fund to be used solely as provided herein. There shall be

deposited into the SRF Loan Reserve Account the total amount of \$2,283,750. The SRF Loan Reserve Account requirement is based upon total draws of \$51,634,000. In the event that the Authority draws less than \$51,634,000, the SRF Loan Reserve Account requirement shall be adjusted downward to an amount approved by the ND PFA. If at any time the balance in the SRF Loan Reserve Account is less than the SRF Loan Reserve Account requirement, the Authority will transfer Net Pledged Revenues to the SRF Loan Reserve Account sufficient to meet such requirement, in accordance with the Master Indenture of Trust.

Section 29. Prior Bonds. The Authority has issued the WIFIA Loan Bond payable from the Net Pledged Revenues of the Authority Loan Fund of the Authority.

Section 30. Additional Parity Bonds. The Authority reserves the further right of issuing additional municipal securities payable from the Net Pledged Revenues appropriated to the SRF Loans Account on a parity as to both principal and interest with the CWSRF Loan Bond, provided that the Net Pledged Revenues received during the last fiscal year prior to such issuance shall have been in an amount not less than one hundred ten percent (110%) of the average annual amount of principal and interest to become due during the remaining term of the then outstanding CWSRF Loan Bond payable from the SRF Loans Account, on those CWSRF Loan Bond and the additional municipal securities to be issued. Any additional municipal securities issued on parity with the CWSRF Loan Bond shall be issued in accordance with the Master Indenture of Trust.

Section 31. Limited Obligations. The CWSRF Loan Bond issued hereunder shall not constitute a charge, lien, or encumbrance upon any property of the Authority, and no holder or holders thereof shall ever have the right to compel any exercise of the taxing power of the Authority to pay the principal and interest on the CWSRF Loan Bond. The principal and interest of the CWSRF Loan Bond shall not be a general obligation of the Authority, but are payable solely from the Net Pledged Revenues of the CWSRF Projects as set forth in this CWSRF Loan Resolution.

Section 32. Loan Forgiveness. During the pendency of the CWSRF Loan, the Authority may be offered a certain amount of loan forgiveness by the Department and the ND PFA to reduce the principal amount loaned to the Authority. The Authority acknowledges that any such loan forgiveness would be made available by the Department and the ND PFA in connection with receiving and administering federal capitalization grants under the State Revolving Fund Program. The Authority agrees to accept any such loan forgiveness offered to it in connection with the CWSRF Loan Agreement without any further action.

Section 33. Use of American Iron and Steel. The Authority will comply with all federal requirements applicable to the CWSRF Loan Agreement (including those imposed by the 2014 Appropriations Act, Public Law No.: 113-76 and related SRF regulations and policy guidelines) which the Authority understands includes, among other, requirements that all of the iron and steel products used in the CWSRF Projects are to be produced in the United States (“American Iron and Steel Requirement”) unless (i) the Authority has requested and obtained a waiver from the Department pertaining to the CWSRF Projects or (ii) the Department or ND PFA has otherwise advised the Authority in writing that the American Iron and Steel Requirement is not applicable to the CWSRF Projects.

Section 34. Davis Bacon and Related Acts. The Authority shall, to the extent applicable to the CWSRF Loan or any related grant, comply with the Davis Bacon and Related Acts requirements (40 U.S.C. 3141, et seq).

Section 35. Record and Reporting Requirements. The Authority will comply with all record keeping and reporting requirements under the Clean Water Act/Safe Drinking Water Act, including any reports required by a federal agency, the Department, or the ND PFA, such as performance indicators of program deliverables and information on costs and project progress. The Authority understands that (i) each contract and subcontract related to the CWSRF Projects is subject to audit by appropriate federal and state entities and (ii) failure to comply with the Clean Water Act/Safe Drinking Water Act and the CWSRF Loan Agreement may be a default thereunder that results in a repayment of the CWSRF Loan in advance of the maturity of the CWSRF Loan Bond and/or other remedial actions.

(Signatures contained on following pages.)

PASSED by the Diversion Authority Board of the Metro Flood Diversion Authority, this _____ day of _____, 2022.

APPROVED:

METRO FLOOD DIVERSION
AUTHORITY

Chad Peterson, Chair

ATTEST:

Dawn Lindblom, Secretary

The motion for the adoption of the foregoing resolution was duly seconded by Member _____, and upon vote being taken thereon, the following voted in favor: _____; the following voted against the same: none; and the following Member was absent and not voting: _____; whereupon said resolution was declared duly passed and adopted and was signed by the Chair and attested by the Authority Secretary.

PASSED by the CCJWRD Managers of the Cass County Joint Water Resource District, North Dakota, this ____ day of _____, 2022.

APPROVED:

CASS COUNTY JOINT WATER
RESOURCE DISTRICT

Chair

ATTEST:

Secretary-Treasurer

The motion for the adoption of the foregoing resolution was duly seconded by Manager _____, and upon vote being taken thereon, the following voted in favor: _____; the following voted against the same: none; and the following were absent and not voting: none; whereupon said resolution was declared duly passed and adopted and was signed by the Chair of the CCJWRD Managers and attested by the CCJWRD Secretary-Treasurer.

EXHIBIT A**SPECIMEN BOND**

**UNITED STATES OF AMERICA
STATE OF NORTH DAKOTA
METRO FLOOD DIVERSION AUTHORITY**

**CLEAN WATER STATE REVOLVING FUND (CWSRF) LOAN BOND
SERIES 2022**

No. R-1 \$51,634,000

Interest Rate

Date of Original Issue

1.50%

REGISTERED OWNER: NORTH DAKOTA PUBLIC FINANCE AUTHORITY

PRINCIPAL AMOUNT: FIFTY-ONE MILLION SIX HUNDRED THIRTY-FOUR
THOUSAND DOLLARS

The Metro Flood Diversion Authority, North Dakota (the “Authority”), a political subdivision of and existing under and pursuant to the laws of the State of North Dakota, for value received, hereby promises to pay from its Authority Loan Fund (as defined in the Master Indenture of Trust between the Authority, the Cass County Joint Water Resource District, the City of Fargo, as Fiscal Agent, and the Bank of North Dakota, as Trustee, dated June 10, 2021, as amended and supplemented, including by the Supplemental Indenture of Trust (CCJWRD Series 2021A Supplemental Indenture), dated June 10, 2021, and the Supplemental Indenture of Trust No. 2 (CWSRF Loan Bond Supplemental Indenture) dated the date hereof (together, the “Master Indenture of Trust”) to the Registered Owner specified above, or registered assigns, the Principal Amount specified above, and to pay to the Registered Owner hereof interest on such Principal Amount from the Date of Original Issue at the annual rate of One and One-Half Percent (1.50%) semiannually on September 1 and March 1, plus the Administrative Fee as set forth in the CWSRF Loan Agreement, on the dates and in the amounts set forth in Attachment A to this CWSRF Loan Bond, which Attachment A shall be revised in accordance with Section 2.02 of the CWSRF Loan Agreement in the event funds are advanced to the Authority other than as originally set forth in Attachment A hereto. The principal and interest are payable solely from the revenues pledged for the CWSRF Loan Bond as further described below. Principal is payable in lawful money of the United States of America at the main office of the Bank of North Dakota, in Bismarck, North Dakota, as paying agent and registrar (the “Registrar”) under the Resolution hereinafter described or of its successor as such. Interest shall be paid by check or draft mailed to the Registered Owner at the Registered Owner’s address set forth on the registration books or by wire transfer.

This CWSRF Loan Bond is issued pursuant to and in full conformity with the Constitution and laws of the State of North Dakota, including N.D.C.C. ch. 40-35 (the “Act”) and pursuant to the Master Indenture of Trust, the CWSRF Loan Resolution and the CWSRF Loan Agreement

adopted and entered into by the Authority for the purpose of financing the CWSRF Projects. This CWSRF Loan Bond is payable from Required Temporary Debt Service, Construction Period Net Revenues, Net Pledged Revenues, Authority Loan Special Assessment Revenue and Authority Loan Deficiency Tax Levy Revenue. Reference is hereby made to the CWSRF Loan Resolution, the CWSRF Loan Agreement, and the Master Indenture of Trust for a full description of the Funds and Accounts pledged to the payment of the CWSRF Loan Bond and the rights of the Registered Owner of the CWSRF Loan Bond. This CWSRF Loan Bond is payable solely from the revenues pledged to the payment thereof and does not constitute a debt of the Authority within the meaning of any constitutional or statutory limitation.

This CWSRF Loan Bond is transferable, as provided in the CWSRF Loan Resolution and the CWSRF Loan Agreement, only upon books of the Authority kept at the main office of the Registrar, by the Registered Owner hereof in person or by the Registered Owner's duly authorized attorney, or it may be surrendered in exchange for new CWSRF Loan Bond of the same aggregate principal amount, maturity and interest rate, as provided in the CWSRF Loan Resolution.

This CWSRF Loan Bond is subject to redemption on any interest payment date with the written consent of the Public Finance Authority.

It is further certified, recited and declared that all acts, conditions and things required by the Constitution and the statutes of the State of North Dakota to exist, to have happened and to have been performed precedent to and in connection with the issuance of the CWSRF Loan Bond have been performed in due time, form and manner as required by law; and that the issuance of the CWSRF Loan Bond is within every debt and other limit prescribed by law.

IN WITNESS WHEREOF, the Authority has caused this CWSRF Loan Bond to be executed in its name by the manual or facsimile signatures of its Executive Director and of its Chair, and sealed with its official seal, all as of the Date of Original Issue set forth above.

METRO FLOOD DIVERSION
AUTHORITY, NORTH DAKOTA

By: (do not sign)
Chad Peterson, Chair

By: (do not sign)
Joel Paulsen, Executive Director

ATTEST:

(do not sign)
Dawn Lindblom, Secretary

CERTIFICATE OF AUTHENTICATION

This CWSRF Loan Bond is described in and issued under the provisions of the within-mentioned CWSRF Loan Resolution.

Bank of North Dakota, Bismarck, North
Dakota

BY: _____ (do not sign)
Authorized Representative

ASSIGNMENT

For Value received the undersigned hereby sells, assigns and transfers unto _____ the within-mentioned CWSRF Loan Bond and hereby irrevocably constitutes and appoints _____ attorney-in-fact, to transfer the same on the books of registration thereof, with full power of substitution in the premises.

Dated: _____

Social Security or other
identifying number of Assignee

NOTICE: The signature to this assignment must correspond with the name as it appears on the face of the within CWSRF Loan Bond in every particular, without alteration or any change whatsoever.

Signature Guaranteed:

NOTICE: Signatures(s) must be guaranteed by a member of the New York Stock Exchange or a commercial bank or trust company.

ATTACHMENT A

SPECIMEN

EXHIBIT B

<Attach executed copy of
TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT OF 2021>

SPECIMEN

EXHIBIT C

UNITED STATES OF AMERICA

STATE OF NORTH DAKOTA

CASS COUNTY JOINT WATER RESOURCE DISTRICT

DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANT OF 2021

Registered
Number
RDAL-1Registered
Dollars

\$90,000,000

INTEREST RATE

_____%

DATE OF ORIGINAL
ISSUE

REGISTERED OWNER: METRO FLOOD DIVERSION AUTHORITY

PRINCIPAL AMOUNT: NINETY MILLION DOLLARS

KNOW ALL MEN BY THESE PRESENTS that Cass County Joint Water Resource District, North Dakota ("CCJWRD") acknowledges itself to be specially indebted and for value received promises to pay to the registered Owner specified above or registered assigns, the principal amount specified above, but only from its Definitive Authority Loan Improvement Warrant Account, held by the Trustee on the maturity date specified above, with interest thereon from the date hereof at the annual rate specified above, payable on the first (1st) Business Day of each month, commencing _____, to the holder of record on the close of the last Business Day of the immediately preceding month, all subject to the provisions referred to herein with respect to the Redemption of the principal of this \$90,000,000 Definitive Authority Loan Improvement Warrant of 202_ No. RDAL-1 ("Definitive Authority Loan Improvement Warrant No. RDAL-1") before maturity. The interest hereon and, upon presentation and surrender hereof, the principal hereof are payable in lawful money of the United States of America by check, draft, or electronic transfer by the Trustee as Paying Agent, or its successor.

Capitalized terms used in this Definitive Authority Loan Improvement Warrant No. RDAL-1 not otherwise defined herein shall have the meanings set forth in the Master Indenture of Trust.

This Definitive Authority Loan Improvement Warrant No. RDAL-1 in the principal amount of Ninety Million Dollars (\$90,000,000) is issued pursuant to the WIFIA Loan Bond Resolution adopted May 27, 2021, by the Governing Body of CCJWRD for the purpose of providing security to the Holders of the Authority Loans to the maintain the Authority Loan Debt Service Coverage Ratio, all pursuant to and in full conformity with the constitution and the laws

of the State of North Dakota, the WIFIA Loan Bond Resolution adopted May 27, 2021, and the Master Indenture of Trust. Except as set forth below, this Definitive Authority Loan Improvement Warrant No. RDAL-1, principal including interest thereon, is payable solely from the Authority Loan Special Assessment Revenue generated by Authority Loan Special Assessments levied, certified, and collected by CCJWRD for FM Flood Risk Management District No. 1 as set out in the WIFIA Loan Bond Resolution adopted May 27, 2021. The Trustee, pursuant to the Master Indenture of Trust, will hold this Definitive Authority Loan Improvement Warrant No. RDAL-1 in trust for the Holders of the Authority Loans, and the Trustee may call the security set forth herein pursuant to the terms and conditions of the Definitive P3 Improvement Warrant Resolution adopted on May 27, 2021, and the Master Indenture of Trust.

This Definitive Authority Loan Improvement Warrant No. RDAL-1 shall remain Outstanding and be enforceable until the earlier of:

- (i) the payment of all payments due under Authority Loans;
- (ii) the termination of the Authority Loan Agreements; or
- (iii) maturity date of the WIFIA Loan Bond.

This Definitive Authority Loan Improvement Warrant No. RDAL-1 has a first priority lien on:

- (i) Authority Loan Special Assessment Revenue; and
- (ii) Authority Loan Deficiency Tax Levy Revenue.

In addition to the foregoing, CCJWRD has levied and is collecting, and may in the future levy and collect, Special Assessments (other than the Authority Loan Special Assessments for FM Flood Risk Management District No. 1) and, with respect to such other Special Assessments, CCJWRD retains and will retain the right to use such other Special Assessment Revenues for any lawful purposes of CCJWRD.

As provided in the WIFIA Loan Bond Resolution adopted May 27, 2021, and subject to certain limitations set forth therein, this Definitive Authority Loan Improvement Warrant No. RDAL-1 is transferable upon the books of CCJWRD at the principal office of the Warrant Registrar, by the registered Owner hereof in person or by its attorney duly authorized in writing, upon surrender hereof together with a written instrument of transfer satisfactory to the Warrant Registrar, duly executed by the registered Owner or attorney; and may also be surrendered in exchange for Definitive Authority Loan Improvement Warrants of other authorized denominations in accordance with the terms of the WIFIA Loan Bond Resolution adopted May 27, 2021, and the Master Indenture of Trust. Upon such transfer or exchange CCJWRD will cause a new Definitive Authority Loan Improvement Warrant to be issued in the name of the transferee or registered Owner of the same aggregate principal amount, bearing interest at the same rate and maturing on the same date, subject to reimbursement for any tax, fee, or governmental charge required to be paid with respect to such transfer or exchange. CCJWRD and the Warrant Registrar may deem and treat the Person in whose name this Definitive Authority Loan Improvement Warrant No.

RDAL-1 is registered as the absolute Owner hereof, whether this Definitive Authority Loan Improvement Warrant No. RDAL-1 is overdue or not, for the purpose of receiving payment and for all other purposes, and neither CCJWRD nor the Warrant Registrar shall be affected by any notice to the contrary.

IT IS HEREBY CERTIFIED, RECITED, COVENANTED AND AGREED that all acts, conditions, and things required by the constitution and laws of the State of North Dakota to be done, to exist, to happen and to be performed preliminary to and in the valid issuance of this Definitive Authority Loan Improvement Warrant have been done, do exist, have happened, and have been performed in regular and due form, time, and manner as so required; that this Definitive Authority Loan Improvement Warrant No. RDAL-1 is duly issued to pay costs incurred and to be incurred in the making of a necessary improvement of special benefit to the above-named FM Flood Risk Management District No. 1 in anticipation of the collection of Authority Loan Special Assessments to be duly levied upon properties within said district, and of taxes to the extent determined by the Governing Body, which are irrevocably appropriated to the Authority Loan Fund of the Trustee in amounts sufficient to pay when due the principal of and interest on all Definitive Authority Loan Improvement Warrants drawn thereon; that if the Authority Loan Fund should at any time be insufficient to pay principal or interest due, Cass County in accordance with N.D.C.C. § 61-16.1-25 is also required by law to levy a tax upon all of the taxable property within the corporate limits of Cass County for the payment of such deficiency, without limitation of rate or amount; and that the issuance of this Definitive Authority Loan Improvement Warrant No. RDAL-1 did not cause the special or general Indebtedness of CCJWRD to exceed any constitutional or statutory limitation.

IN WITNESS WHEREOF, the Cass County Joint Water Resource District, North Dakota, by its Governing Body, has caused this Definitive Authority Improvement Warrant No. RDAL-1 to be executed on its behalf by the signature of the Chair and countersigned by the Secretary.

Dated:

CERTIFICATE OF AUTHENTICATION

This is one of the Definitive Authority Loan Improvement Warrants delivered pursuant to the WIFIA Loan Bond Resolution adopted on May 27, 2021, mentioned within.

BANK OF NORTH DAKOTA
P.O. Box 5509
Bismarck, ND 58504-5509

BY: _____ (do not sign)
Authorized Representative

CASS COUNTY JOINT WATER
RESOURCE DISTRICT

(do not sign)
Chair

(do not sign)
Secretary

CERTIFICATE AS TO LEGAL OPINION

We certify that attached is the legal opinion rendered by Bond Counsel on the issue of warrants, which includes the within Definitive Improvement Warrant, dated as of the date of delivery of and payment for the Definitive Improvement Warrants.

(do not sign)
Secretary

(do not sign)
Chair

The following abbreviations, when used in the inscription on the face of this Definitive Improvement Warrant, shall be construed as though they were written in full according to applicable laws or regulations:

TEN COM - as tenants in common

TEN ENT - as tenants by the entireties

JT TEN - as joint tenants with right of survivorship and not as tenants in common

UTMA - ACT _____ Custodian _____
(Cust) (Minor)

under Uniform Transfer to Minors Act _____
(State)

Additional abbreviations may also be used.

ASSIGNMENT

FOR VALUE RECEIVED the undersigned hereby sells, assigns, and transfers unto _____ the within Definitive Improvement Warrant and all rights thereunder, and hereby irrevocably constitutes and appoints _____ attorney to transfer the within Definitive Improvement Warrant on the books kept for registration thereof, with full power of substitution in the premises.

DATED: _____

Please insert Social Security or other identifying number of Assignee:

NOTICE: The signature to this Assignment must correspond to the name as it appears upon the face of the within Definitive Improvement Warrant in every particular, without alteration, enlargement, or any change whatsoever.

DRAFT

V-1

SUPPLEMENTAL INDENTURE OF TRUST NO. 2
(CWSRF Loan Bond Supplemental Indenture)

Related to:

North Dakota Public Finance Authority
Clean Water State Revolving Fund Loan Bond of 2022

between

METRO FLOOD DIVERSION AUTHORITY,
as issuer of the CWSRF Loan Bond

and

CASS COUNTY JOINT WATER RESOURCE DISTRICT,
as issuer of the Temporary Authority Loan Improvement Warrants and Definitive
Authority Loan Improvement Warrant

to

THE BANK OF NORTH DAKOTA, as Trustee

Dated as of _____, 2022

This instrument was drafted by:
Ohnstad Twichell, P.C.
John T. Shockley
P.O. Box 458
West Fargo, North Dakota 58078

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CWSRF LOAN BOND SUPPLEMENTAL INDENTURE OF TRUST

THIS CWSRF LOAN BOND SUPPLEMENTAL INDENTURE OF TRUST NO. 2 (the “CWSRF LOAN BOND SUPPLEMENTAL INDENTURE”) is dated as of the ____ day of _____, 2022, by and between the METRO FLOOD DIVERSION AUTHORITY, a political subdivision of the State of North Dakota (the “Authority”), the CASS COUNTY JOINT WATER RESOURCE DISTRICT, a political subdivision of the State of North Dakota (“CCJWRD”), and the BANK OF NORTH DAKOTA, a bank duly organized and existing under the laws of the State of North Dakota, as Trustee (the “Trustee”).

RECITALS

WHEREAS, on June 10, 2021, the Authority, CCJWRD, the Fiscal Agent, and the Trustee entered into the Master Indenture of Trust, which pursuant to Article VIII of the Master Indenture of Trust authorizes, in part, the issuance of the CWSRF Loan Bonds by the Authority for the purpose of financing Eligible CWSRF Project Costs; and

WHEREAS, the CWSRF Loan Bonds will evidence the Authority’s obligations under the CWSRF Loan Agreement; and

WHEREAS, on June 10, 2021, the Authority, CCJWRD, and the Trustee entered into the CCJWRD Series 2021A Supplemental Indenture (also known as the Supplemental Indenture of Trust No. 1) to (i) issue the CCJWRD Series 2021A Bonds, (ii) call and Prepay the Wells Fargo Credit Facility, and (iii) pay the Costs of Issuance of the CCJWRD Series 2021A Bonds; and

WHEREAS, the Master Indenture of Trust sets forth that the CWSRF Loan Bond will be issued pursuant to the terms of a Supplemental Indenture; and

WHEREAS, in accordance with the terms and conditions of the Master Indenture of Trust, and the additional terms and conditions set forth in this CWSRF Loan Bond Supplemental Indenture, the Authority desires to issue the CWSRF Loan Bond; and

WHEREAS, the proceeds of the CWSRF Loan Bond will be used to: (i) fund Eligible CWSRF Project Costs; (ii) pay the Costs of Issuance of the CWSRF Loan; and (iii) fund or refund Bonds or other notes, bonds, or other Indebtedness of the Authority, which is eligible to be refunded as determined by the ND PFA; and

WHEREAS, the execution and delivery of this CWSRF Loan Bond Supplemental Indenture and the issuance of the CWSRF Loan Bond have been in all respects duly and validly authorized by the Diversion Authority Board pursuant to a resolution adopted by the Diversion Authority Board on _____, 2022 (the “CWSRF Loan Resolution”); and

WHEREAS, the CWSRF Loan Bond, the forms of assignment, and the Trustee’s authentication certificates to be endorsed on the back of the CWSRF Loan Bond are to be in substantially the following form (the text of which forms may be printed on the face, or on the back, or partly on the face and partly on the back), to wit:

FORM OF BOND

**UNITED STATES OF AMERICA
STATE OF NORTH DAKOTA
METRO FLOOD DIVERSION AUTHORITY**

**CLEAN WATER STATE REVOLVING FUND (CWSRF) LOAN BOND
SERIES 2022**

No. R-1

\$51,634,000

Interest RateDate of Original Issue

1.50%

REGISTERED OWNER: NORTH DAKOTA PUBLIC FINANCE AUTHORITY

PRINCIPAL AMOUNT: FIFTY-ONE MILLION SIX HUNDRED THIRTY-FOUR
THOUSAND DOLLARS

The Metro Flood Diversion Authority, North Dakota (the “Authority”), a political subdivision of and existing under and pursuant to the laws of the State of North Dakota, for value received, hereby promises to pay from its Authority Loan Fund (as defined in the Master Indenture of Trust between the Authority, the Cass County Joint Water Resource District, the City of Fargo, as Fiscal Agent, and the Bank of North Dakota, as Trustee, dated June 10, 2021, as amended and supplemented, including by the Supplemental Indenture of Trust (CCJWRD Series 2021A Supplemental Indenture, dated June 10, 2021, and the Supplemental Indenture of Trust No. 2 (CWSRF Loan Bond Supplemental Indenture) dated the date hereof (together, the “Master Indenture of Trust”) to the Registered Owner specified above, or registered assigns, the Principal Amount specified above, and to pay to the Registered Owner hereof interest on such Principal Amount from the Date of Original Issue at the annual rate of One and One-Half Percent (1.50%) semiannually on September 1 and March 1, plus the Administrative Fee as set forth in the CWSRF Loan Agreement, on the dates and in the amounts set forth in Attachment A to this CWSRF Loan Bond, which Attachment A shall be revised in accordance with Section 2.02 of the CWSRF Loan Agreement in the event funds are advanced to the Authority other than as originally set forth in Attachment A hereto. The principal and interest are payable solely from the revenues pledged for the CWSRF Loan Bond as further described below. Principal is payable in lawful money of the United States of America at the main office of the Bank of North Dakota, in Bismarck, North Dakota, as paying agent and registrar (the “Registrar”) under the Resolution hereinafter described or of its successor as such. Interest shall be paid by check or draft mailed to the Registered Owner at the Registered Owner’s address set forth on the registration books or by wire transfer.

This CWSRF Loan Bond is issued pursuant to and in full conformity with the Constitution and laws of the State of North Dakota, including N.D.C.C. ch. 40-35 (the “Act”) and pursuant to the Master Indenture of Trust, the CWSRF Loan Resolution and the CWSRF Loan Agreement adopted and entered into by the Authority for the purpose of financing the CWSRF Projects. This CWSRF Loan Bond is payable from Required Temporary Debt Service, Construction Period Net Revenues, Net Pledged Revenues, Authority Loan Special Assessment Revenue and Authority

Loan Deficiency Tax Levy Revenue. Reference is hereby made to the CWSRF Loan Resolution, the CWSRF Loan Agreement, and the Master Indenture of Trust for a full description of the Funds and Accounts pledged to the payment of the CWSRF Loan Bond and the rights of the Registered Owner of the CWSRF Loan Bond. This CWSRF Loan Bond is payable solely from the revenues pledged to the payment thereof and does not constitute a debt of the Authority within the meaning of any constitutional or statutory limitation.

This CWSRF Loan Bond is transferable, as provided in the CWSRF Loan Resolution and the CWSRF Loan Agreement, only upon books of the Authority kept at the main office of the Registrar, by the Registered Owner hereof in person or by the Registered Owner's duly authorized attorney, or it may be surrendered in exchange for new CWSRF Loan Bond of the same aggregate principal amount, maturity and interest rate, as provided in the CWSRF Loan Resolution.

This CWSRF Loan Bond is subject to redemption on any interest payment date with the written consent of the Public Finance Authority.

It is further certified, recited and declared that all acts, conditions and things required by the Constitution and the statutes of the State of North Dakota to exist, to have happened and to have been performed precedent to and in connection with the issuance of the CWSRF Loan Bond have been performed in due time, form and manner as required by law; and that the issuance of the CWSRF Loan Bond is within every debt and other limit prescribed by law.

IN WITNESS WHEREOF, the Authority has caused this CWSRF Loan Bond to be executed in its name by the manual or facsimile signatures of its Executive Director and of its Chair, and sealed with its official seal, all as of the Date of Original Issue set forth above.

METRO FLOOD DIVERSION
AUTHORITY, NORTH DAKOTA

By: _____
Chad Peterson, Chair

By: _____
Joel Paulsen, Executive Director

ATTEST:

Dawn Lindblom, Secretary

CERTIFICATE OF AUTHENTICATION

This CWSRF Loan Bond is described in and issued under the provisions of the within-mentioned CWSRF Loan Resolution.

Bank of North Dakota, Bismarck, North
Dakota

BY: _____
Authorized Representative

ASSIGNMENT

For Value received the undersigned hereby sells, assigns and transfers unto _____ the within-mentioned CWSRF Loan Bond and hereby irrevocably constitutes and appoints _____ attorney-in-fact, to transfer the same on the books of registration thereof, with full power of substitution in the premises.

Dated: _____

Social Security or other
identifying number of Assignee

NOTICE: The signature to this assignment must correspond with the name as it appears on the face of the within CWSRF Loan Bond in every particular, without alteration or any change whatsoever.

Signature Guaranteed:

NOTICE: Signatures(s) must be guaranteed by a member of the New York Stock Exchange or a commercial bank or trust company.

ATTACHMENT A

SPECIMEN

WHEREAS, all acts, conditions, and things necessary and required by the constitution and laws of the State of North Dakota, or otherwise, to exist, to have happened, or to have been performed precedent to and in execution and delivery of this CWSRF Loan Bond Supplemental Indenture, and in the issuance of the CWSRF Loan Bond, do exist, have happened, or have been performed in regular form, time, and manner, and the execution and delivery of this CWSRF Loan Bond Supplemental Indenture have been in all respects duly authorized; and

WHEREAS, the Trustee has accepted the Trust Estate created by the Master Indenture of Trust and supplemented by this CWSRF Loan Bond Supplemental Indenture and in evidence thereof has joined in the execution hereof.

NOW, THEREFORE, THIS CWSRF LOAN BOND SUPPLEMENTAL INDENTURE WITNESSETH:

GRANTING CLAUSES

That the Authority in order to secure the payment of the principal of and interest on the CWSRF Loan Bond issued under this CWSRF Loan Bond Supplemental Indenture according to their tenor and effect and the performance and observance of each and all of the covenants and conditions herein and therein contained, and for and in consideration of the premises and of the acceptance of the CWSRF Loan Bond by the registered Owners thereof, and for good and valuable consideration, the receipt whereof is hereby acknowledged, has executed and delivered this CWSRF Loan Bond Supplemental Indenture and has granted, bargained, sold, assigned, transferred, conveyed, pledged, and set over, unto the Trustee, and to its successor or successors in the Trust Estate hereby created and to its assigns forever:

A lien on and pledge of all right, title, and interest in Required Temporary Debt Service Revenue, Construction Period Net Revenues, Net Pledged Revenues, Authority Loan Special Assessment Revenue, and Authority Loan Deficiency Tax Levy Revenue, in accordance with the priority set forth in the Master Indenture of Trust.

TO HAVE AND TO HOLD all and singular the said property hereby conveyed and assigned, or agreed, or intended so to be, to the Trustee, its successor or successors in trust and its and their assigns, FOREVER.

IN TRUST, NEVERTHELESS, upon the terms and trust herein set forth, for the equal and proportionate benefit, security, and protection of all holders of the CWSRF Loan Bond issued or to be issued under and secured by this CWSRF Loan Bond Supplemental Indenture, without preference, priority, or distinction as to lien or otherwise of any of the CWSRF Loan Bond over any of the others.

PROVIDED, HOWEVER, that if the Authority, its successors or assigns, shall well and truly pay or cause to be paid the principal of the CWSRF Loan Bond and interest due or to be due thereon, at the times and in the manner mentioned in the CWSRF Loan Bond according to the true intent and meaning thereof, and shall well and truly keep, perform, and observe all the covenants and conditions pursuant to this CWSRF Loan Bond Supplemental Indenture and the Master Indenture of Trust to be kept, performed, and observed by it and shall pay the Trustee all sums of money due or to become due to it in accordance with the terms and provisions hereof; then upon such final payment this CWSRF Loan Bond Supplemental Indenture and the rights hereby granted

shall cease, extinguish, and be void; otherwise, this CWSRF Loan Bond Supplemental Indenture to be and remain in full force and effect.

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ARTICLE I. DEFINITIONS AND INTERPRETATION

Section 1.01 DEFINITIONS. All capitalized terms used and not otherwise defined herein shall have the meanings given to them in the Master Indenture of Trust or in this CWSRF Loan Bond Supplemental Indenture and as defined in this Section unless a different meaning clearly applies from the context.

Section 1.02 CHARACTERISTICS OF CERTIFICATE OR OPINION. Every certificate or Opinion of Counsel with respect to compliance with a condition or covenant provided for in this CWSRF Loan Bond Supplemental Indenture, and except for certificates and opinions given pursuant to this Section 1.02 hereof, shall include: (i) a statement that the Person or Persons making such certificate or opinion have read such covenant or condition and the definitions herein relating thereto; (ii) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based; (iii) a statement that, in the opinion of the signers, they have made or caused to be made such examination or investigation as is necessary to enable them to express an informed opinion as to whether or not such covenant or condition has been complied with; and (iv) a statement as to whether, in the opinion of the signers, such condition or covenant has been complied with.

Section 1.03 TERMS GENERALLY. The definition of terms herein shall apply equally to the singular and plural forms of the terms defined. Whenever the context may require, any pronoun shall include the corresponding masculine, feminine, and neuter forms. The words “include,” “includes,” and “including” shall be deemed to be followed by the phrase “without limitation.” The word “will” shall be construed to have the same meaning and effect as the word “shall.” Unless the context requires otherwise (a) any definition of or reference to any agreement, instrument, or other document herein shall be construed as referring to such agreement, instrument, or other document as from time to time amended, supplemented, or otherwise modified (subject to any restrictions on such amendments, supplements, or modifications set forth herein); (b) any reference herein to any Person shall be construed to include such Person’s permitted successors and assigns; (c) the words “herein,” “hereof,” and “hereunder” and words of similar import, shall be construed to refer to this CWSRF Loan Bond Supplemental Indenture in its entirety and not to any particular provision hereof; (d) all references herein to Articles, Sections, Exhibits, and Schedules shall be construed to refer to Articles and Sections of, and Exhibits and Schedules to, this CWSRF Loan Bond Supplemental Indenture; and (e) the words “assets” and “property” shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, Accounts, and contract rights.

Section 1.04 ACCOUNTING TERMS; GAAP. Except as otherwise expressly provided herein, all terms of an accounting or financial nature shall be construed in accordance with GAAP, as in effect from time to time.

Section 1.05 AUTHORIZATION. The Parties executing this CWSRF Loan Bond Supplemental Indenture hereby represent and warrant that they have full authority and are duly empowered to execute this CWSRF Loan Bond Supplemental Indenture and have taken all action necessary to authorize the execution and delivery of this CWSRF Loan Bond Supplemental Indenture.

Section 1.06 NOT A JOINT VENTURE OR SEPARATE POLITICAL SUBDIVISION. This CWSRF Loan Bond Supplemental Indenture does not create a joint venture, partnership, or a separate political subdivision. The Authority is a political subdivision under the laws of the State of North Dakota.

ARTICLE II. MASTER INDENTURE OF TRUST

Section 2.01 INCORPORATION AND CONFLICT. The Parties, along with the Fiscal Agent, previously entered the Master Indenture of Trust to set forth the financing structure for the Comprehensive Project. Pursuant to Article XLVI of the Master Indenture of Trust, the Authority is executing this CWSRF Loan Bond Supplemental Indenture to provide for the issuance of the CWSRF Loan Bond pursuant to the provisions of the Master Indenture of Trust and to prescribe the terms and conditions pursuant to which the CWSRF Loan Bond may be issued, paid, or Redeemed. No term or condition of this CWSRF Loan Bond Supplemental Indenture is intended to conflict or take precedence over any term or condition of the Master Indenture of Trust. In the event a term or condition of this CWSRF Loan Bond Supplemental Indenture conflicts with a term or condition of the Master Indenture of Trust, the Master Indenture of Trust controls. All terms and conditions of the Master Indenture of Trust are hereby incorporated by reference into this CWSRF Loan Bond Supplemental Indenture.

ARTICLE III. FORM, EXECUTION, AND REGISTRATION OF CWSRF LOAN BOND

Section 3.01 FORM, MATURITIES, AND NUMERATION OF CWSRF LOAN BOND. The CWSRF Loan Bond to be issued and secured under the Master Indenture of Trust and this CWSRF Loan Bond Supplemental Indenture shall be designated as the “Metro Flood Diversion Authority Clean Water State Revolving Fund (CWSRF) Loan Bond of 2022.” The CWSRF Loan Bond shall be issued in fully registered form in the denomination of, initially, the principal amount of the CWSRF Loan Bond, and thereafter, any principal amount equal to the Outstanding principal amount of the CWSRF Loan, initially numbered from R-1 upwards in order of maturity. Subject to the provisions of Section 3.06, the CWSRF Loan Bond shall bear interest at a rate of One and One-Half Percent (1.5%) semiannually on March 1 and September 1 (each an “Interest Payment Date”) on the dates in the amounts set forth in Attachment A to the CWSRF Loan Bond, plus the Administrative Fee as set forth in the CWSRF Loan Agreement.

Section 3.02 EXECUTION OF CWSRF LOAN BOND. The CWSRF Loan Bond shall be executed in the name of the Authority by the manual or facsimile signature of the Chair of the Diversion Authority Board and the manual or facsimile signature of the Executive Director or signed by the manual or facsimile signatures of other officers of the Authority and said CWSRF Loan Bond shall be authenticated by the Trustee, which is hereby designated as authenticating agent. In the event that any of the officers whose signatures appear on any CWSRF Loan Bond shall cease to be officers of the Authority before such CWSRF Loan Bond shall have been authenticated or delivered by the Trustee, such CWSRF Loan Bond may, nevertheless, be authenticated, delivered, and issued, and upon such authentication, delivery, and issue, shall be binding upon the Authority as though those officers who signed the same have continued to be such officers of the Authority; and, also, any CWSRF Loan Bond may be signed on behalf of the Authority by such Person who, at the actual date of execution of such CWSRF Loan Bond, shall

be the proper officer of the Authority, although at the date of such CWSRF Loan Bond, such Person shall not have been an officer of the Authority.

Section 3.03 DELIVERY OF CWSRF LOAN BOND. Upon execution of this CWSRF Loan Bond Supplemental Indenture, the Authority shall execute and deliver to the Trustee, and the Trustee shall authenticate, pursuant to the provisions of Section 3.04 hereof, the CWSRF Loan Bond, with a maximum aggregate principal amount not to exceed Fifty-One Million Six Hundred Thirty-Four Thousand Dollars (\$51,634,000), and the Trustee shall deliver the CWSRF Loan Bond to the purchasers thereof in the manner designated and directed by the Authority and as provided in this Section.

Prior to and concurrent with the delivery of the CWSRF Loan Bond to the Trustee, there shall also be filed with the Trustee the necessary documentation as set forth in Section 8.02 of the Master Indenture of Trust.

Section 3.04 AUTHENTICATION OF CWSRF LOAN BOND. No CWSRF Loan Bond shall be valid or obligatory for any purpose or shall be entitled to any right or benefit hereunder or under the Master Indenture of Trust or the CWSRF Loan Resolution unless a responsible officer of the Trustee shall manually endorse and execute on such CWSRF Loan Bond a certificate of authentication substantially in the form of the certificate hereinabove set forth. Such certificate upon any CWSRF Loan Bond shall be conclusive evidence that such CWSRF Loan Bond so authenticated has been duly issued under the Master Indenture of Trust and this CWSRF Loan Bond Supplemental Indenture and that the holder thereof is entitled to the benefits of the Master Indenture of Trust, this CWSRF Loan Bond Supplemental Indenture, and the CWSRF Loan Resolution.

No CWSRF Loan Bond shall be authenticated by the Trustee except in accordance with this Article III.

The Trustee shall not be required to authenticate any CWSRF Loan Bond unless provided with the documents referred to in Section 3.03 of this CWSRF Loan Bond Supplemental Indenture and such further certified resolutions, certificates, instruments, or Opinions of Counsel as the Trustee may reasonably require with respect to the validity of the CWSRF Loan Bond to be issued and the right and authority of the CWSRF Loan Bond to authenticate such CWSRF Loan Bond.

Section 3.05 FORM OF CWSRF LOAN BOND. The CWSRF Loan Bond issued under this CWSRF Loan Bond Supplemental Indenture will be substantially in the form set forth in the Recitals of this CWSRF Loan Bond Supplemental Indenture with such appropriate variations, omissions, and insertions as are permitted or required by this CWSRF Loan Bond Supplemental Indenture and the CWSRF Loan Agreement.

Section 3.06 REGISTRATION, TRANSFER, AND EXCHANGES OF THE CWSRF LOAN BOND. As long as any of the CWSRF Loan Bond issued hereunder shall remain Outstanding, the Authority shall maintain and keep at the office of the Trustee, as Bond Registrar and Paying Agent, an office or agency for the payment of the principal of and interest on such CWSRF Loan Bond, as in this CWSRF Loan Bond Supplemental Indenture provided, and for the registration and transfer of such CWSRF Loan Bond and shall also keep at said office of the Trustee records of such registration and transfer. The Authority does hereby appoint the Trustee, and its successors

in the trust from time to time, as its agent to maintain said office and agency at the office of the Trustee.

Upon surrender or transfer of any fully registered CWSRF Loan Bond at the office of the Trustee with a written instrument of transfer satisfactory to the Trustee, duly executed by the registered Owner or its duly authorized attorney, and upon payment of any tax, fee, or other governmental charge required to be paid with respect to such transfer, the Authority shall execute and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more fully registered CWSRF Loan Bond of the same series, of any authorized denominations and of a like aggregate principal amount, interest rate, and maturity.

Except as the right of exchange may be limited as to a CWSRF Loan Bond, a fully registered CWSRF Loan Bond, upon surrender thereof at the office of the Trustee may, at the option of the registered Owner thereof, may be exchanged for an equal aggregate principal amount of fully registered CWSRF Loan Bond of the same series, maturity, and interest rate of any authorized denominations.

In all cases in which the privilege of exchanging a CWSRF Loan Bond or transferring a fully registered CWSRF Loan Bond is exercised, the Authority shall execute, and the Trustee shall deliver, a CWSRF Loan Bond in accordance with the provisions of this CWSRF Loan Bond Supplemental Indenture. For every such exchange or transfer of a CWSRF Loan Bond, the Authority or the Trustee may make a charge sufficient to reimburse it for any tax, fee, or other governmental charge required to be paid with respect such exchange or transfer, which sum or sums shall be paid by the Person requesting such exchange or transfer as a condition precedent to the exercise of the privilege of making such exchange or transfer. Notwithstanding any other provision of this CWSRF Loan Bond Supplemental Indenture, the cost of preparing each new CWSRF Loan Bond upon each exchange or transfer, and any other expenses of the Authority or the Trustee incurred in connection therewith (except any applicable tax, fee, or other governmental charge) shall be paid by the Authority. The Authority shall not be obligated to make any such exchange or transfer of a CWSRF Loan Bond during the fifteen (15) calendar days next preceding the date of the first publication or the mailing (if there is no publication) of notice of Redemption in the case of a proposed Redemption of a CWSRF Loan Bond. The Authority and Trustee shall not be required to make any transfer or exchange of any CWSRF Loan Bond called for Redemption. Notwithstanding the foregoing, neither the Trustee nor any agent shall have any responsibility or liability for any actions taken or not taken by the Depository.

Section 3.07 PAYMENT OF INTEREST ON CWSRF LOAN BOND; INTEREST RIGHTS PRESERVED. Interest on any fully registered CWSRF Loan Bond which is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Person in whose name that CWSRF Loan Bond (or one or more predecessor bonds) is registered at the close of business on the day for such interest specified in the provisions of the CWSRF Loan Agreement.

Any interest on the CWSRF Loan Bond, which is payable, but is not punctually paid or duly provided for, on any Interest Payment Date (hereinafter called "Defaulted Interest") shall forthwith cease to be payable to the registered holder on the relevant day set forth in the CWSRF Loan Agreement solely by virtue of such holder having been such holder; and such Defaulted Interest may be paid by the Trustee, at the election of the Trustee in each case, as provided in subsection (a) or (b) below:

(a) The Trustee may elect to make payment of any Defaulted Interest on the fully registered CWSRF Loan Bond to the Persons in whose names such CWSRF Loan Bond (or their respective predecessor bonds) are registered at the close of business on a date for the payment of such Defaulted Interest as set forth in the CWSRF Loan Agreement, which shall be fixed in the following manner. The Trustee shall fix a date in accordance with the CWSRF Loan Agreement for the payment of such Defaulted Interest which shall not be more than fifteen (15) calendar days, nor less than ten (10) calendar days prior to the date of proposed payment, and not less than ten (10) calendar days after the receipt by the Trustee of the monies with which to make the proposed payment. The Trustee shall promptly notify the Authority of such date and, the amount of such Defaulted Interest and the date therefor to be mailed, first class postage prepaid, to each holder of a fully registered CWSRF Loan Bond of such series at its address as it appears in the registration books not less than ten (10) days prior to such date. The Trustee shall, at the expense of the Authority, cause a similar notice to be published on EMMA, but such publication shall not be a condition precedent to the establishment of such date. Notice of the proposed payment of such Defaulted Interest and the date therefor having been mailed as aforesaid, such Defaulted Interest shall be paid to the Persons in whose names the CWSRF Loan Bond of such series (or their respective predecessor bonds) are registered on such date and shall no longer be payable pursuant to the following subsection (b).

(b) The Trustee may make payment of any Defaulted Interest on the fully registered CWSRF Loan Bond in any other lawful manner if such payment shall be deemed practicable by the Trustee.

Subject to the foregoing provisions of this Section, each CWSRF Loan Bond delivered hereunder this CWSRF Loan Bond Supplemental Indenture, transfer of or in exchange for in lieu of any other CWSRF Loan Bond, shall carry all rights to interest accrued and unpaid, and to accrue, which were carried by such other CWSRF Loan Bond and each such CWSRF Loan Bond shall bear interest from such date that neither gain nor loss in interest shall result from such transfer, exchange, or substitution.

Section 3.08 NOT BOOK ENTRY BOND. The CWSRF Loan Bond will not be registered in a Book Entry Bond and will be delivered directly to ND PFA.

ARTICLE IV. REDEMPTION

Section 4.01 OPTIONAL REDEMPTION. The CWSRF Loan Bond is subject to optional prior Redemption, in whole or in part, and if in part in such order and in such amounts as the Authority may designate in integral multiples of \$5,000, by the Authority, upon consent by ND PFA as provided in the CWSRF Loan Agreement, and any day thereafter at a Redemption Price equal to the principal amount thereof to be Redeemed, plus accrued interest to the date of Redemption without premium.

Section 4.02 CANCELLATION OF REDEEMED CWSRF LOAN BOND. All CWSRF Loan Bonds Redeemed shall forthwith be canceled and destroyed by the Trustee and a certificate of destruction furnished to the Authority upon request, and no further CWSRF Loan Bonds shall be executed or authenticated or issued hereunder in exchange or substitution therefor.

ARTICLE V. CREATION AND USE OF FUNDS AND ACCOUNTS

Section 5.01 MASTER INDENTURE OF TRUST FUNDS AND ACCOUNTS. Article XXVII of the Master Indenture of Trust previously created Funds and Accounts to manage the flow of monies for the Comprehensive Project. This CWSRF Loan Bond Supplemental Indenture reaffirms the creation of such Funds and Accounts to meet debt service obligations on the CWSRF Loan Bond.

Section 5.02 FM DIVERSION PROJECT FUND. Pursuant to Section 10.04(c) of the Joint Powers Agreement and Section 27.05 of the Master Indenture of Trust, the Fiscal Agent created the FM Diversion Project Fund as a separate and special bookkeeping Account on the official books and records of the Authority. Within the FM Diversion Project Fund, the Master Indenture of Trust created a CWSRF Projects Account. The Fiscal Agent shall deposit all CWSRF Loan Proceeds received from the Trustee into the CWSRF Projects Account. Costs included within the Eligible CWSRF Project Costs shall be withdrawn by the Fiscal Agent from the CWSRF Projects Account and deposited into the Milestone Payment Account in accordance with the Master Indenture of Trust.

Section 5.03 AUTHORITY LOAN FUND. Pursuant to Section 27.14 of the Master Indenture of Trust, the Trustee created the Authority Loan Fund as a separate and special bookkeeping Account on the official books of the Trustee. Within the Authority Loan Fund, the Trustee will maintain the SRF Loans Account.

(a) SRF Loans Account. Within the Authority Loan Fund, the Master Indenture of Trust created an SRF Loans Account to be held by the Trustee. The Trustee will establish and maintain the SRF Loans Account as a separate and special bookkeeping Account on the official books of the Trustee and shall deposit and/or withdraw funds therein in accordance with the Master Indenture of Trust.

(b) Temporary Authority Loan Improvement Warrant Account. Within the Authority Loan Fund, the Master Indenture of Trust created the Temporary Authority Loan Improvement Warrant Account as a separate and special bookkeeping Account on the official books of the Trustee. Authority Loan Special Assessment Revenue and Authority Loan Deficiency Tax Levy Revenue will be deposited into the Temporary Authority Loan Improvement Warrant Account and/or withdrawn in accordance with Sections 30.07 and 31.04 of the Master Indenture of Trust.

(c) Definitive Authority Loan Improvement Warrant Account. Within the Authority Loan Fund, the Master Indenture of Trust created the Definitive Authority Loan Improvement Warrant Account as a separate and special bookkeeping Account on the official books of the Trustee. Authority Loan Special Assessment Revenue and Authority Loan Deficiency Tax Levy Revenue will be deposited into the Definitive Authority Loan Improvement Warrant Account and/or withdrawn in accordance with Sections 30.08 and 36.04 of the Master Indenture of Trust.

Section 5.04 AUTHORITY LOAN RESERVE FUND. Pursuant to Section 27.17 of the Master Indenture of Trust, the Trustee created the Authority Loan Reserve Fund. The Trustee will

establish and maintain the Authority Loan Reserve Fund as a separate and special bookkeeping Account on the official books and records of the Trustee. Within the Authority Loan Reserve Fund, the Trustee will maintain the SRF Loans Reserve Account. The Trustee will establish and maintain the SRF Loans Reserve Account as a separate and special bookkeeping Account on the official books of the Trustee. Excess Construction Period Net Revenues, Construction Period Net Revenues, and Net Pledged Revenues will be deposited into the SRF Loan Reserve Account and/or withdrawn in accordance with the Master Indenture of Trust. The SRF Loans Reserve Account Requirement for the CWSRF Loan Bond is \$2,283,750, which shall be deposited in the SRF Loans Reserve Account from available funds of the Authority other than proceeds of the CWSRF Loan Bond.

Section 5.05 DEBT OBLIGATION RETIREMENT FUND. Pursuant to Section 27.03 of the Master Indenture of Trust, the Trustee created the Debt Obligation Retirement Fund. The Trustee will establish and maintain the Debt Obligation Retirement Fund as a separate and special bookkeeping Fund on the official books and records of the Trustee. Within the Debt Obligation Retirement Fund, the Trustee will maintain the Authority Loan Retirement Account. Within the Debt Obligation Retirement Fund, the Master Indenture of Trust created an Authority Loan Retirement Account to be held by the Trustee. The Trustee will establish and maintain the Authority Loan Retirement Account as a separate and special bookkeeping Account on the official books of the Trustee. In the event the Authority determines it will Redeem the CWSRF Loan, it will deposit non-bond proceeds in the Authority Loan Retirement Account pursuant to Article XIV of the Master Indenture of Trust.

ARTICLE VI. CWSRF LOAN BOND PROCEEDS

Section 6.01 PURPOSE OF CWSRF LOAN BOND. The purpose of the CWSRF Loan Bond is to provide funds to: (i) fund Eligible CWSRF Project Costs; (ii) pay the Costs of Issuance for the CWSRF Loan; and (iii) fund or refund Bonds or other notes, bonds, or other Indebtedness of the Authority, which is eligible to be refunded as determined by the ND PFA.

Section 6.02 APPLICATION OF CWSRF LOAN PROCEEDS. CWSRF Loan Proceeds shall be applied to Eligible CWSRF Project Costs as set forth in the CWSRF Loan Agreement.

ARTICLE VII. PLEDGED REVENUES

Section 7.01 PLEDGE OF REQUIRED TEMPORARY DEBT SERVICE REVENUE. The Authority hereby dedicates and pledges the Required Temporary Debt Service Revenue for payment of interest on the CWSRF Loan Bond pursuant to the terms and conditions of the Master Indenture of Trust and this CWSRF Loan Bond Supplemental Indenture. Such dedication shall be irrevocable so long as any principal and interest on the CWSRF Loan Bond remains Outstanding and unpaid.

Section 7.02 PLEDGE OF CONSTRUCTION PERIOD NET REVENUES. The Authority hereby dedicates and pledges the Construction Period Net Revenues for payment of principal and interest on the CWSRF Loan Bond pursuant to the terms and conditions of the Master Indenture of Trust

and this CWSRF Loan Bond Supplemental Indenture. Such dedication shall be irrevocable so long as any principal and interest on the CWSRF Loan remains Outstanding and unpaid.

Section 7.03 PLEDGE OF NET PLEDGED REVENUES. The Authority hereby dedicates and pledges the Net Pledged Revenues for the payment of principal and interest on the CWSRF Loan Bond pursuant to the terms and conditions of the Master Indenture of Trust and this CWSRF Loan Bond Supplemental Indenture. Such dedication shall be irrevocable so long as any principal and interest on the CWSRF Loan remains Outstanding and unpaid.

Section 7.04 PLEDGE OF TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT REVENUE. In accordance with the priority established in 31.04 and 30.07 of the Master Indenture of Trust, the Authority and CCJWRD hereby dedicate and pledge the Authority Loan Special Assessment Revenues and the Authority Loan Deficiency Tax Levy Revenue to the Trustee under the Master Indenture of Trust for payment of principal and interest on the CWSRF Loan Bond until the Construction Period Net Revenues Sunset Date and any such dedication shall be irrevocable so long as any such interest on the CWSRF Loan Bond remains Outstanding and unpaid.

Section 7.05 PLEDGE OF DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANT REVENUE. In accordance with the priority established in Section 36.04 and 30.08 of the Master Indenture of Trust, the Authority and CCJWRD hereby dedicate and pledge the Authority Loan Special Assessment Revenues and the Authority Loan Deficiency Tax Levy Revenue to the Trustee under the Master Indenture of Trust for payment of the principal and interest on the CWSRF Loan Bond after the Construction Period Net Revenues Sunset Date and any such dedications shall be irrevocable so long as any such interest on the CWSRF Loan Bond remains Outstanding and unpaid.

Section 7.06 NOT GENERAL OBLIGATIONS. **The CWSRF Loan Bond is not a general obligation of the Authority. The CWSRF Loan Bond is a special limited obligation of the Authority and does not constitute an Indebtedness, general or moral obligation, or charge of the City of Fargo, the City of Moorhead, Cass County, Clay County, the State of Minnesota, or the State of North Dakota; the full faith and credit of the Authority is not pledged to the payment of the CWSRF Loan Bond. The CWSRF Loan Bond does not directly, indirectly, or contingently obligate, in any manner, the Authority to levy any tax or to make any appropriation for payment of the CWSRF Loan Bond. The CWSRF Loan Bond is payable solely from the Required Temporary Debt Service Revenue, Construction Period Net Revenues, Net Pledged Revenues, Authority Loan Special Assessment Revenue, and Authority Loan Deficiency Tax Levy Revenue, in accordance with the Master Indenture of Trust and this CWSRF Loan Bond Supplemental Indenture.**

ARTICLE VIII.

ISSUANCE OF TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT

Section 8.01 FINDINGS IN CONNECTION WITH THE ISSUANCE OF THE TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT. It is hereby found, determined, and declared that:

- (a) CCJWRD has duly created and has ordered, received, and approved plans and estimates of the cost for the construction of the improvements within FM Flood Risk Management District No. 1;
- (b) The CCJWRD Managers determined the necessity of constructing the Comprehensive Project, and, where applicable, by petition or after giving the owners of property liable to be specially assessed therefor the opportunity provided by law to protest against the construction of the Comprehensive Project, it was determined that protests sufficient to divest CCJWRD with reference to the making of improvements consisting of the Comprehensive Project had not been filed or a petition having been received;
- (c) CCJWRD possesses and has power to exercise through the CCJWRD Managers full and exclusive jurisdiction over all utilities, streets, and places wherein the improvements within FM Flood Risk Management District No. 1;
- (d) The total cost of the Comprehensive Project in excess of any other monies on hand and appropriate for the payment of such cost, including reimbursing other monies of CCJWRD for any amounts temporarily advanced to meet immediate expenses of the improvements within FM Flood Risk Management District No. 1 is now estimated to be approximately Two Billion Seven Hundred Fifty Million Dollars (\$2,750,000,000);
- (e) The total benefits to all lots, tracts, and parcels of land liable to be specially assessed for benefits resulting from the improvements in FM Flood Risk Management District No. 1 will be in excess of the cost of improvements within FM Flood Risk Management District No. 1 to be assessed against the properties as herein provided; and
- (f) That all acts, conditions, and things required by the constitution and laws of the State of North Dakota to be done, to exist, to happen, and to be performed preliminary to the issuance of the Temporary Authority Loan Improvement Warrant RTAL-1 for the improvements within FM Flood Risk Management District No. 1 have been done, do exist, have happened, and have been performed in regular and due form, time, and manner as so required.

Section 8.02 COVENANT TO COMPLETE LEVY OF AUTHORITY LOAN SPECIAL ASSESSMENTS. CCJWRD hereby covenants and agrees with the holders from time to time of the CWSRF Loan Bond herein and authorized or referred to that it will do and perform all acts and things necessary for the completion of the Comprehensive Project and for the valid and final levy of Authority Loan Special Assessments upon all properties within FM Flood Risk Management District No. 1 identified in Section 8.03 of this CWSRF Loan Bond Supplemental Indenture to be benefited by the Comprehensive Project, in an aggregate amount as described in the Master Indenture of Trust, with interest on installments thereof from time to time remaining unpaid at a rate determined by the CCJWRD Managers in accordance with the North Dakota Century Code, as amended, and that should any of such Temporary Authority Loan Special Assessments be at any time determined to be invalid or unenforceable for any reason, it will take all such further actions and proceedings as may be required by law to make such assessment a valid and binding lien upon the properties within FM Flood Risk Management District No. 1.

Section 8.03 ALLOCATION OF SPECIAL ASSESSMENTS. CCJWRD hereby covenants that it will levy Special Assessments for FM Flood Risk Management District No. 1 in the following tranches and allocations or as otherwise required by the Master Indenture of Trust:

District Designation	Principal Amount	Years Levied	Amounts of Principal per Year of Payment*
FM Flood Risk Management District No. 1 Non-P3 Special Assessments (Non-P3 Improvement Warrant(s))	\$180,000,000	Commencing on Construction Period Net Revenues Sunset Date for a period of 30 years	In accordance with Non-P3 Improvement Warrant(s)
FM Flood Risk Management District No. 1 P3 Special Assessments (P3 Improvement Warrant(s))	\$599,098,000	Commencing on Construction Period Net Revenues Sunset Date for a period of 30 years	In accordance with P3 Improvement Warrant(s)
FM Flood Risk Management District No. 1 Authority Loan Special Assessments (Authority Loan Improvement Warrant(s))	\$90,000,000	Commencing on WIFIA Debt Service Commencement Date for a period of 30 years	\$5,000,000 each year of levy
Total	\$870,000,000		

Section 8.04 TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT RTAL-1. The Temporary Authority Loan Improvement Warrant RTAL-1 matures three (3) years from the date of Original Issue and bear interest from the date of issue until paid at a rate of the WIFIA Loan Bond plus one hundred and fifty basis points (150 BPS) per annum. The principal and interest on each Temporary Authority Loan Improvement Warrant is payable at the office of the Trustee.

Section 8.05 FORM OF THE TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT. A fully executed copy of the Temporary Authority Loan Improvement Warrant is attached hereto as **Exhibit A**.

Section 8.06 AUTOMATIC ISSUANCE AND EXCHANGE FOR TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT. In the event the Temporary Authority Loan Improvement Warrant RTAL-1 matures prior to the anticipated WIFIA Debt Service Commencement Date, a Temporary Authority Loan Improvement Warrant of 2024 of the Cass County Joint Water Resource District Temporary Authority Loan Improvement Warrant RTAL-2, in the same principal amount of, and on the same terms, aside from maturity date, as, the Temporary Authority Loan Improvement Warrant RTAL-1, shall be issued by CCJWRD without further authorization of the CCJWRD Managers. The maturity of the Temporary Authority Loan Improvement Warrant RTAL-2 shall be three (3) years from the date of original issuance, and CCJWRD will exchange said Temporary Authority Loan Improvement Warrant RTAL-2 with the Temporary Authority Loan Improvement Warrant RTAL-1 in the Temporary Authority Loan Improvement Warrant Account to continue to serve as security for the holders of the CWSRF Loan Bond. In the event

the Temporary Authority Loan Improvement Warrant RTAL-2 matures prior to the anticipated WIFIA Debt Service Commencement Date, a Temporary Authority Loan Improvement Warrant of 2027 of the Cass County Joint Water Resource District Temporary Authority Loan Improvement Warrant RTAL-3, in the same principal amount of, and on the same terms, aside from maturity date, as, the Temporary Authority Loan Improvement Warrant RTAL-2, shall be issued by CCJWRD without further authorization of the CCJWRD Managers. The maturity of the Temporary Authority Loan Improvement Warrant RTAL-3 shall be three (3) years from the Date of Original Issue, and CCJWRD will exchange said Temporary Authority Loan Improvement Warrant RTA-2 with the Temporary Authority Loan Improvement Warrant RTAL-3 in the Temporary Authority Loan Improvement Warrant Account to continue to serve as security for the holders of the CWSRF Loan Bond. All terms, conditions, and covenants set forth in this CWSRF Loan Bond Supplemental Indenture that are applicable to the Temporary Authority Loan Improvement Warrant will apply to the subsequent temporary improvement warrants issued pursuant to this Section.

Section 8.07 TIMING OF DEFINITIVE EXCHANGE OF THE TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT(S). CCJWRD will refund and replace the Temporary Authority Loan Improvement Warrant with the Definitive Authority Loan Improvement Warrant upon the earlier of the following:

- (a) Within thirty (30) calendar days of receiving notice from the Developer of the anticipated Project Substantial Completion Date pursuant to Section 16.3(a)(ii) of the Project Agreement¹; or
- (b) Within one hundred eight (180) days prior to the anticipated Construction Period Net Revenues Sunset Date.

Section 8.08 AUTHORITY LOAN DEFICIENCY TAX LEVY WITH RESPECT TO THE TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT. With respect to the Temporary Authority Loan Improvement Warrant Account, CCJWRD hereby recognizes its obligation with respect to the Temporary Authority Loan Improvement Warrant RTAL-1 and if so issued Temporary Authority Loan Improvement Warrant RTAL-2 and if so issued Temporary Authority Loan Improvement Warrant RTAL-3 drawn against the Temporary Authority Loan Improvement Warrant Account, as set forth in N.D.C.C. § 61-16.1-36, that whenever all Authority Loan Special Assessments, Required Temporary Debt Service Revenue and Construction Period Net Revenues, and taxes, if any, theretofore collected for the payment of debt service on the CWSRF Loan Bond prior to the effective date of the Definitive Authority Loan Improvement Warrant are insufficient to pay principal of or interest then due on the then Outstanding CWSRF Loan Bond, the Cass County Commission, wherein CCJWRD lies, shall advance to the Temporary Authority Loan Improvement Warrant Account an amount sufficient to pay the deficiency attributable to benefited property in Cass County. In the event the Temporary Authority Loan Improvement Warrant Account should at any time be insufficient to pay principal or interest due on the CWSRF Loan Bond prior to the effective date of the Definitive Authority Loan Improvement Warrant, the Cass County Commission shall thereupon levy a tax upon all taxable property in Cass County, unlimited as to rate, for the payment of such deficiency. Nothing herein contained shall be deemed to limit

¹ Pursuant to section 16.3(a)(ii) of the Project Agreement, “[t]he Developer shall provide written notice to the Authority of the anticipated date for Project Substantial Completion . . . at least one hundred twenty (120) days prior to the anticipated date for Project Substantial Completion.”

the power of CCJWRD under the provisions of N.D.C.C. § 61-16.1-36, to levy a general tax in anticipation of a deficiency considered likely to occur in the Temporary Authority Loan Improvement Warrant Account within thirteen (13) months, and it is hereby declared to be the policy of CCJWRD that the Cass County Commission will annually review the current requirements and resources of the Temporary Authority Loan Improvement Warrant Account, at the time of the preparation of and hearing on the budget, in accordance with the provisions of N.D.C.C. Chapter 61-16.1 and the JPA, to the end that provision may be made in each annual budget for any deficiency in the Temporary Authority Loan Improvement Warrant Account, which is deemed likely to occur within thirteen (13) months. Such taxes levied in accordance with the provisions of this paragraph in payment of a deficiency, or in anticipation of a deficiency, shall be paid upon collection into the Temporary Authority Loan Deficiency Tax Levy Sub-Account of the Temporary Authority Loan Improvement Warrant Account and applied as provided in Article VII of this CWSRF Loan Bond Supplemental Indenture.

ARTICLE IX.

ISSUANCE OF DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANT

Section 9.01 FINDINGS IN CONNECTION WITH THE ISSUANCE OF THE DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANT. It is hereby found, determined, and declared that:

- (a) CCJWRD has duly created and has ordered, received, and approved plans and estimates of the cost for the construction of the improvements within FM Flood Risk Management District No. 1;
- (b) The CCJWRD Managers determined the necessity of constructing the Comprehensive Project, and, where applicable, by petition or after giving the owners of property liable to be specially assessed therefor the opportunity provided by law to protest against the construction of the Comprehensive Project, it was determined that protests sufficient to divest CCJWRD with reference to the making of the improvements consisting of the Comprehensive Project had not been filed nor a petition having been received;
- (c) CCJWRD possesses and has power to exercise through the CCJWRD Managers full and exclusive jurisdiction over all utilities, streets, and places wherein the improvements within FM Flood Risk Management District No. 1;
- (d) The total cost of the Comprehensive Project in excess of any other monies on hand and appropriate for the payment of such cost, including reimbursing other monies of CCJWRD for any amounts temporarily advanced to meet immediate expenses of the improvements within FM Flood Risk Management District No. 1 is now estimated to be approximately Two Billion Seven Hundred Fifty Million Dollars (\$2,750,000,000);
- (e) The total benefits to all lots, tracts, and parcels of land liable to be specially assessed for benefits resulting from the improvements in FM Flood Risk Management District No. 1 will be in excess of the cost of the improvements within FM Flood Risk Management District No. 1 to be assessed against the properties as herein provided; and
- (f) That all acts, conditions, and things required by the constitution and laws of the State of North Dakota to be done, to exist, to happen, and to be performed preliminary to the issuance of the Temporary Authority Loan Improvement Warrant RTAL-1 for the

improvements within FM Flood Risk Management District No. 1 have been done, do exist, have happened, and have been performed in regular and due form, time, and manner as so required.

Section 9.02 DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANT. In anticipation of the collection of the Authority Loan Special Assessments as set forth in Section 8.03 of this CWSRF Loan Bond Supplemental Indenture to be levied for the payment of the cost of the Comprehensive Project financed by the issuance of the Definitive Authority Loan Improvement Warrant drawn on the Definitive Authority Loan Improvement Warrant Account, CCJWRD will issue its Definitive Authority Loan Improvement Warrant RTAL-1 in accordance herewith and with Sections 3.07 and 4.01 of the WIFIA Loan Bond Resolutions, and the Master Indenture of Trust.

Section 9.03 FORM OF THE DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANT. The Definitive Authority Loan Improvement Warrant shall be typewritten and photocopied in substantially the form attached hereto as **Exhibit B**.

Section 9.04 AUTHORITY LOAN DEFICIENCY TAX LEVY WITH RESPECT TO THE DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANT. With respect to the Definitive Authority Loan Improvement Warrant Account, CCJWRD hereby recognizes its obligation with respect to the Definitive Authority Loan Improvement Warrant, as set forth in N.D.C.C. § 61-16.1-36, that whenever all Authority Loan Special Assessments, Net Pledged Revenues, and taxes, if any, theretofore collected for payment of debt service on the CWSRF Loan Bond after the effective date of the Definitive Authority Loan Improvement Warrant are insufficient to pay principal or interest then due on the then Outstanding CWSRF Loan Bond, the Cass County Commission, wherein CCJWRD lies, shall advance to the Definitive Authority Loan Improvement Warrant Account an amount sufficient to pay the deficiency attributable to benefited property in Cass County. In the event the Definitive Authority Loan Improvement Warrant Account should at any time be insufficient to pay principal or interest due on the CWSRF Loan Bond after the effective date of the Definitive Authority Loan Improvement Warrant, the Cass County Commission shall thereupon levy a tax upon all taxable property in Cass County, unlimited as to rate, for the payment of such deficiency. Nothing herein contained shall be deemed to limit the power of CCJWRD under the provisions of N.D.C.C. § 61-16.1-36, to levy a general tax in anticipation of a deficiency considered likely to occur in the Definitive Authority Loan Improvement Warrant Account within thirteen (13) months, and it is hereby declared to be the policy of CCJWRD that the Cass County Commission will annually review the current requirements and resources of the Definitive Authority Loan Improvement Warrant Account, at the time of the preparation of and hearing on the budget, in accordance with the provisions of N.D.C.C. Chapter 61-16.1 and the JPA, to the end that provision may be made in each annual budget for any deficiency in the Definitive Authority Loan Improvement Warrant Account which is deemed likely to occur within thirteen (13) months. Such taxes levied in accordance with the provisions of this paragraph in payment of a deficiency, or in anticipation of a deficiency, shall be paid upon collection into the Authority Loan Deficiency Tax Levy Sub-Account of the Definitive Authority Loan Improvement Warrant Account and applied as provided in Article VII of this CWSRF Loan Bond Supplemental Indenture.

ARTICLE X. PARTICULAR COVENANTS OF THE AUTHORITY

Section 10.01 JURISDICTION OF THE AUTHORITY. The Authority has undertaken, pursuant to the constitution and laws of the State of North Dakota, to create and issue the CWSRF Loan Bond, to loan the proceeds thereof to the Authority, to execute this CWSRF Loan Bond Supplemental Indenture, execute the CWSRF Loan Agreement, assign and pledge to the Trustee the Trust Estate, and to make the covenants as herein provided. All necessary action and proceedings on its part to be taken for the creation and issuance of the CWSRF Loan Bond and the execution and delivery of this CWSRF Loan Bond Supplemental Indenture have been duly and effectively taken, and the CWSRF Loan Bond in the hands of the holders or Owners thereof are and will be duly issued special obligations of the Authority in accordance with their terms.

Section 10.02 TO OBSERVE ALL COVENANTS AND LIMITATIONS ON AUTHORITY'S OBLIGATIONS. The Authority will not issue or permit to be issued any CWSRF Loan Bond hereunder in any manner other than in accordance with the provisions of the Master Indenture of Trust and this CWSRF Loan Bond Supplemental Indenture, the CWSRF Loan Agreement, and the agreements in that behalf therein and herein contained and will not suffer or permit any default to occur under the CWSRF Loan Bond Supplemental Indenture, but it will faithfully observe and perform all conditions, covenants, and requirements hereof. The Authority has no obligation to levy taxes for, or to make any advance or payment or to incur any expense or liability from its general funds in performing, any of the conditions, covenants, or requirements of the CWSRF Loan Bond or this CWSRF Loan Bond Supplemental Indenture.

Section 10.03 DESIGNATION OF ALTERNATE PAYING AGENTS. The Authority hereby covenants and agrees to cause the necessary arrangements to be made through the Trustee and to be thereafter continued for the designation of alternate paying agents, if any, and for the making available of monies hereunder, but only to the extent such monies are made available to the Authority from CWSRF Loan Proceeds or other Funds or Accounts created under the Master Indenture of Trust or hereunder or the income from the temporary investment thereof, for the payment of such bonds as shall be presented, when due, at the principal office of the Trustee, or its successor in trust hereunder, or at the principal corporate trust office of said alternate paying agents.

ARTICLE XI. CWSRF LOAN AGREEMENT

Section 11.01 INCORPORATION OF CWSRF LOAN AGREEMENT. The terms and conditions of the CWSRF Loan Agreement are hereby incorporated by reference into this CWSRF Loan Bond Supplemental Indenture.

ARTICLE XII. MISCELLANEOUS

Section 12.01 COVENANTS TO BIND SUCCESSORS AND ASSIGNS. All the covenants, stipulations, promises, and agreements in this CWSRF Loan Bond Supplemental Indenture contained, by, or on behalf of the Authority shall bind and inure to the benefit of its successors and assigns, whether so expressed or not.

Section 12.02 COVENANT TO COMPLETE THE COMPREHENSIVE PROJECT. The Authority hereby covenants to proceed with the construction of the Comprehensive Project and to complete construction prior to the Construction Period Net Revenues Sunset Date.

Section 12.03 NOT SECTION 265(B)(3) QUALIFIED. The CWSRF Loan Bond will **not** be designated as a qualified tax-exempt obligation pursuant to Section 265(b)(3) of the Internal Revenue Code of 1986.

Section 12.04 AMENDMENT OF CWSRF LOAN BOND SUPPLEMENTAL INDENTURE.

(a) This CWSRF Loan Bond Supplemental Indenture may be amended without the consent of ND PFA for one or more of the following purposes:

- (i) To add the covenants and agreements of the Authority in this CWSRF Loan Bond Supplemental Indenture and any other covenants and agreements thereafter to be observed by the Authority.
- (ii) To cure any ambiguity or formal defect in this CWSRF Loan Bond Supplemental Indenture, if that cure does not, in the judgment of the Authority, adversely affect the interests of the holder of the Authority Loan.

(b) This CWSRF Loan Bond Supplemental Indenture may be amended for any other purpose only upon the consent of the ND PFA, provided, however, that no amendment shall be valid which:

- (i) Extends the maturity of any CWSRF Loan Bond, reduces the rate of interest upon any CWSRF Loan Bond, extends the time of payment of interest on the CWSRF Loan Bond, or reduces the amount of principal payable on any CWSRF Loan Bond, without the consent of the ND PFA.
- (ii) *[Reserved for future use.]*

Section 12.05 NO CREDIT ENHANCEMENT. There is no credit enhancement facility securing the CWSRF Loan Bond, nor is there any provision for credit enhancement to be provided to secure the CWSRF Loan Bond.

Section 12.06 IMMUNITY. No recourse for the payment of any part of principal and interest on the CWSRF Loan Bond or for the satisfaction of any liability arising from, founded upon, or existing by reason of the issue or ownership of any CWSRF Loan Bond shall be had against any officer, member, or agent of the Authority, the State of North Dakota, or the State of Minnesota in their private, individual capacity, all such liability being hereby expressly released and waived as a condition of and as part of the consideration for the execution of this CWSRF Loan Bond Supplemental Indenture and the issuance of the CWSRF Loan Bond.

Section 12.07 SEVERABILITY OF INVALID PROVISION. If any one or more of the covenants, stipulations, promises, agreements, and obligations provided herein on the part of the Authority or the Trustee to be performed should be contrary to law, then such covenant or covenants, stipulation or stipulations, promise or promises, agreement or agreements, or obligation or obligations shall be null and void, shall be deemed and construed to be severable from the

remaining covenants, stipulations, promises, agreements, and obligations herein contained, and shall in no way affect the validity of the other provisions hereof or of the CWSRF Loan Bond.

Section 12.08 EXECUTION IN COUNTERPARTS. This CWSRF Loan Bond Supplemental Indenture may be simultaneously executed in several counterparts, each of which, when so executed, shall be deemed to be an original, and such counterparts shall together constitute one and the same instrument.

Section 12.09 HEADINGS NOT CONTROLLING. The headings of the several Articles and Sections hereof are inserted for the convenience of reference only and shall not control or affect the meaning or construction of any of the provisions hereof.

Section 12.10 APPLICABLE LAW. This CWSRF Loan Bond Supplemental Indenture shall be governed exclusively by the constitution and laws of the State of North Dakota.

Section 12.11 NOTICES, ETC. Any request, demand, authorization, direction, notice, consent, or other document provided or permitted by this CWSRF Loan Bond Supplemental Indenture shall be sufficient for any purpose under this CWSRF Loan Bond Supplemental Indenture, when hand delivered or mailed registered mail, return receipt requested, postage prepaid (except as otherwise provided in this CWSRF Loan Bond Supplemental Indenture) (with a copy to the other Parties) at the following addresses (or such other address as may be provided by any Party by notice) and shall be deemed to be effective upon receipt:

Section 12.12 APPLICABLE LAW. This CWSRF Loan Bond Supplemental Indenture shall be governed exclusively by the constitution and laws of the State of North Dakota.

- (a) To the Authority: Metro Flood Diversion Authority
Attn: Executive Director
207 4th St. N., Suite A
Fargo, ND 58102
- (b) To CCJWRD: Cass County Joint Water Resource District
Attn: Secretary-Treasurer
1201 W. Main Ave.
West Fargo, ND 58078
- (c) To the Trustee: Bank of North Dakota
Attn: Trust Department
PO Box 5509
Bismarck, ND 58506-5509
Email: fmdiversiiontrustee@nd.gov

Section 12.13 ELECTRONIC SIGNATURES. This CWSRF Loan Bond Supplemental Indenture may be executed in two or more counterparts, each of which together shall be deemed an original, but all of which together shall constitute one and the same instrument. In the event that any signature is delivered by facsimile transmission or by email delivery of a “.pdf” format data file, including but not limited to a signature delivered through a provider such as *DocuSign*®, such signature shall create a valid and binding obligation of the party executing (or on whose behalf

such signature is executed) with same force and effect as if such facsimile or “.pdf” signature page was an original thereof.

IN WITNESS WHEREOF, the Authority and the Trustee caused this CWSRF Loan Bond Supplemental Indenture to be executed.

(Remainder of page intentionally left blank.)

Signature Page for the Metro Flood Diversion Authority

The Governing Body of the Metro Flood Diversion Authority approved this CWSRF Loan Bond Supplemental Indenture on the ____ day of _____, 2022.

METRO FLOOD DIVERSION
AUTHORITY

By the DIVERSION AUTHORITY BOARD

By: _____
Chad Peterson, Chair

By: _____
Joel Paulsen, Executive Director

ATTEST:

Dawn Lindblom, Secretary

Signature Page for the Cass County Joint Water Resource District

The Governing Body of the Cass County Joint Water Resource District approved this CWSRF Loan Bond Supplemental Indenture on the ____ day of _____, 2022

CCJWRD:

Cass County Joint Water Resource District

By Its Board of Managers

By: _____
Dan Jacobson, Chair

ATTEST:

Carol Harbeke Lewis, Secretary-Treasurer

Signature Page for the Trustee

The Bank of North Dakota approved this CWSRF Loan Bond Supplemental Indenture on the
___ day of _____, 2022

TRUSTEE:

Bank of North Dakota

By: _____
Cindy Doll, Trust Officer

EXHIBIT A

<Attach executed copy of
TEMPORARY AUTHORITY LOAN IMPROVEMENT WARRANT OF 2021>

SPECIMEN

EXHIBIT B

UNITED STATES OF AMERICA

STATE OF NORTH DAKOTA

CASS COUNTY JOINT WATER RESOURCE DISTRICT

DEFINITIVE AUTHORITY LOAN IMPROVEMENT WARRANT OF 2021

Registered

Number

RDAL-1

Registered

Dollars

\$90,000,000

INTEREST RATE

_____%

DATE OF ORIGINALISSUE

REGISTERED OWNER: METRO FLOOD DIVERSION AUTHORITY

PRINCIPAL AMOUNT: NINETY MILLION DOLLARS

KNOW ALL MEN BY THESE PRESENTS that Cass County Joint Water Resource District, North Dakota ("CCJWRD") acknowledges itself to be specially indebted and for value received promises to pay to the registered Owner specified above or registered assigns, the principal amount specified above, but only from its Definitive Authority Loan Improvement Warrant Account, held by the Trustee on the maturity date specified above, with interest thereon from the date hereof at the annual rate specified above, payable on the first (1st) Business Day of each month, commencing _____, to the holder of record on the close of the last Business Day of the immediately preceding month, all subject to the provisions referred to herein with respect to the Redemption of the principal of this \$90,000,000 Definitive Authority Loan Improvement Warrant of 202_ No. RDAL-1 ("Definitive Authority Loan Improvement Warrant No. RDAL-1") before maturity. The interest hereon and, upon presentation and surrender hereof, the principal hereof are payable in lawful money of the United States of America by check, draft, or electronic transfer by the Trustee as Paying Agent, or its successor.

Capitalized terms used in this Definitive Authority Loan Improvement Warrant No. RDAL-1 not otherwise defined herein shall have the meanings set forth in the Master Indenture of Trust.

This Definitive Authority Loan Improvement Warrant No. RDAL-1 in the principal amount of Ninety Million Dollars (\$90,000,000) is issued pursuant to the WIFIA Loan Bond Resolution adopted May 27, 2021, by the Governing Body of CCJWRD for the purpose of providing security to the Holders of the Authority Loans to the maintain the Authority Loan Debt Service Coverage Ratio, all pursuant to and in full conformity with the constitution and the laws of the State of North Dakota, the WIFIA Loan Bond Resolution adopted May 27, 2021, and the Master Indenture of Trust. Except as set forth below, this Definitive Authority Loan Improvement

Warrant No. RDAL-1, principal including interest thereon, is payable solely from the Authority Loan Special Assessment Revenue generated by Authority Loan Special Assessments levied, certified, and collected by CCJWRD for FM Flood Risk Management District No. 1 as set out in the WIFIA Loan Bond Resolution adopted May 27, 2021. The Trustee, pursuant to the Master Indenture of Trust, will hold this Definitive Authority Loan Improvement Warrant No. RDAL-1 in trust for the Holders of the Authority Loans, and the Trustee may call the security set forth herein pursuant to the terms and conditions of the Definitive P3 Improvement Warrant Resolution adopted on May 27, 2021, and the Master Indenture of Trust.

This Definitive Authority Loan Improvement Warrant No. RDAL-1 shall remain Outstanding and be enforceable until the earlier of:

- (i) the payment of all payments due under Authority Loans;
- (ii) the termination of the Authority Loan Agreements; or
- (iii) maturity date of the WIFIA Loan Bond.

This Definitive Authority Loan Improvement Warrant No. RDAL-1 has a first priority lien on:

- (i) Authority Loan Special Assessment Revenue; and
- (ii) Authority Loan Deficiency Tax Levy Revenue.

In addition to the foregoing, CCJWRD has levied and is collecting, and may in the future levy and collect, Special Assessments (other than the Authority Loan Special Assessments for FM Flood Risk Management District No. 1) and, with respect to such other Special Assessments, CCJWRD retains and will retain the right to use such other Special Assessment Revenues for any lawful purposes of CCJWRD.

As provided in the WIFIA Loan Bond Resolution adopted May 27, 2021, and subject to certain limitations set forth therein, this Definitive Authority Loan Improvement Warrant No. RDAL-1 is transferable upon the books of CCJWRD at the principal office of the Warrant Registrar, by the registered Owner hereof in person or by its attorney duly authorized in writing, upon surrender hereof together with a written instrument of transfer satisfactory to the Warrant Registrar, duly executed by the registered Owner or attorney; and may also be surrendered in exchange for Definitive Authority Loan Improvement Warrants of other authorized denominations in accordance with the terms of the WIFIA Loan Bond Resolution adopted May 27, 2021, and the Master Indenture of Trust. Upon such transfer or exchange CCJWRD will cause a new Definitive Authority Loan Improvement Warrant to be issued in the name of the transferee or registered Owner of the same aggregate principal amount, bearing interest at the same rate and maturing on the same date, subject to reimbursement for any tax, fee, or governmental charge required to be paid with respect to such transfer or exchange. CCJWRD and the Warrant Registrar may deem and treat the Person in whose name this Definitive Authority Loan Improvement Warrant No. RDAL-1 is registered as the absolute Owner hereof, whether this Definitive Authority Loan Improvement Warrant No. RDAL-1 is overdue or not, for the purpose of receiving payment and

for all other purposes, and neither CCJWRD nor the Warrant Registrar shall be affected by any notice to the contrary.

IT IS HEREBY CERTIFIED, RECITED, COVENANTED AND AGREED that all acts, conditions, and things required by the constitution and laws of the State of North Dakota to be done, to exist, to happen and to be performed preliminary to and in the valid issuance of this Definitive Authority Loan Improvement Warrant have been done, do exist, have happened, and have been performed in regular and due form, time, and manner as so required; that this Definitive Authority Loan Improvement Warrant No. RDAL-1 is duly issued to pay costs incurred and to be incurred in the making of a necessary improvement of special benefit to the above-named FM Flood Risk Management District No. 1 in anticipation of the collection of Authority Loan Special Assessments to be duly levied upon properties within said district, and of taxes to the extent determined by the Governing Body, which are irrevocably appropriated to the Authority Loan Fund of the Trustee in amounts sufficient to pay when due the principal of and interest on all Definitive Authority Loan Improvement Warrants drawn thereon; that if the Authority Loan Fund should at any time be insufficient to pay principal or interest due, Cass County in accordance with N.D.C.C. § 61-16.1-25 is also required by law to levy a tax upon all of the taxable property within the corporate limits of Cass County for the payment of such deficiency, without limitation of rate or amount; and that the issuance of this Definitive Authority Loan Improvement Warrant No. RDAL-1 did not cause the special or general Indebtedness of CCJWRD to exceed any constitutional or statutory limitation.

IN WITNESS WHEREOF, the Cass County Joint Water Resource District, North Dakota, by its Governing Body, has caused this Definitive Authority Improvement Warrant No. RDAL-1 to be executed on its behalf by the signature of the Chair and countersigned by the Secretary.

Dated:

CERTIFICATE OF AUTHENTICATION

This is one of the Definitive Authority Loan Improvement Warrants delivered pursuant to the WIFIA Loan Bond Resolution adopted on May 27, 2021, mentioned within.

BANK OF NORTH DAKOTA
P.O. Box 5509
Bismarck, ND 58504-5509

CASS COUNTY JOINT WATER
RESOURCE DISTRICT

Chair

Secretary

BY: _____
Authorized Representative

CERTIFICATE AS TO LEGAL OPINION

We certify that attached is the legal opinion rendered by Bond Counsel on the issue of warrants, which includes the within Definitive Improvement Warrant, dated as of the date of delivery of and payment for the Definitive Improvement Warrants.

Secretary

Chair

The following abbreviations, when used in the inscription on the face of this Definitive Improvement Warrant, shall be construed as though they were written in full according to applicable laws or regulations:

TEN COM - as tenants in common

TEN ENT - as tenants by the entireties

JT TEN - as joint tenants with right of survivorship and not as tenants in common

UTMA - ACT _____ Custodian _____
(Cust) (Minor)

under Uniform Transfer to Minors Act _____
(State)

Additional abbreviations may also be used.

ASSIGNMENT

FOR VALUE RECEIVED the undersigned hereby sells, assigns, and transfers unto _____ the within Definitive Improvement Warrant and all rights thereunder, and hereby irrevocably constitutes and appoints _____ attorney to transfer the within Definitive Improvement Warrant on the books kept for registration thereof, with full power of substitution in the premises.

DATED: _____

Please insert Social Security or other
identifying number of Assignee:

NOTICE: The signature to this Assignment must correspond to the name as it appears upon the face of the within Definitive Improvement Warrant in every particular, without alteration, enlargement, or any change whatsoever.

**RESOLUTION REQUESTING THAT CASS COUNTY
ACQUIRE ROAD RIGHTS-OF-WAY
(SWDCAI – Phase 2)**

of the

METRO FLOOD DIVERSION AUTHORITY

Approved on _____, 2022

This resolution was drafted by:
Ohnstad Twichell, P.C.
P.O. Box 458
West Fargo, North Dakota 58078

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Member _____ introduced the following resolution and moved for its adoption:

**RESOLUTION REQUESTING THAT CASS COUNTY
ACQUIRE ROAD RIGHTS-OF-WAY
(SWDCAI – Phase 2)**

WHEREAS, the City of Moorhead, the City of Fargo, Clay County, Cass County, and the Cass County Joint Water Resource District (the “Member Entities”) entered into a Joint Powers Agreement (“JPA”), dated June 1, 2016, creating the Metro Flood Diversion Authority (the “Authority”); and

WHEREAS, section 4.04 of the JPA provides that the North Dakota Member Entities will be responsible for certain elements of the Comprehensive Project, including:

- (a) An approximately thirty (30) mile, 20,000 cubic feet per second (cfs) storm water diversion channel and associated features (“SWDCAI”);
- (b) The channel outlet;
- (c) The Rush and Lower Rush River hydraulic structures;
- (d) The Maple River aqueduct;
- (e) The Sheyenne River aqueduct;
- (f) The tie-in to USACE’s diversion inlet structure project;
- (g) Railroad bridges;
- (h) In-town levees located in the City of Fargo;
- (i) Road raises within the protected area, outside of any city limits;
- (j) The Oxbow-Hickson-Bakke levee;
- (k) Recreation features located in North Dakota;
- (l) Environmental mitigation features and associated structures for the SWDCAI located in North Dakota specifically within the channel mitigation features; and
- (m) Lands, easements, and rights-of-way; and

WHEREAS, Article 12 of the JPA provides the Authority with the authorization to request that a Member Entity undertake certain elements of the Comprehensive Project; and

WHEREAS, on April 22, 2021, the Authority, Cass County, and the Cass County Joint Water Resource District (“CCJWRD”) entered into a Memorandum of Understanding (the “ROW MOU”), which outlined the roles and responsibilities of the Authority, Cass County, and CCJWRD regarding road rights-of-way acquired in North Dakota as part of land acquisition for the Project; and

WHEREAS, pursuant to the JPA and the ROW MOU, the Authority now desires to request that Cass County, as a North Dakota Member Entity, acquire certain rights-of-way that will be impacted by the construction of Phase 2 of the SWDCAI.

NOW, THEREFORE, BE IT RESOLVED by the governing body of the Metro Flood Diversion Authority:

Section 1. Definitions.

All capitalized terms used and not otherwise defined herein shall have the meanings given them in this resolution and as defined in this Section unless a different meaning clearly applies from the context.

“Authority” means the Metro Flood Diversion Authority, a political subdivision of the State of North Dakota.

“Cass County” means Cass County, a political subdivision of the State of North Dakota.

“CCJWRD” means the Cass County Joint Water Resource District, a political subdivision of the State of North Dakota.

“Comprehensive Project” means the Fargo-Moorhead Metropolitan Area Flood Risk Management Project authorized by Section 7002(2) of the Water Resources Reform and Development Act of 2014, as generally described in the Final Feasibility Report and Environmental Impact Statement, Fargo Moorhead Metropolitan Area Flood Risk Management, dated July 2011 and approved in accordance with the Chief’s Report, as amended by the Supplemental Environmental Assessment, Fargo-Moorhead Metropolitan Area Flood Risk Management Project, dated September 2013 and approved by the U.S. Army Engineer, St. Paul, on September 19, 2013, and as amended by the Second Supplemental Environmental Assessment dated August 27, 2018 (2018 SEA), and the Engineering Documentation Report, Fargo-Moorhead Metropolitan Area Flood Risk Management Project, ND and MN, Modifications Through February 2019.

“JPA” means the Joint Powers Agreement, dated June 1, 2016, by and between the Member Entities.

“Member Entity” the City of Moorhead, the City of Fargo, Cass County, Clay County, or CCJWRD.

“North Dakota Member Entity” means the City of Fargo, Cass County, or CCJWRD.

“Phase 2” means that portion of the SWDCAI that will be constructed from approximately Interstate 94 west of West Fargo to Interstate 29 north of Harwood.

“ROW” means the road right-of-way designated on Exhibit A as “Road Controlled by Cass County” on 169th Avenue Southeast, 168th Avenue Southeast, 29th Street Southeast, 76th Avenue North, 52nd Avenue North, 32nd Avenue Northwest, 38th Street Northwest, and 35th Street Southeast where such roads intersect Phase 2 of the SWDCAI.

“ROW MOU” means the Memorandum of Understanding, attached hereto as Exhibit B, by and between the Authority, Cass County, and CCJWRD, dated April 22, 2021, outlining the roles and responsibilities of the parties regarding road rights-of-way acquired in North Dakota as part of land acquisition for the Comprehensive Project.

“SEAI” means the Southern Embankment and Associated Infrastructure, including the diversion inlet structure, the connecting channel, Red River structure, the Wild Rice structure, and the southern embankment in its entirety, to be constructed as part of the Comprehensive Project.

“SWDCAI” shall have the same meaning as how it is defined in the recitals in this resolution.

Section 2. ROW Acquisition.

(a) The Authority hereby formally requests that Cass County acquire the ROW through the process set forth in the ROW MOU for Phase 2 of the SWDCAI.

(b) Following the Effective Date, the Authority will notify all landowners, by certified mail, within a minimum distance of one thousand (1,000) feet of the ROW of its request to Cass County.

Section 3. Permanent Obstruction Authorization.

In conjunction with the Authority’s request to Cass County, pursuant to the terms of the ROW MOU, CCJWRD will file a request with Cass County to permanently obstruct the ROW with Phase 2 of the SWDCAI. CCJWRD will also notify all landowners within a minimum distance of one thousand (1,000) feet of the ROW of its request to Cass County.

Section 4. Reimbursement.

The Authority will reimburse Cass County for any reasonable costs or expenses related to acquisition of the ROW following the submission of a payment request from Cass County.

Section 5. Joint Powers Agreement and ROW MOU.

Nothing herein is intended to conflict with the terms and conditions of the JPA or the ROW MOU; rather, this resolution is intended to supplement the JPA and ROW MOU. In the event there is a conflict between this resolution, the JPA, and/or the ROW MOU, the JPA takes precedence over this resolution and the ROW MOU and the ROW MOU takes precedence over this resolution.

Section 6. North Dakota Law Applies.

This resolution will be controlled by the laws of the State of North Dakota, and any claims arising out of or pertaining to this resolution will be filed, heard, and decided in the state district court of Cass County, North Dakota, which will have exclusive jurisdiction and venue.

Section 7. Effective Date.

This resolution will take effect immediately upon adoption.

Section 8. Electronic Signatures.

Electronic signatures to this resolution shall be valid as original signatures and shall be valid to bind the Authority. For purposes hereof: (i) “electronic signature” means a manually signed original signature that is then transmitted by electronic means; and (ii) “transmitted by electronic means” means sent in the form of a facsimile or sent via the internet as a portable document format (“pdf”) or other replicating image attached to an electronic mail or internet message.

Dated: _____, 2022.

METRO FLOOD DIVERSION AUTHORITY

APPROVED:

Chad Peterson, Chair

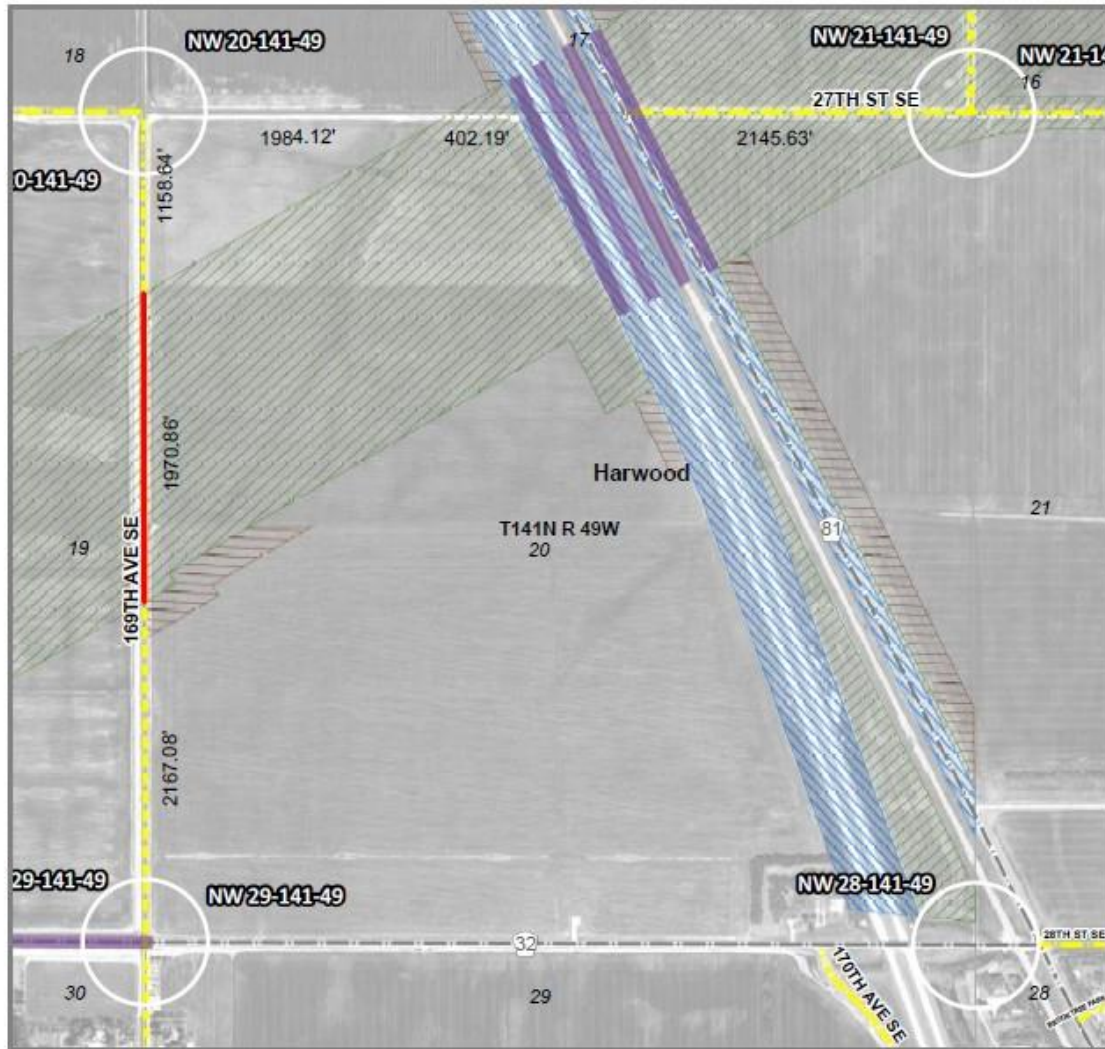
ATTEST:

Dawn Lindblom, Secretary

The motion for adoption of the foregoing resolution was duly seconded by Member _____ and upon roll call vote, the following Members voted in favor thereof: _____. The following were absent and not voting: _____. The following voted against the same: _____. A majority of the Members having voted aye, the resolution was declared duly passed and adopted.

EXHIBIT A

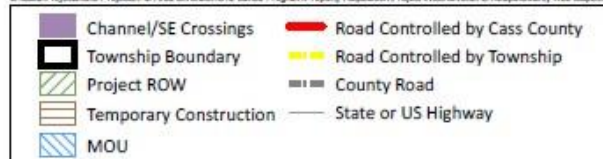
ROAD RIGHT-OF-WAY



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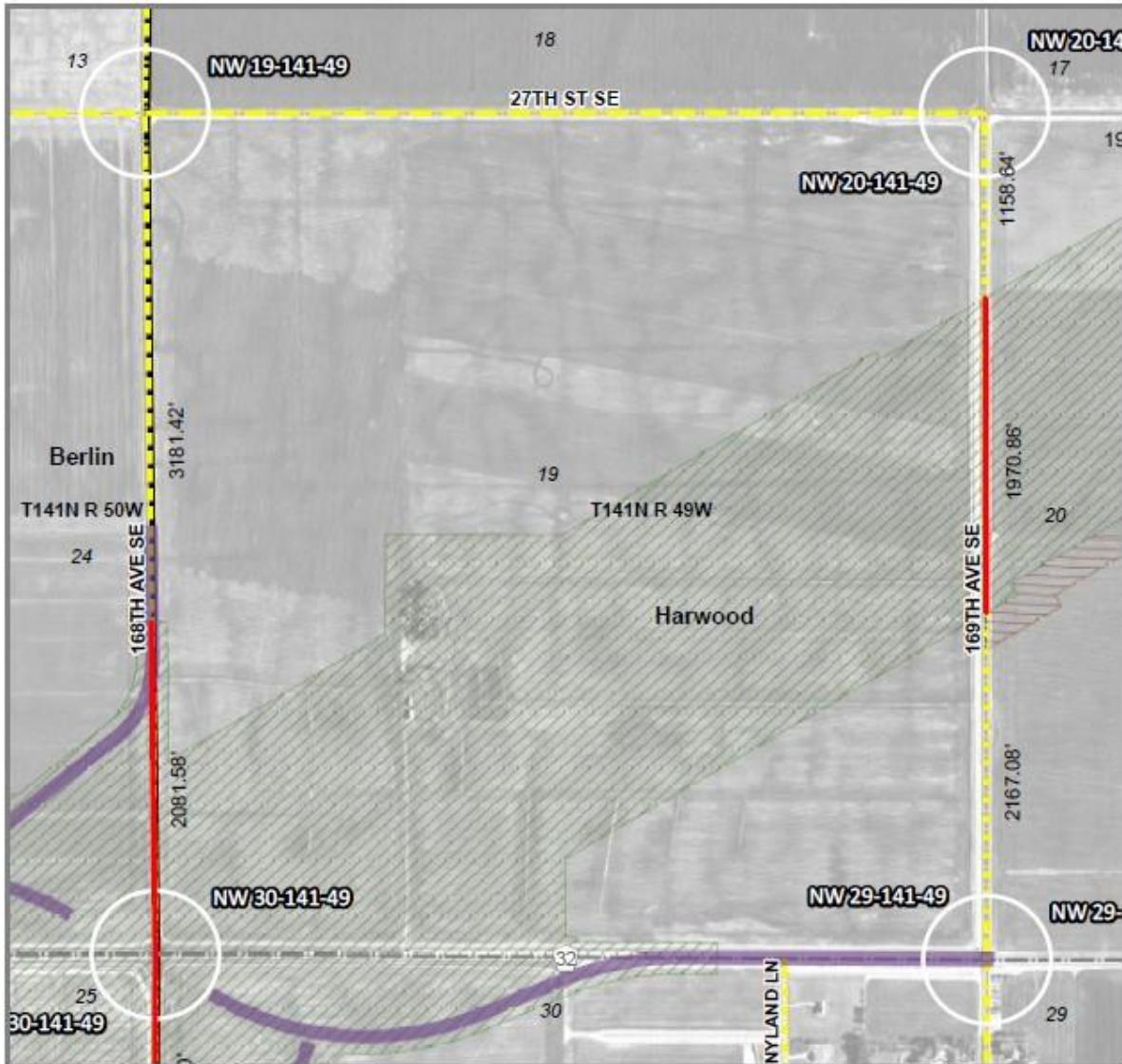
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Harwood Township

FM Area Division
Map Date: 10/18/2022

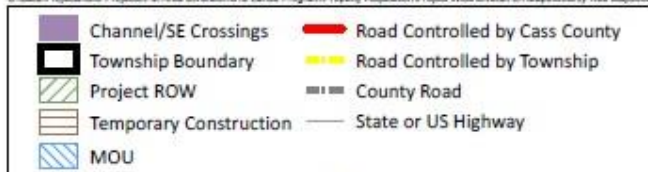




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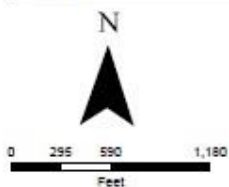
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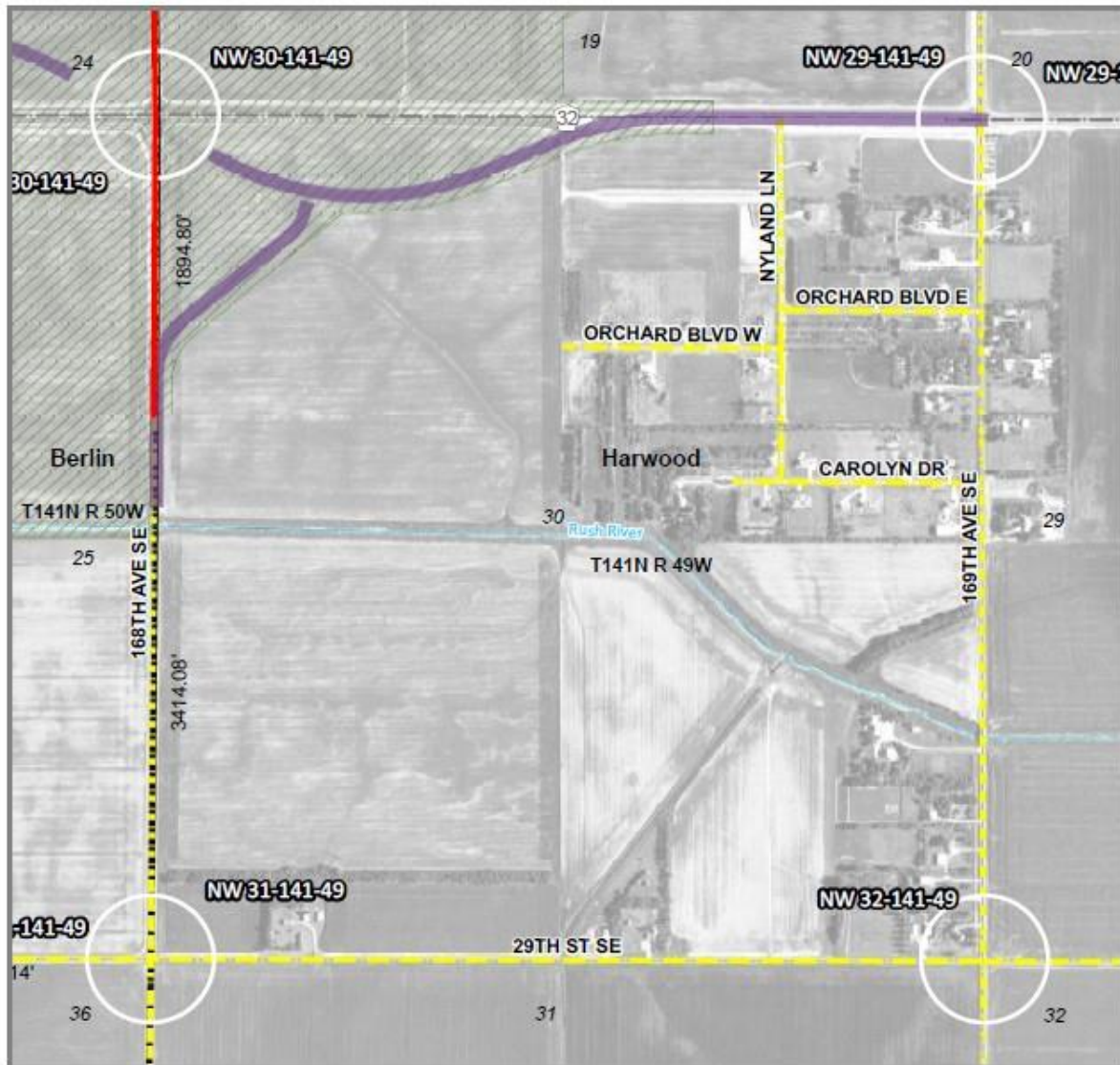
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Harwood Township

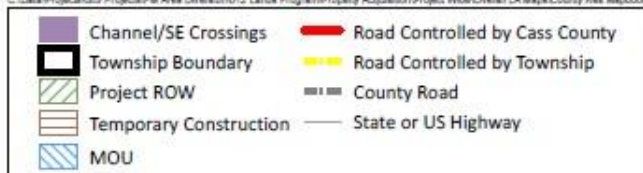
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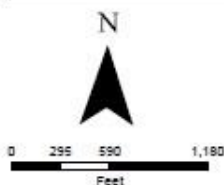
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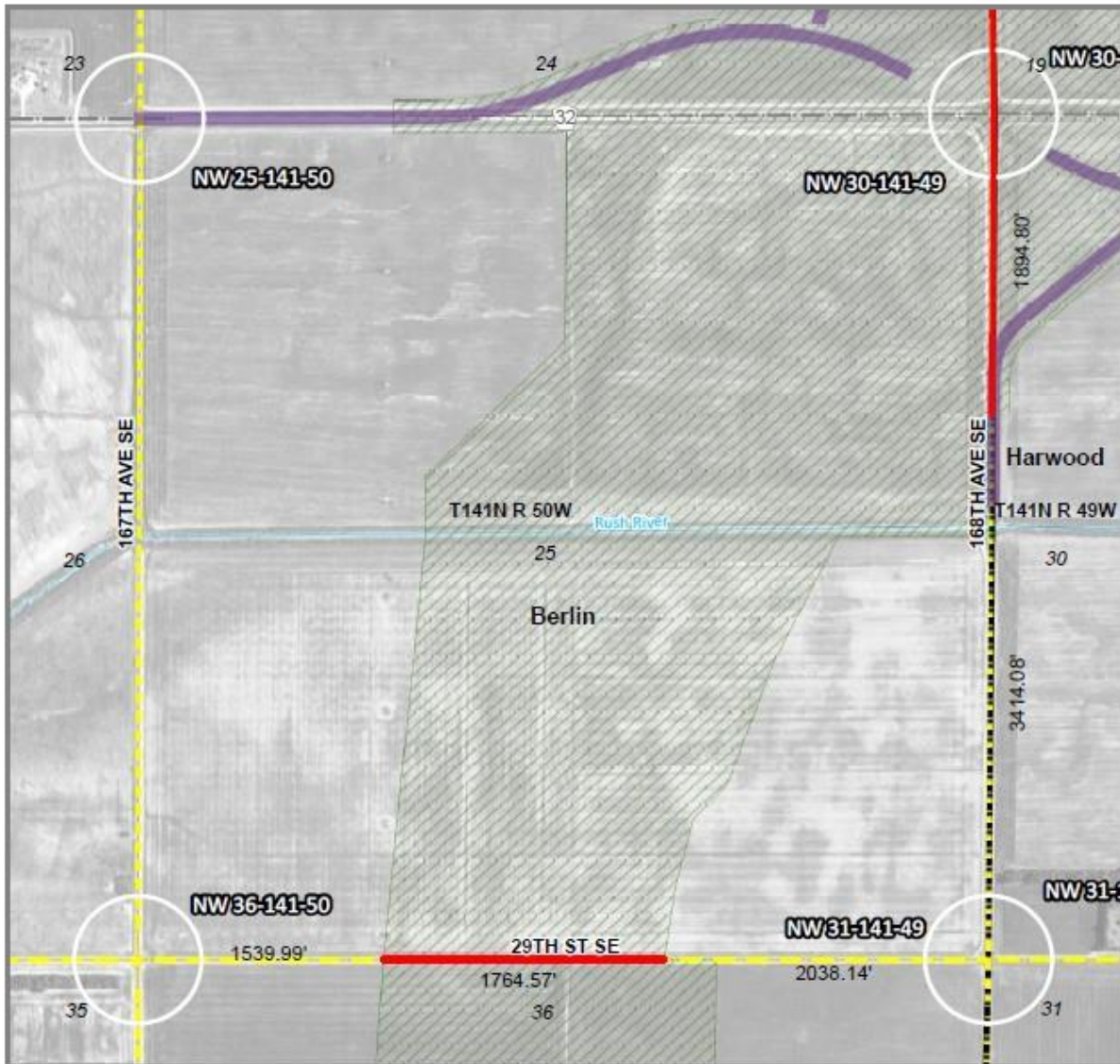
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Harwood Township

FM Area Diversion
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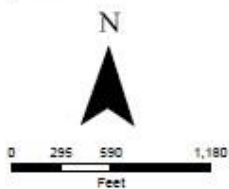
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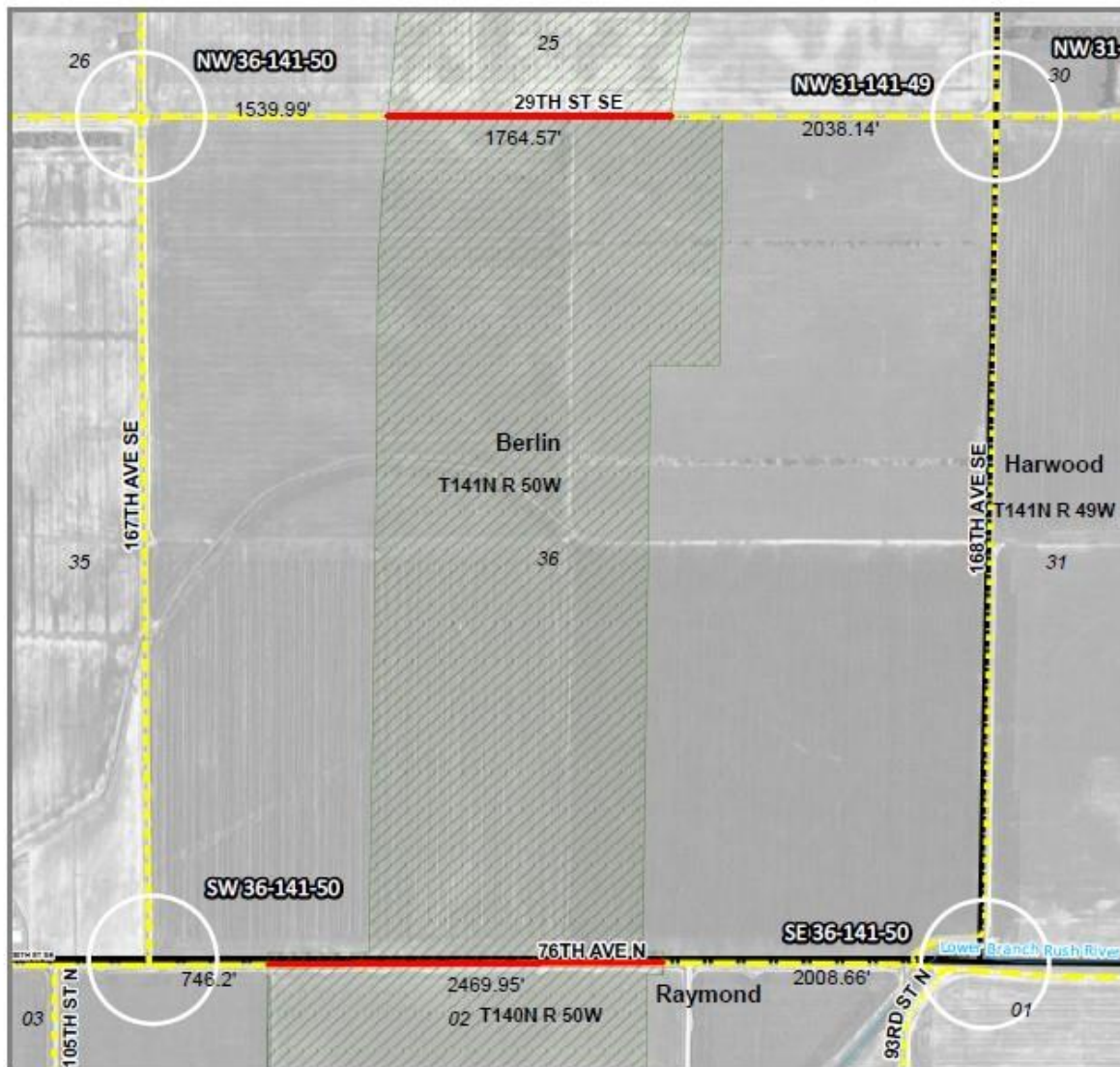
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Berlin Township

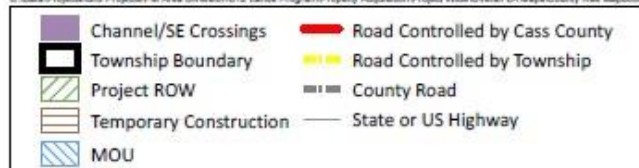
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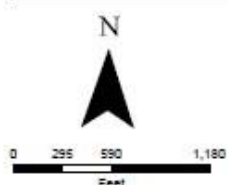
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Berlin Township

FM Area Diversion
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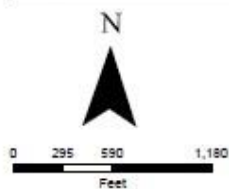
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Raymond Township

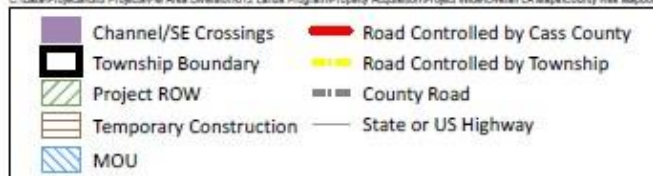
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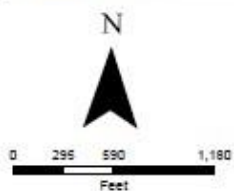
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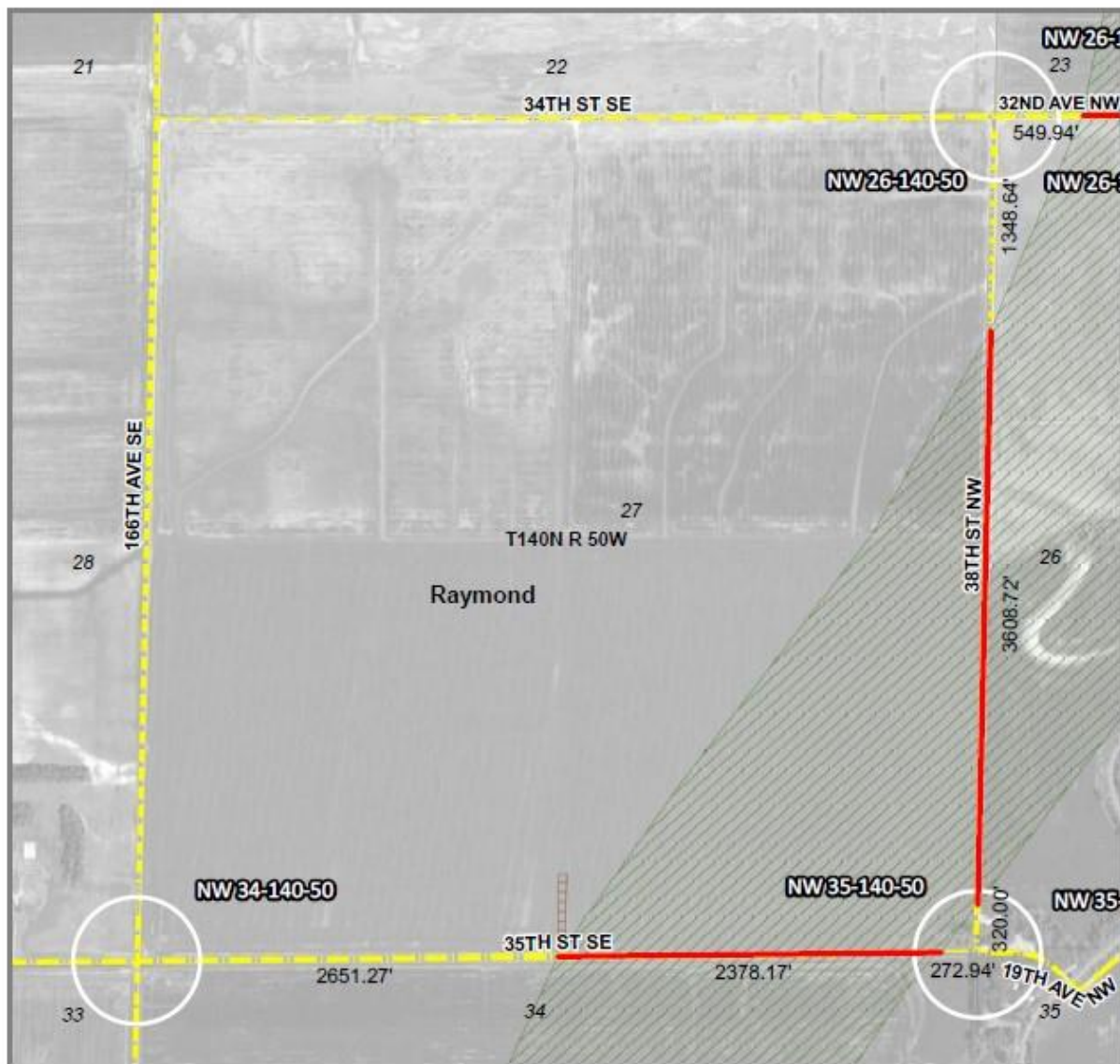
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Raymond Township

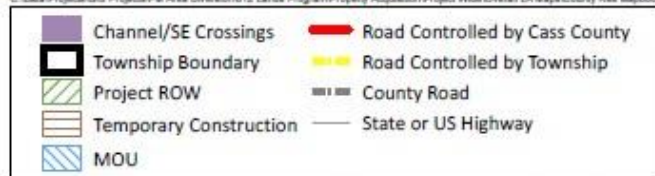
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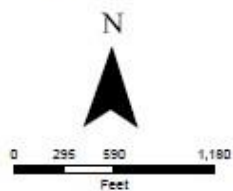
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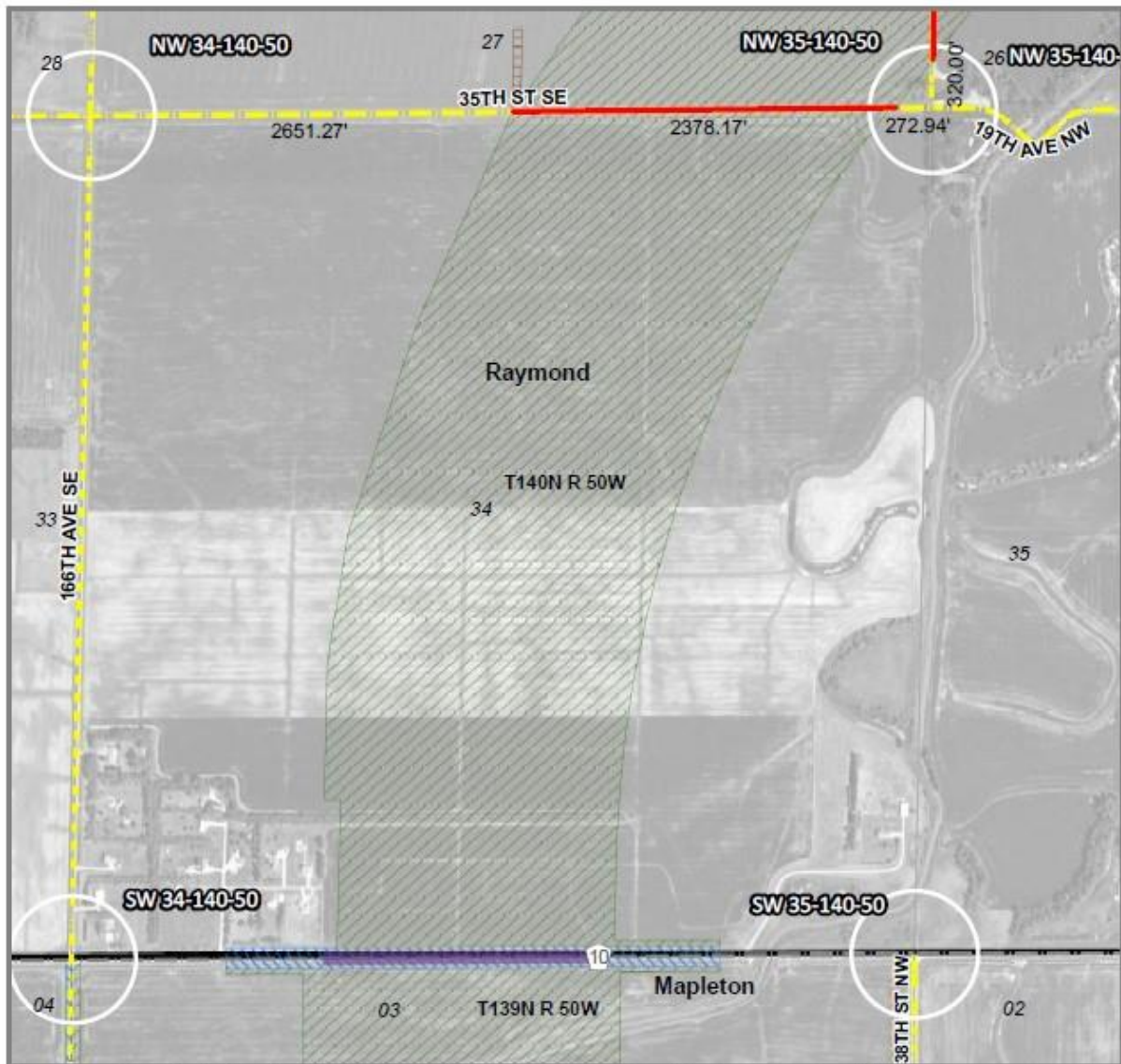
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Raymond Township

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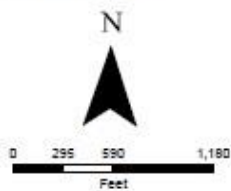
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Raymond Township

FM Area Diversion
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EXHIBIT B

ROW MOU

(Please see the following twenty-nine (29) pages.)

MEMORANDUM OF UNDERSTANDING

BY AND BETWEEN
METRO FLOOD DIVERSION AUTHORITY
AND
CASS COUNTY, NORTH DAKOTA
AND
CASS COUNTY JOINT WATER RESOURCE DISTRICT

Dated as of April 22, 2021

Relating to:

A Memorandum of Understanding outlining the roles and responsibilities of the Parties regarding road rights-of-way acquired in North Dakota as part of land acquisition for the Fargo-Moorhead Metropolitan Area Flood Risk Management Project.

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MEMORANDUM OF UNDERSTANDING

THIS MEMORANDUM OF UNDERSTANDING (the “MOU”) is made effective as of April 22, 2021 (the “Effective Date”), between METRO FLOOD DIVERSION AUTHORITY, a political subdivision of the State of North Dakota (the “Authority”); CASS COUNTY, NORTH DAKOTA, a political subdivision of the State of North Dakota (the “County”); and CASS COUNTY JOINT WATER RESOURCE DISTRICT, a political subdivision of the State of North Dakota (“CCJWRD”).

WHEREAS, Section 7002(2) of the Water Resources Reform and Development Act of 2014, Public Law 113-221, authorized construction of the locally preferred plan for the Fargo-Moorhead Metropolitan Area Flood Risk Management Project, now defined as the Comprehensive Project; and

WHEREAS, the Authority, the City of Fargo, North Dakota, and the City of Moorhead, Minnesota, are the Non-Federal Sponsors for the Comprehensive Project and have entered into a Project Partnership Agreement (the “PPA”) with the United States Army Corps of Engineers (“USACE”) for the construction, operation, and maintenance of the Comprehensive Project; and

WHEREAS, the PPA sets forth a split delivery method for the Comprehensive Project, establishing the respective responsibilities of both the Non-Federal Sponsors and USACE in completing the Non-Federal Work and the Federal Work; and

WHEREAS, the Member Entities, including the County and CCJWRD, created the Authority pursuant to the Joint Powers Agreement to undertake and fulfill the Non-Federal Sponsors’ legal obligations under the PPA; and

WHEREAS, one such obligation of the Authority is to acquire all property interests necessary for the construction, operation, and maintenance of the Comprehensive Project; and

WHEREAS, pursuant to section 4.03 of the Joint Powers Agreement, the Authority will generally allocate its responsibilities under the PPA to the Member Entities; and

WHEREAS, the Authority has allocated the responsibility of acquiring all property interests necessary for the construction, operation, and maintenance of the Comprehensive Project in North Dakota to CCJWRD; and

WHEREAS, part of CCJWRD’s responsibility to acquire all property interests includes the responsibility to obtain property interests in road rights-of-way that will be turned over to the contractors of the Comprehensive Project and obstructed by the same; and

WHEREAS, the County will assist CCJWRD in the acquisition of road rights-of-way for the Comprehensive Project; and

WHEREAS, following acquisition but prior to Turnover for construction, the Parties desire to leave the road rights-of-way open for public travel; and

WHEREAS, the Parties desire to enter into this MOU to set forth their respective roles and responsibilities for operating and maintaining the road rights-of-way prior to and following Turnover.

NOW THEREFORE, in consideration of the mutual covenants made herein and for other valuable consideration, the receipt of which is hereby acknowledged, the Authority, the County, and CCJWRD agree as follows:

ARTICLE I. DEFINITIONS AND INTERPRETATION

Section 1.01 DEFINITIONS. All capitalized terms used and not otherwise defined herein shall have the meanings given to them in this MOU and as defined in this Section unless a different meaning clearly applies from the context.

“Authority” means the Metro Flood Diversion Authority, a political subdivision of the State of North Dakota and a permanent joint powers entity formed through the Joint Powers Agreement to provide the Fargo-Moorhead metropolitan area with permanent and comprehensive flood protection.

“Best Efforts” means an individual or entity will act in Good Faith, act in accordance with generally accepted commercial practices, and use reasonable due diligence to undertake all action contemplated by this MOU, in accordance with federal and state laws, regulations, and rules; however, the obligation to use Best Efforts does not mean a duty to take action that would be in violation of applicable federal or state law.

“Business Day” means any day that is not a Saturday, a Sunday, or a State of North Dakota public holiday.

“Cass County Joint Water Resource District” or **“CCJWRD”** means the Cass County Joint Water Resource District, a political subdivision of the State of North Dakota.

“Comprehensive Project” means the Fargo-Moorhead Metropolitan Area Flood Risk Management Project authorized by Section 7002(2) of the Water Resources Reform and Development Act of 2014, as generally described in the Final Feasibility Report and Environmental Impact Statement, Fargo Moorhead Metropolitan Area Flood Risk Management, dated July 2011 and approved in accordance with the Chief’s Report, as amended by the Supplemental Environmental Assessment, Fargo-Moorhead Metropolitan Area Flood Risk Management Project, dated September 2013 and approved by the U.S. Army Engineer, St. Paul, on September 19, 2013, and as amended by the Second Supplemental Environmental Assessment dated August 27, 2018 (2018 SEA), and the Engineering Documentation Report, Fargo-Moorhead Metropolitan Area Flood Risk Management Project, ND and MN, Modifications Through February 2019.

“Construction Site” means the site defined (i) by the Project Agreement between the Authority and the Developer to be utilized by the Developer for the construction of the SWDCAI, (ii) by a construction contract between the Authority and a Third Party Contractor to be utilized

by the Third Party Contractor for construction of Non-Federal Work, or (iii) by a construction contract between USACE and its contractor to be utilized by such contractor for the construction of Federal Work.

“County” means Cass County, North Dakota, a political subdivision of the State of North Dakota.

“Developer” means the individual, partnership, corporation, or joint venture that enters the Project Agreement with the Authority to design, finance, build, operate, and maintain the SWDCAI. References to the Developer throughout this MOU include references to other Person engaged by the Developer to complete such work.

“Effective Date” means the date on which all Parties have executed this MOU.

“Extraordinary Maintenance” means any repairs or maintenance that is required for the ROW outside of Routine Maintenance.

“Federal Work” means that portion of the Comprehensive Project consisting of the diversion inlet structure, the control structures on the Red River and Wild Rice River; the southern embankment; the overflow embankment; construction of road and railroad raises associated with the staging area; and all mitigation features not included in the Non-Federal Work.

“Good Faith” means the observance of reasonable commercial standards of fair dealing in a given trade or business.

“Joint Powers Agreement” means the Joint Powers Agreement between the City of Moorhead, Minnesota; the City of Fargo, North Dakota; Clay County, Minnesota; Cass County, North Dakota; and the Cass County Joint Water Resource District, dated as of June 1, 2016, to create the Authority.

“Member Entities” means the City of Fargo, North Dakota; the City of Moorhead, Minnesota; Cass County, North Dakota; Clay County, Minnesota; and the Cass County Joint Water Resource District.

“Non-Federal Work” means that portion of the Comprehensive Project consisting of the SWDCAI; the in-town levees and the Oxbow-Hickson-Bakke levee; recreation features; environmental mitigation features located within the diversion channel and associated structures for the diversion channel; and applicable pre- and post-monitoring and adaptive management for the Comprehensive Project.

“NTP1” means as defined by the Project Agreement.

“Original Term” means as defined in Section 6.01.

“Party” means the Authority, the County, or CCJWRD, as the context requires, and its respective representatives, successors, and assigns.

“Person” means an individual, a general or limited partnership, a joint venture, a corporation, a limited liability company, a trust, an unincorporated organization, or a governmental authority.

“PPA” means the Project Partnership Agreement between the Department of the Army and the City of Fargo, North Dakota, the City of Moorhead, Minnesota, and the Metro Flood Diversion Authority for Construction of the Fargo-Moorhead Metropolitan Area Flood Risk Management Project, dated July 11, 2016, and any amendments thereto.

“Project Agreement” means the contract between the Authority and the Developer for the Developer to design, build, finance, operate, and maintain the SWDCAI.

“Project Limits” means the permanent property interests necessary for the construction of the Comprehensive Project, as currently projected on Exhibit A.

“Renewal Term” means as defined in Section 6.01.

“Road ROW” means the thirty-three (33) foot road right-of-way on either side of a section line.

“Routine Maintenance” means as defined in Section 3.02.

“ROW” means the Road ROW and Vacated ROW collectively.

“SWDCAI” means an approximately 30-mile, 20,000 cubic feet per second (cfs) diversion channel and associated features; the channel outlet; the Rush and Lower Rush River hydraulic structures; the Maple River aqueduct; the Sheyenne River aqueduct; the inflow design flood levee; and associated railroad bridges.

“Third Party Contractor” means a contractor engaged by the Authority to perform Non-Federal Work other than the SWDCAI.

“Turnover” means (i) in terms of a USACE contractor or a Third Party Contractor, the date, as defined by the applicable construction contract, on which the contracting entity provides control of a Construction Site to the contractor for the contractor to commence construction thereon, or (ii) in terms of the Developer, the date preceding the date on which the Developer commences construction on a Construction Site.

“Vacated ROW” means that portion of the thirty-three (33) foot road right-of-way on either side of 173rd Avenue Southeast that was platted and vacated in the FMD – Pleasant Subdivision, Cass County, North Dakota.

Section 1.02 INTERPRETATION. The definition of terms herein shall apply equally to the singular and plural forms of the term defined. Whenever the context may require, any pronoun will include the corresponding masculine, feminine, and neuter forms. The words “include,” “includes,” and “including” will be deemed to be followed by the phrase “without limitation.” The word “will” shall be construed to have the same meaning and effect as the word “shall.” Unless

the context requires otherwise (a) any definition of or reference to any agreement, instrument, or other document herein shall be construed as referring to such agreement, instrument, or other document as from time to time amended, supplemented, or otherwise modified (subject to any restrictions on such amendments, supplements, or modifications as set forth herein), (b) any reference herein to any person shall be construed to include such person's permitted successors and assigns, (c) the words "herein," "hereof," and "hereunder," and words of similar import, shall be construed to refer to this MOU in its entirety and not to any particular provision hereof, (d) all references herein to articles, sections, exhibits, and schedules shall be construed to refer to articles and sections of, and exhibits and schedules to, this MOU, and (e) the words "asset" and "property" shall be construed to have the same meaning and effect and to refer to any and all tangible and intangible assets and properties, including cash, securities, accounts, and contract rights.

ARTICLE II. PRE-CONSTRUCTION SITE CONTROL

Section 2.01 LAND ACQUISITION PROCESS. Road ROW in North Dakota, and the authority to construct the Comprehensive Project upon, over, and across such Road ROW, will be acquired through the following means:

(a) The Authority will request that the County take over Road ROW, pursuant to N.D.C.C. § 24-05-09, based on the design of the Comprehensive Project. The current projected Project Limits of the Comprehensive Project, and the corresponding impacted Road ROW, are included in Exhibit A.

(b) In conjunction with the Authority's request for Road ROW takeover, CCJWRD will file a request with the County to permanently obstruct such Road ROW, pursuant to N.D.C.C. § 24-06-28, with the applicable element of the Comprehensive Project. If CCJWRD's request is granted by the County, the intent is to allow the Road ROW to remain open until, as set forth in Section 3.01, construction on the applicable element of the Comprehensive Project is scheduled to commence.

(c) Upon making their requests to the County, the Authority and CCJWRD will notify all landowners, by certified mail, within a minimum distance of one thousand (1,000) feet of the Road ROW.

(d) In response to the requests, the County will set a time and place for a hearing on the requests, and at least thirty (30) days prior to the date of the hearing, it will provide notice to all landowners within a minimum distance of one thousand (1,000) feet of the Road ROW of the time and place set for the hearing.

(e) The County will hold a public hearing on the requests at the time and place set, and if appropriate following the hearing, it will (i) adopt a resolution granting the Authority's request and take over the Road ROW and (ii) adopt a resolution granting CCJWRD's request and allow the permanent obstruction of said Road ROW at an applicable time.

Section 2.02 NON-FEDERAL WORK AREAS. Prior to the Turnover of a Construction Site that includes Road ROW from the Authority to the Developer or a Third Party Contractor, the

County will have control of the Road ROW and will have the authority to make day-to-day decisions about the operation of the Road ROW. This authority includes the ability to temporarily close a Road ROW as needed in the discretion of the County. If the County decides to temporarily close a Road ROW, it will be responsible for placing barriers and, whenever possible, providing two (2) weeks' prior notification to the Authority and CCJWRD of such closure.

Section 2.03 FEDERAL WORK AREAS. Prior to the Turnover of a Construction Site that includes Road ROW from USACE to its construction contractor, the County will have control of the Road ROW and will have the authority to make day-to-day decisions about the operation of the Road ROW. This authority includes the ability to temporarily close a Road ROW as needed in the discretion of the County. If the County decides to temporarily close a Road ROW, it will be responsible for placing barriers and, whenever possible, providing two (2) weeks' prior notification to the Authority and CCJWRD of such closure.

Section 2.04 PUBLIC USE OF ROAD ROW AND PLATTING. The Parties intend that although CCJWRD may have authorization to permanently obstruct the Road ROW with the Comprehensive Project, the Road ROW will remain open for public use until the notices, as described in Section 3.01, are received. Following Turnover of a Construction Site that includes Road ROW, CCJWRD will use its Best Efforts as applicable fee simple is acquired to plat and vacate the Road ROW.

Section 2.05 VACATED ROAD ROW. CCJWRD will allow the Vacated ROW, although a private drive following vacation, to remain open for public travel. Prior to the recommencement of construction on the Vacated ROW by USACE's construction contractor, the County will have control of the Vacated ROW and will have the authority to make day-to-day decisions about the operation of the Vacated ROW. This authority includes the ability to temporarily close the Vacated ROW as needed in the discretion of the County. If the County decides to temporarily close the Vacated ROW, it will be responsible for placing barriers and, whenever possible, providing two (2) weeks' prior notification to the Authority and CCJWRD of such closure.

ARTICLE III. MAINTENANCE

Section 3.01 RESPONSIBILITY.

(a) Developer Works. The County will be responsible for performing all Routine Maintenance and Extraordinary Maintenance on the ROW until Turnover to the Developer, which will occur following notice from the Developer as set forth herein. The Developer will be responsible for notifying the Authority at least ninety (90) calendar days prior to the commencement of construction on the ROW. The Authority will notify the County and CCJWRD as soon as possible after its receipt of notice from the Developer. This notice will allow CCJWRD to exercise its authorization to permanently obstruct the ROW, which will include posting signs, in coordination with the County, stating the dates of the road closure and coordinating with the Developer for traffic control signage.

(b) Third Party Contractor Works. The County will be responsible for performing all Routine Maintenance and Extraordinary Maintenance on the ROW until Turnover to the Third

Party Contractor, which is currently anticipated to be close in time to the commencement of construction. The Authority must give the County and CCJWRD at least ninety (90) calendar days' written notice of when it is anticipated the Third Party Contractor will begin construction on the ROW. This notice will allow CCJWRD to exercise its authorization to permanently obstruct the ROW, which will include posting signs, in coordination with the County, stating the dates of the road closure and coordinating with the Third Party Contractor for traffic control signage.

(c) USACE Contractor Works. The County will be responsible for performing all Routine Maintenance and Extraordinary Maintenance on the ROW until Turnover to the USACE construction contractor, which is currently anticipated to be close in time to the commencement of construction. The Parties will work with USACE to get as much notice as possible regarding the scheduled date for the commencement of construction. Upon receipt of this notice, CCJWRD will exercise its authorization to permanently obstruct the ROW, which will include posting signs, in coordination with the County, stating the dates of the road closure and coordinating with the USACE Contractor for traffic control signage.

Section 3.02 MAINTENANCE REQUIREMENTS. The County will perform, or ensure the performance of, the following maintenance tasks on the ROW (collectively, "Routine Maintenance"):

- (a) The ROW will be graded twice a calendar month.
- (b) A 3-inch minimum thickness of gravel will be maintained.
- (c) The graded cross slopes across each lane will match its existing range of two percent (2%) to four percent (4%). If the current infield slope is not within that range, it will be upgraded to the two percent (2%) to four percent (4%) range.
- (d) Class 13 gravel will be placed for any aggregate needs.
- (e) Snow removal along the ROW will be dependent on the applicable township's current plow locations. The township will need to provide information to the County if a certain ROW was being plowed as needed by the township or private individuals in the winter.

Section 3.03 COUNTY REIMBURSEMENT. The County may seek reimbursement from the Authority, as set forth herein, for costs and expenses incurred for Routine Maintenance and Extraordinary Maintenance; provided, however, the County must seek prior written approval from both CCJWRD and the Authority before performing Extraordinary Maintenance that exceeds \$5,000.

Section 3.04 TOWNSHIP INVOLVEMENT. The County may engage an applicable township to perform Routine Maintenance. Reimbursement for such work, however, may be submitted by either the County or the township.

Section 3.05 SECURING CONSTRUCTION SITES. The Authority will include in the Project Agreement and in its construction contract with the Third Party Contractor that the Developer and the Third Party Contractor, respectively, are responsible for securing the ROW, upon the

commencement of construction, to limit public travel on the ROW. The Parties will work with USACE for USACE to include in its construction contract that the contractor is responsible for securing the ROW, upon commencement of construction, to limit public travel on the ROW.

ARTICLE IV. IMPACTED LANDS

Section 4.01 ROW. As set forth herein, the County will secure ROW, either inside or outside the Project Limits, to the extent necessary to allow for construction of the Comprehensive Project. CCJWRD will be responsible for securing property interests other than ROW that are necessary to construct termination tees.

Section 4.02 OBLITERATION. Following construction of the Comprehensive Project and the termination tees, the Parties will obliterate that portion of the ROW that exists between the termination tees and Project Limits that will no longer be utilized as a road. Timing of each obliteration will be agreed upon by the Parties. The Authority will be responsible for all costs and expenses associated with obliteration and will be responsible for hiring a contractor for the obliteration work. The Authority will indemnify the County and CCJWRD for all obliteration work done on the ROW.

ARTICLE V. INSURANCE AND INDEMNIFICATION

Section 5.01 JOINT POWERS AGREEMENT.

(a) Pursuant to section 15.05 of the Joint Powers Agreement, the Authority agreed to defend and indemnify the Member Entities, including both the County and CCJWRD, for any liability claims arising from the Authority's activities or operations, decisions of the Authority, or arising out of or regarding the Comprehensive Project.

(b) The Parties acknowledge and agree that section 15.05 of the Joint Powers Agreement is applicable to the County's and CCJWRD's control of the ROW and the County's maintenance of the ROW. As a result, the Authority will indemnify both CCJWRD and the County from third party claims relating to the ROW.

(c) The Authority has secured a commercial general limited liability policy from the North Dakota Insurance Reserve Fund ("NDIRF") and has listed both the County and CCJWRD as additional insureds under such policy. The Authority will continue to maintain such policy, or a like policy, in accordance with the terms of the Joint Powers Agreement and continue to list both the County and CCJWRD as additional insureds during the term of this MOU.

Section 5.02 GROSSLY NEGLIGENT OR WILLFUL MISCONDUCT. Notwithstanding anything herein to the contrary, the Authority will not indemnify the County for grossly negligent or willful misconduct committed by the Person engaged by the County to perform maintenance. In lieu of such indemnification, the County must include in its maintenance contract that the contractor shall procure and maintain commercial general liability in the amount of \$3,000,000 and must name the County, CCJWRD, and the Authority as additional insureds under such policy.

Section 5.03 DEVELOPER CONSTRUCTION. The Developer will be responsible for procuring and maintaining the insurance set forth in the Project Agreement. The Authority will include provisions in the Project Agreement requiring the Developer (i) to procure and maintain commercial general liability in the amount of \$1,000,000 per occurrence and \$10,000,000 annual aggregate and must name CCJWRD, the County, and the Authority as additional insureds under such policy, and (ii) to indemnify and hold harmless CCJWRD, the County, and the Authority for construction performed on the ROW.

Section 5.04 THIRD PARTY CONTRACTOR CONSTRUCTION. Upon Turnover, the Third Party Contractor will be responsible for procuring and maintaining insurance requirements set forth in the construction contract. The Authority will include provisions in the construction contract requiring the Third Party Contractor (i) to procure and maintain commercial general liability in the amount of \$3,000,000 and must name CCJWRD, the County, and the Authority as additional insureds under such policy, and (ii) to indemnify and hold harmless CCJWRD, the County, and the Authority for construction performed on the ROW.

Section 5.05 USACE CONTRACTOR CONSTRUCTION. Upon Turnover, the USACE contractor will be responsible for procuring and maintaining insurance requirements set forth in the construction contract. The Authority will coordinate with USACE regarding insurance requirements for the contractor.

ARTICLE VI. TERM AND TERMINATION

Section 6.01 TERM. The Original Term of this MOU will be for two (2) years from the Effective Date. The MOU will automatically renew for successive one (1) year additional terms (each, respectively, a “Renewal Term”) unless the Parties mutually agree, in writing, to terminate this MOU.

Section 6.02 AGREEMENT. The Parties may mutually agree, in writing, at any time, to terminate this MOU.

ARTICLE VII. DISPUTE RESOLUTION

Section 7.01 INTENT AND PROCEDURE. The Parties will cooperate and use their Best Efforts to ensure that the various provisions of this MOU are fulfilled. The Parties agree to act in Good Faith to undertake resolution of disputes in an equitable and timely manner and in accordance with the provisions of this MOU. If disputes cannot be resolved informally by the Parties, the following procedures will be used.

Section 7.02 MEDIATION. If there is a failure between the Parties to resolve a dispute on their own, the Parties will first attempt to mediate the dispute. The Parties will agree upon a single mediator and will equally split any costs for mediation services.

Section 7.03 LITIGATION IF DISPUTE NOT RESOLVED. If the dispute is not resolved within forty-five (45) calendar days after the end of mediation proceedings, the Parties may litigate the matter.

Section 7.04 LITIGATION; VENUE. All litigation between the Parties arising out of or pertaining to this MOU or its breach will be filed, heard, and decided in the State District Court of Cass County, North Dakota, which will have exclusive jurisdiction and venue.

Section 7.05 WAIVER OF JURY TRIAL. THE PARTIES HEREBY KNOWINGLY, IRREVOCABLY, VOLUNTARILY, AND INTENTIONALLY WAIVE ANY RIGHTS THAT ANY MAY HAVE TO A TRIAL BY JURY WITH RESPECT TO ANY ACTION, PROCEEDING, COUNTERCLAIM, OR DEFENSE BASED ON THIS MOU, OR ARISING OUT OF, UNDER, OR IN ANY CONNECTION WITH THIS MOU, OR WITH RESPECT TO ANY COURSE OF CONDUCT, COURSE OF DEALING, STATEMENTS (WHETHER ORAL OR WRITTEN), OR ACTIONS OF ANY PARTY HERETO RELATING TO THIS MOU. THIS PROVISION IS A MATERIAL INDUCEMENT FOR ALL PARTIES ENTERING INTO THIS MOU. THIS PROVISION APPLIES ONLY TO SUITS BETWEEN THE PARTIES AND DOES NOT APPLY TO THIRD PARTY CLAIMS OR SUITS.

ARTICLE VIII. REIMBURSEMENT

Section 8.01 COSTS AND EXPENSES. Between the Effective Date and Turnover of a ROW, the County may seek reimbursement from the Authority for costs and expenses incurred for Routine Maintenance and Extraordinary Maintenance.

Section 8.02 INVOICING.

(a) The County will remit hard copy invoices to the Authority at the Authority's main office, and the invoices will be processed by the Authority for the following month. The County will also submit copies of the invoices to the Authority electronically at APInvoicesFMDiv@jacobs.com, copied to kbakkegard@fmdiversion.gov.

(b) The County's invoices must be detailed and precise, clearly indicate fees and expenses, and include at least the following information:

- (1) The County's name and address;
- (2) The County's federal employer identification number;
- (3) Unique invoice number;
- (4) Billing period;
- (5) Description of each activity performed for each day in which services were performed;

- (6) Work order number associated with each activity;
- (7) Name, billing rate, hours worked by each person involved in each activity;
- (8) Total amount of fees and costs “billed to date,” including the preceding months;
- (9) Preferred remittance address, if different from the address on the invoice’s coversheet; and
- (10) All of the work performed during that billing period.

(c) After the Authority receives a County invoice, the Authority will either process the invoice for payment or give the County specific reasons, in writing, within fifteen (15) Business Days, why part or all of the Authority’s payment is being withheld and what actions the County must take to receive the withheld payment.

(d) In the event of disputed billing, only the disputed portion will be withheld from payment and the Authority will pay the undisputed portion. The Authority will exercise reasonableness in disputing any bill or portion thereof. Interest will accrue on any disputed portion of the billing determined to be due and owing to the County.

(e) Payment does not imply acceptance of services or that the invoice is accurate. In the event an error is identified within three (3) months of receipt of payment, the County must credit any payment error from any payment that is due or that may become due to the County under this MOU.

ARTICLE IX. MISCELLANEOUS

Section 9.01 COMPLETE AGREEMENT. This MOU contains the entire and exclusive understanding of the Parties with respect to the subject matter thereof and supersedes all prior agreements, understandings, statements, representations, and negotiations, in each case oral or written, among the Parties with respect to their subject matter.

Section 9.02 COUNTERPARTS. This instrument may be executed in two or more counterparts, each of which will be deemed an original, but all of which together will constitute one and the same instrument.

Section 9.03 AMENDMENTS. This MOU may be amended only by written instrument duly executed by the Parties or their respective successors or assigns, except to the extent expressly provided otherwise in this MOU.

Section 9.04 SEVERABILITY AND SAVINGS CLAUSE. Each provision, section, sentence, clause, phrase, and word of this MOU is intended to be severable. If any provision, section, sentence, clause, phrase, or word hereof is held by a court with jurisdiction to be illegal or invalid

for any reason whatsoever, such illegality or invalidity will not affect the validity of the remainder of this MOU.

Section 9.05 FORCE MAJEURE. A Party will not be liable to the others during any period in which its performance is delayed or prevented, in whole or in part, by any of the following circumstances: war, civil war, invasion, violent act of foreign enemy, or armed conflict; nuclear, chemical, or biological contamination; ionizing radiation; or any act of terrorism. If such a circumstance occurs, the Party claiming the delay must undertake reasonable action to notify the other Parties of the same.

Section 9.06 AUTHORIZED REPRESENTATIVES. Each Party hereby designates the following individual as its initial authorized representative, respectively, to administer this MOU on its respective behalf:

- (a) Authority Representative: Kris Bakkegard, Director of Engineering
- (b) County Representative: Jason Benson, County Engineer
- (c) CCJWRD Representative: Carol Harbeke Lewis, Secretary-Treasurer

Section 9.07 NOTICE.

(a) All notices under the MOU will be in writing and: (a) delivered personally; (b) sent by certified mail, return receipt requested; (c) sent by a recognized overnight mail or courier service, with delivery receipt requested; or (d) sent by email communication followed by a hard copy, to the following addresses.

(b) All notices to the Authority will be marked as regarding the Comprehensive Project and will be delivered to the following addresses or as otherwise directed by the Authority Representative:

Director of Engineering
Box 2806
207 4th Street North
Suite A
Fargo, North Dakota 58102

(c) All notices to the County will be marked as regarding the Comprehensive Project and will be delivered to the following address or as otherwise directed by the County Representative:

County Engineer
1201 Main Avenue West
West Fargo, North Dakota 58078

(d) All notices to CCJWRD will be marked as regarding the Comprehensive Project and will be delivered to the following address or as otherwise directed by the CCJWRD Representative:

CCJWRD Secretary-Treasurer
1201 Main Avenue West
West Fargo, North Dakota 58078

(e) Notices will be deemed received when actually received in the office of the addressee (or by the addressee if personally delivered) or when delivery is refused, as shown on the receipt of the U.S. Postal Service, private courier, or other person making the delivery. Notwithstanding the foregoing, notices sent by facsimile after 4:00 p.m. central time and all other notices received after 5:00 central time will be deemed received on the first Business Day following delivery.

Section 9.08 GOVERNING LAW. This MOU will be governed by and construed in accordance with the laws of the State of North Dakota.

Section 9.09 CONFLICT WITH MOU REGARDING OTHER COMPREHENSIVE PROJECT WORK. Nothing in this MOU is intended to supersede, amend, or otherwise modify any other memorandum of understanding or agreement entered by and between the Parties for work regarding other aspects of the Comprehensive Project.

IN WITNESS WHEREOF, the Authority, the County, and CCJWRD caused this Agreement to be executed.

(Remainder of page intentionally left blank.)

Signature Page for the Metro Flood Diversion Authority

The governing body of the Metro Flood Diversion Authority approved this MOU on the 22nd day of April, 2021

METRO FLOOD DIVERSION
AUTHORITY

By: Shelly Carlson
Michelle (~~Shelly~~) A. Carlson, Chair

By: Joel Paulsen
Joel Paulsen, Executive Director


ATTEST:

Dawn Lindblom
Dawn Lindblom, Secretary

Signature Page for Cass County, North Dakota

The governing body of Cass County, North Dakota, approved this MOU on the 19 day of April, 2021.

CASS COUNTY, NORTH DAKOTA

By: 
Chad Peterson, Chair of the Board of
County Commissioners

ATTEST:


Michael Montplaisir, County Auditor

Signature Page for the Cass County Joint Water Resource District

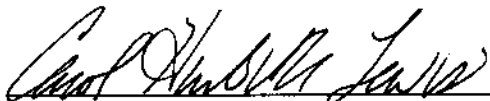
The governing body of the Cass County Joint Water Resource District approved this MOU on the 22 day of April, 2021.

CASS COUNTY JOINT WATER
RESOURCE DISTRICT

By: 

Dan Jacobson, Chair

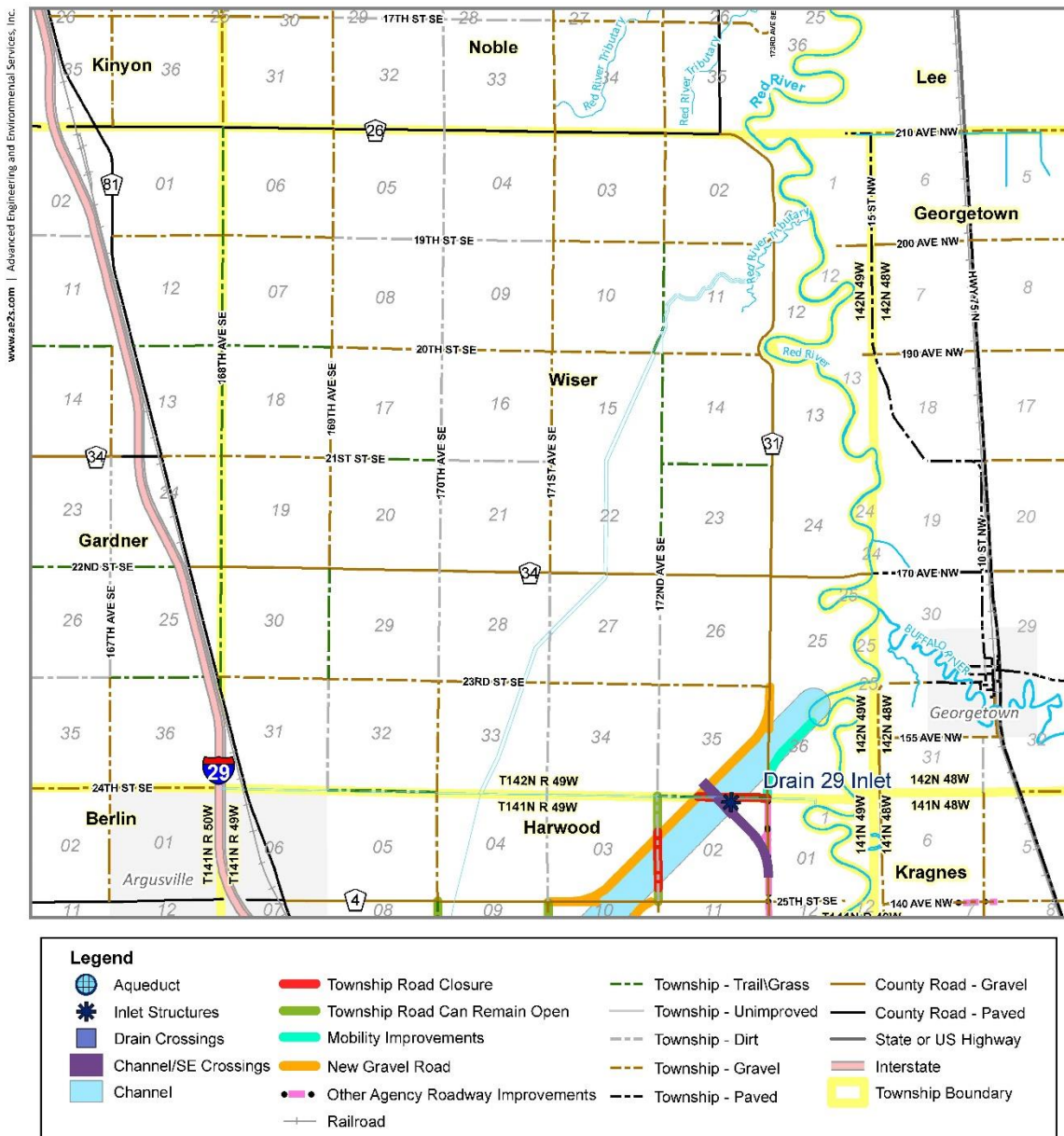
ATTEST:



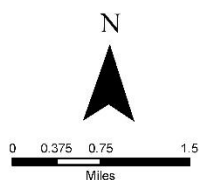
Carol Harbeke Lewis, Secretary-Treasurer

EXHIBIT A

COMPREHENSIVE PROJECT IMPACTS MAPS



Any reliance upon this map is at user's own risk. AE2S does not warrant the map or its features are either spatially or temporally accurate or fit for a particular use. All parcel acreages and legal descriptions shown hereon are based on County GIS data. Final acreages and legal descriptions to be determined by boundary survey. Coordinate System: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet | Produced By: owickenhelser - AE2S, Inc. | C:\Data\Projects\GIS Projects\FM Area Diversion\Projects\Land Acquisition\Project Work Package\Project Wide\Overall LA Maps\MOU by Township 8 x11.mxd

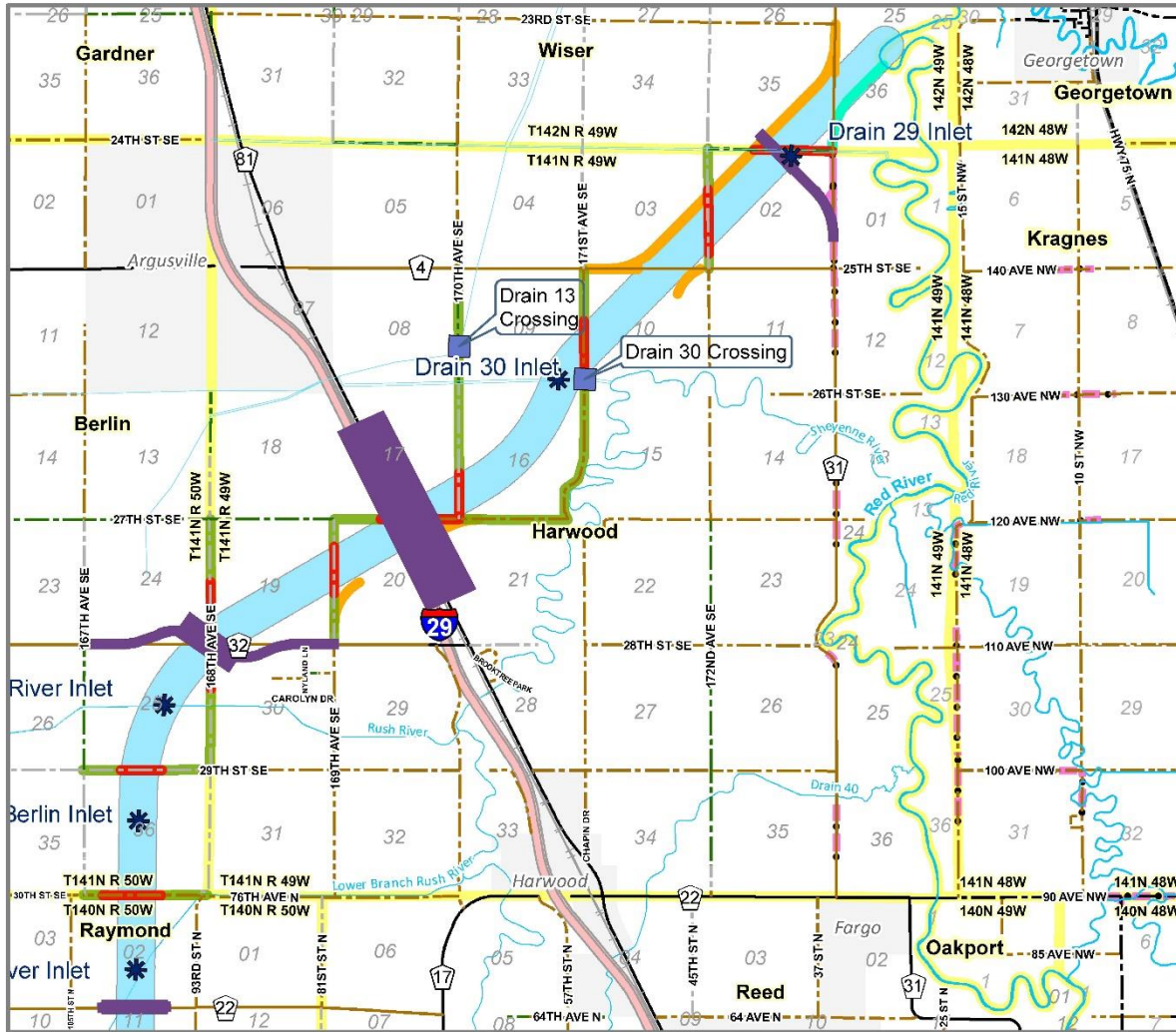


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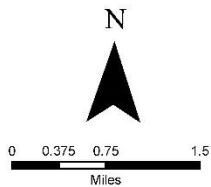
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Map Date: 10/7/2020



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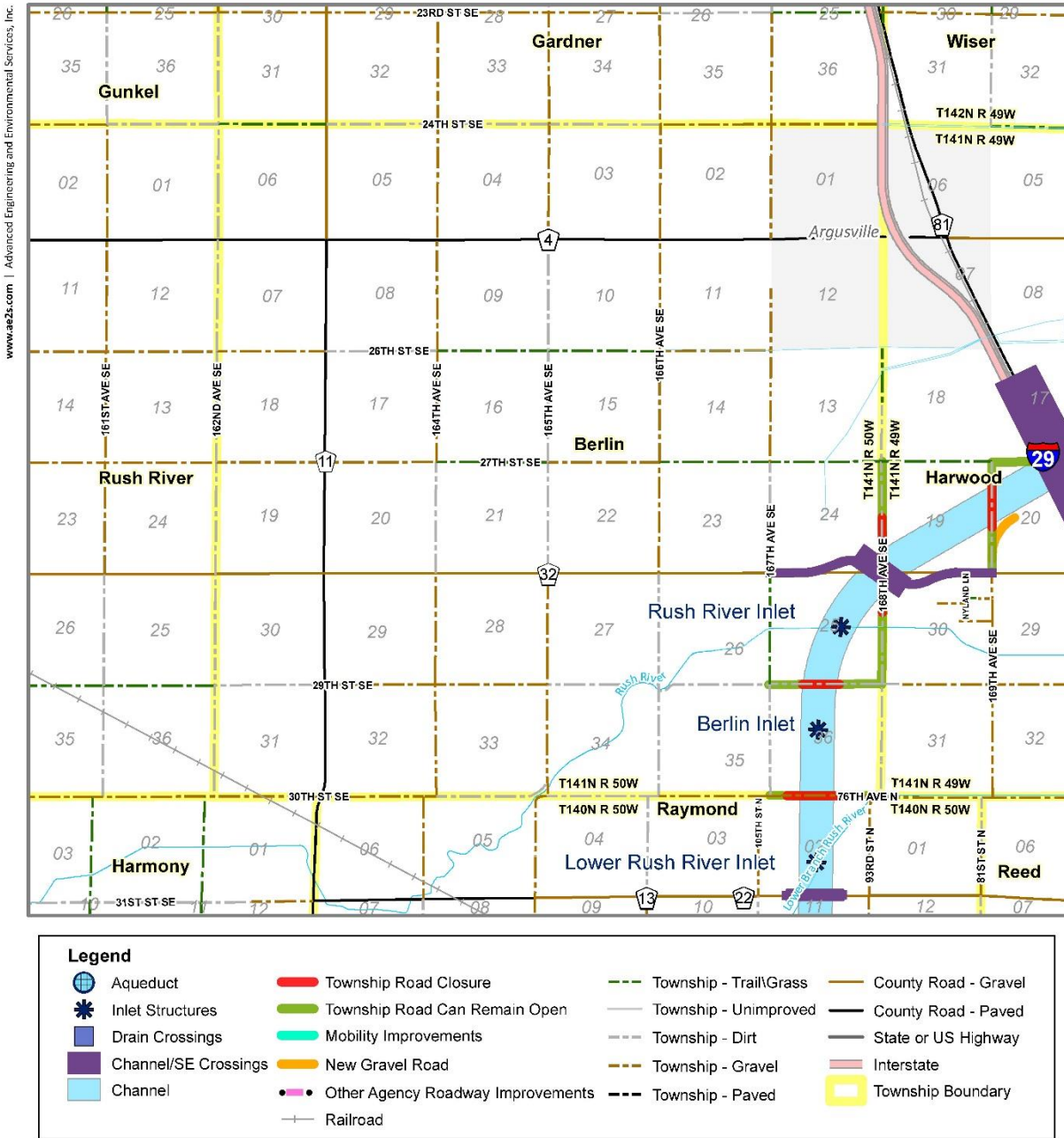
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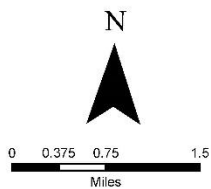
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FM Area Diversion
Map Date: 10/7/2020





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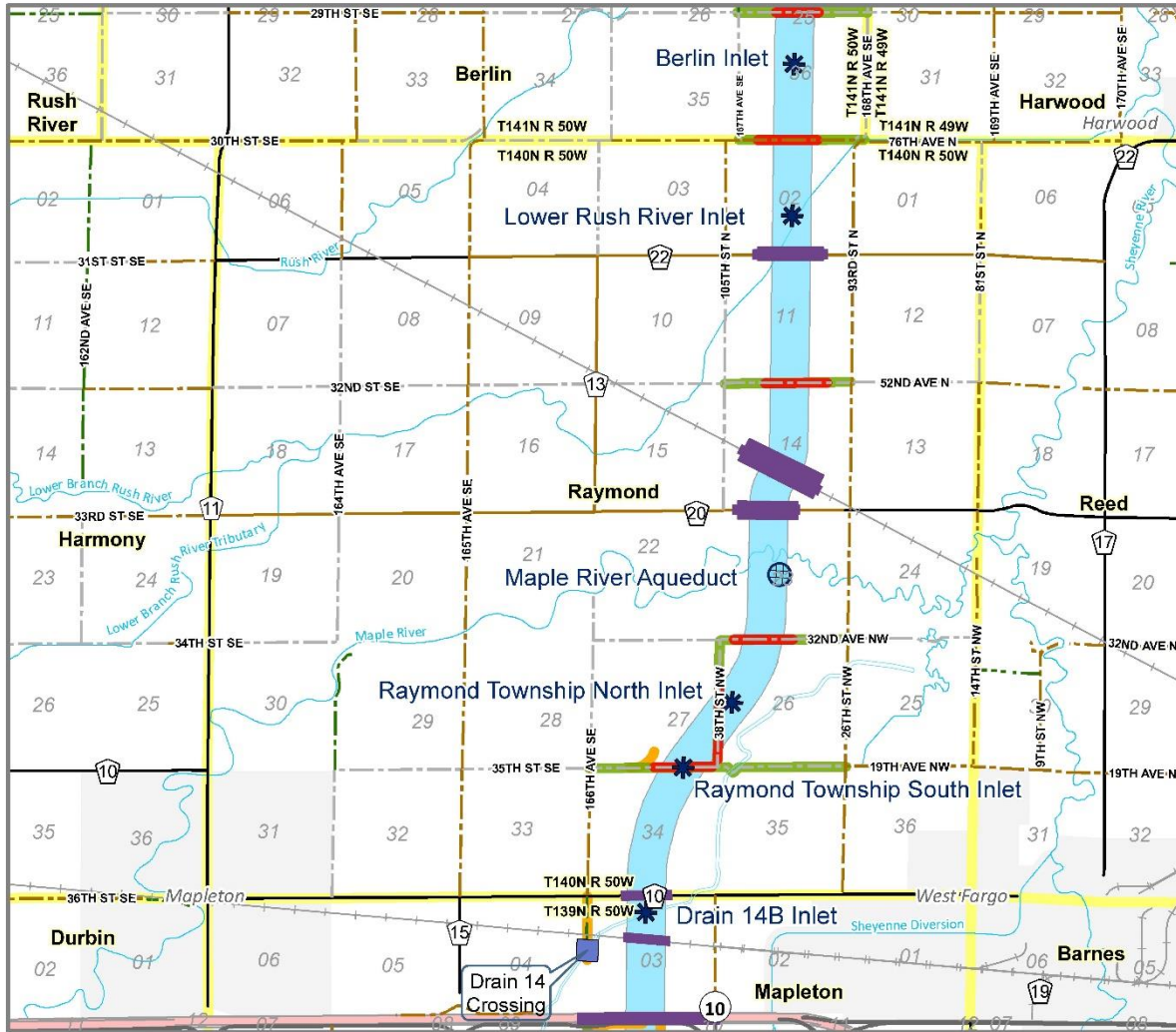


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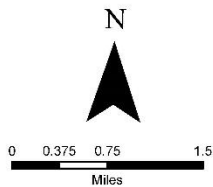
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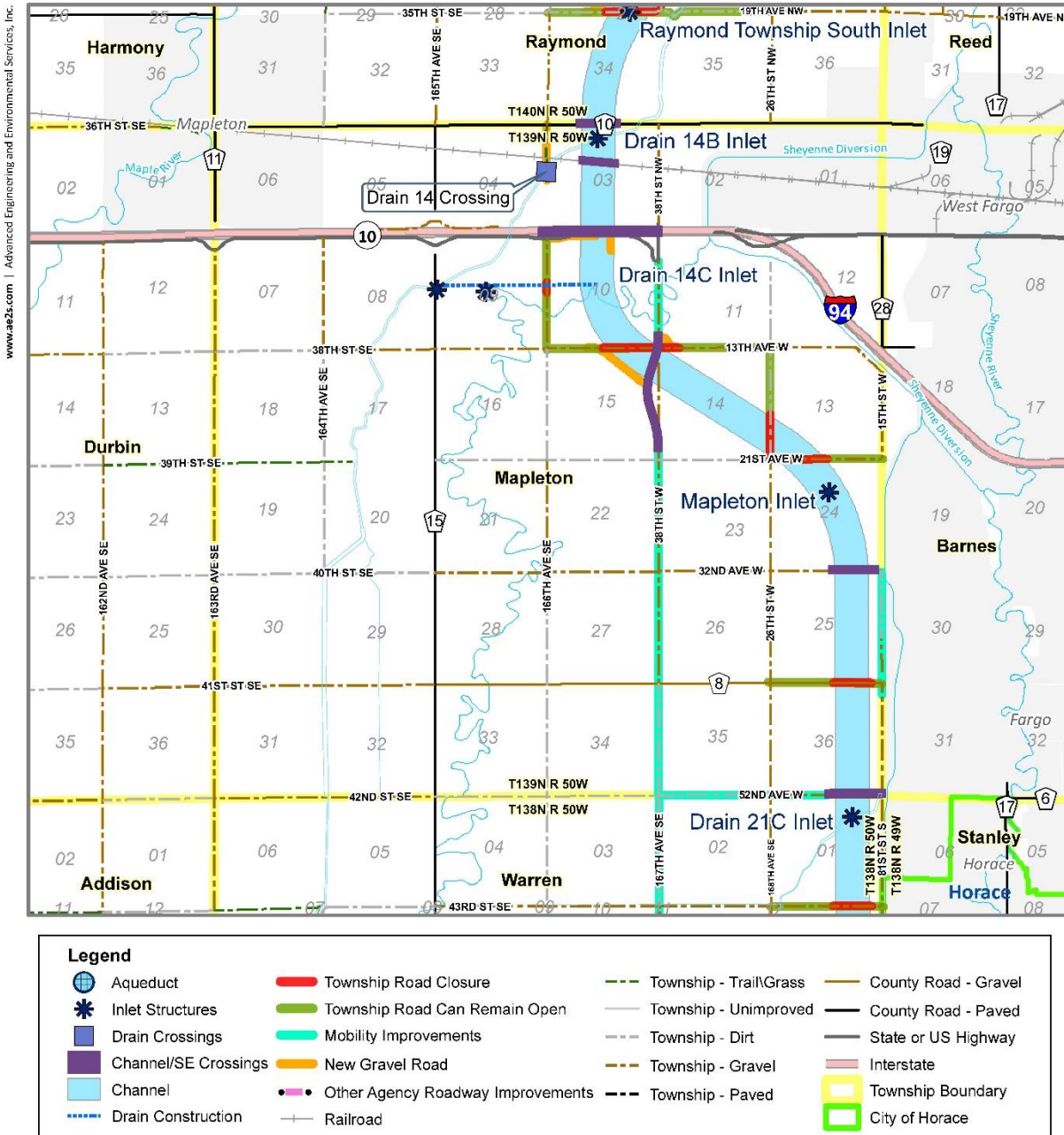
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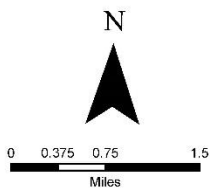
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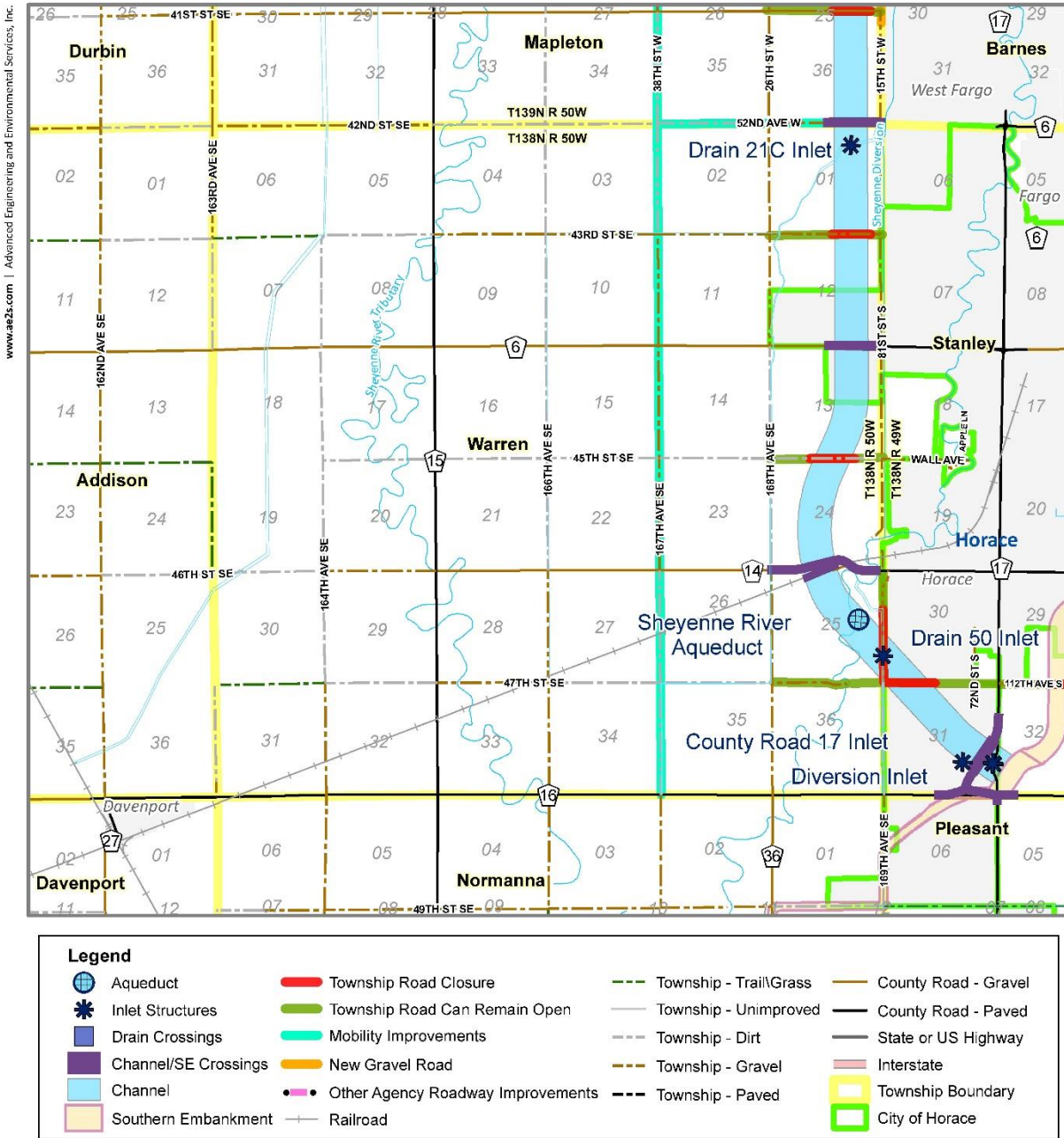
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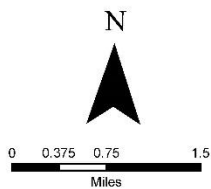
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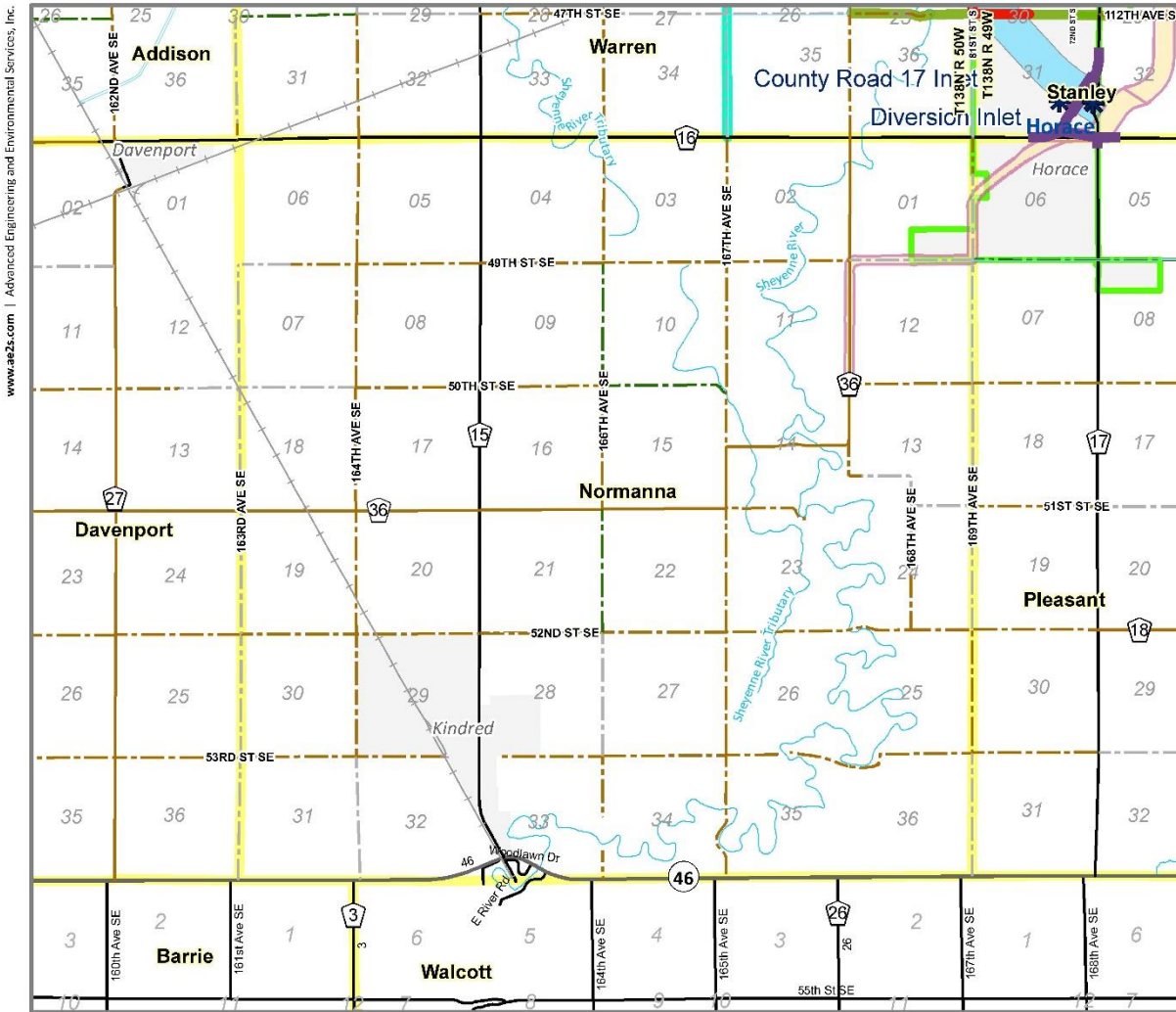
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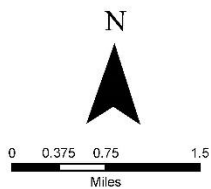
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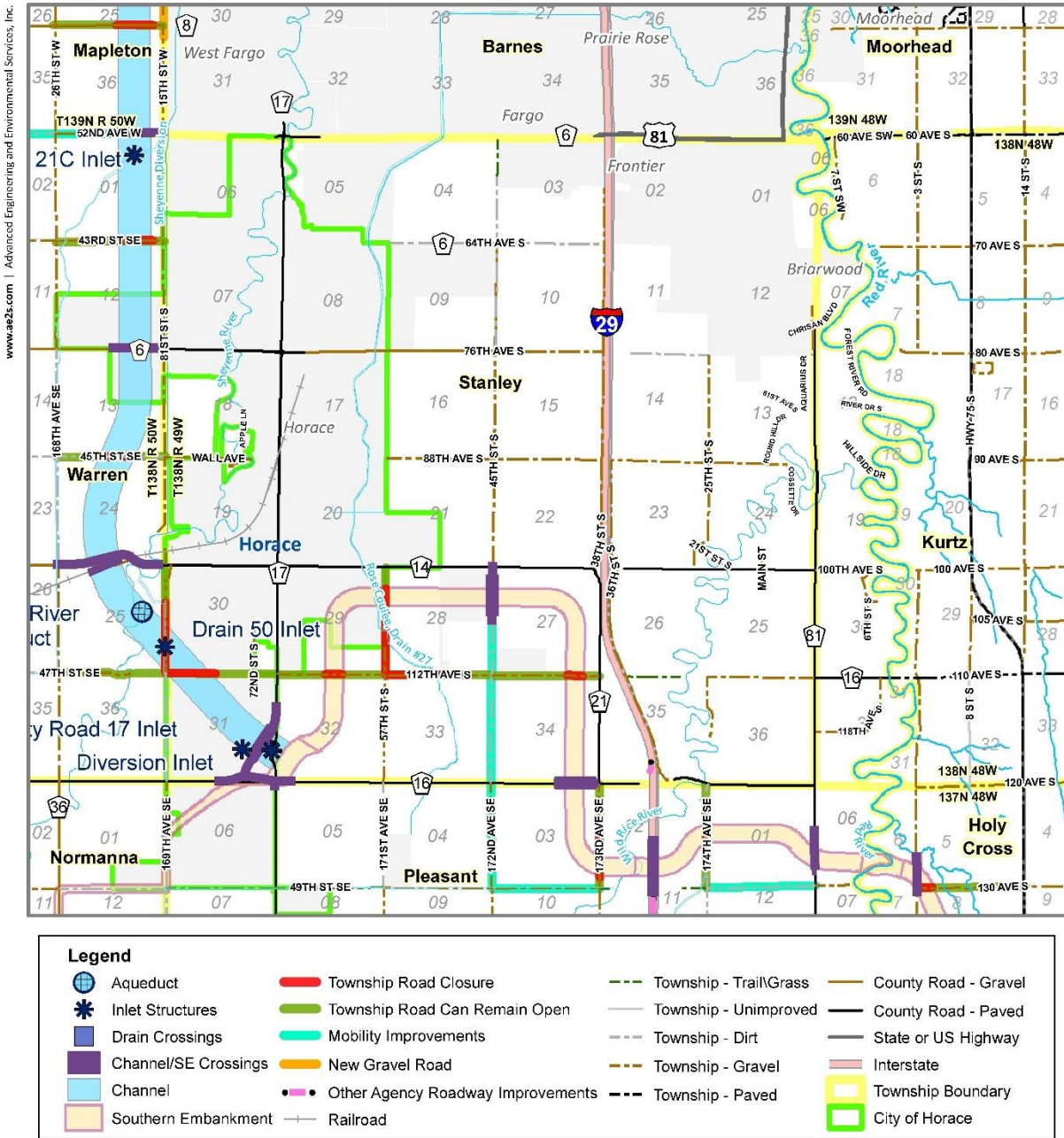
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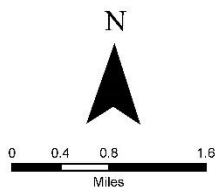
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Map Date: 10/7/2020





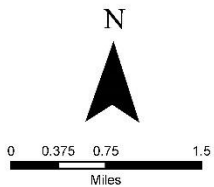
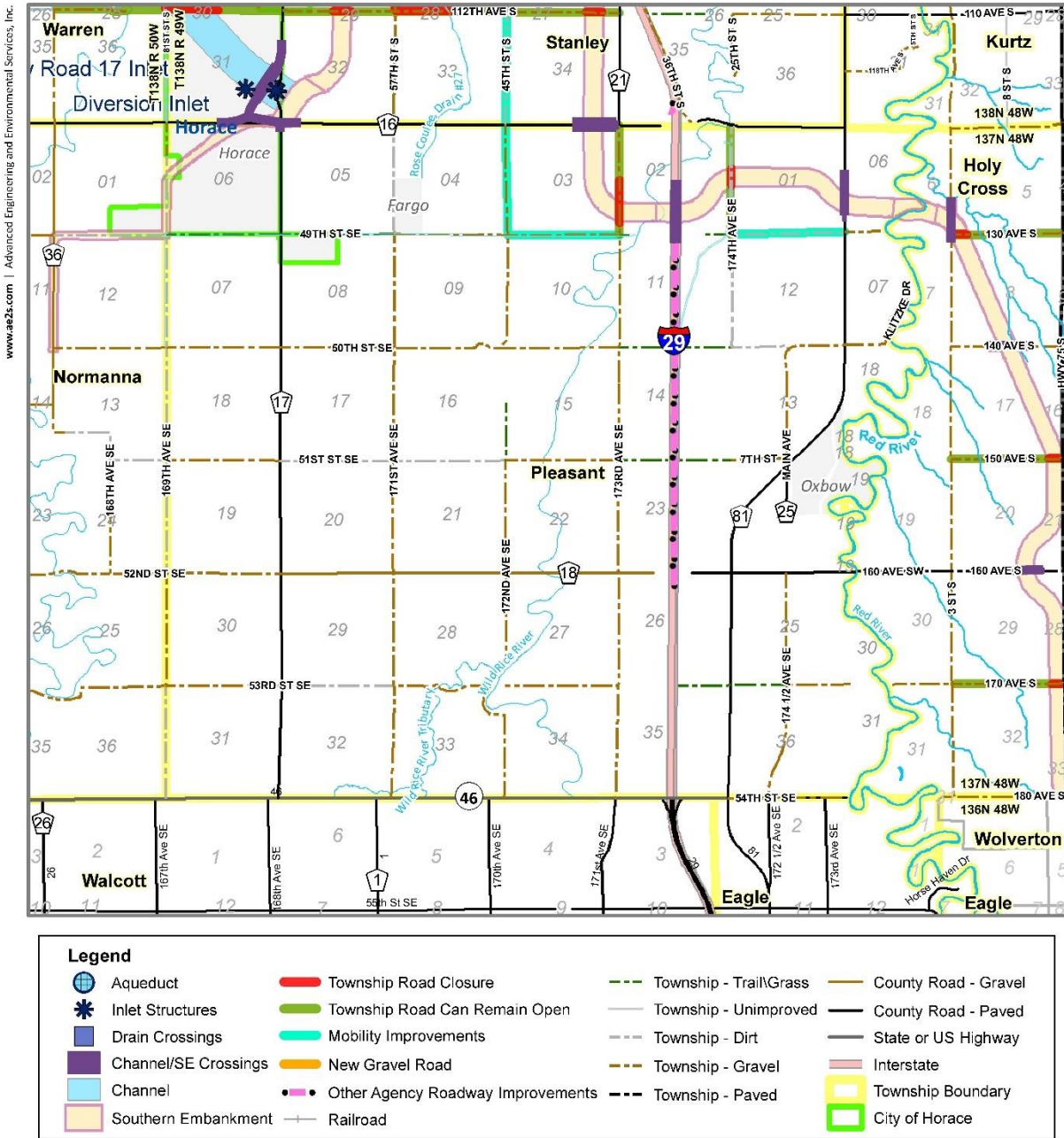
Any reliance upon this map is at user's own risk. AE2S does not warrant the map or its features are either spatially or temporally accurate or fit for a particular use. All parcel acreages and legal descriptions shown hereon are based on County GIS data. Final acreages and legal descriptions to be determined by boundary survey. Coordinate System: NAD 1983 StatePlane North Dakota South FIPS 3302 Feet | Produced By:cwickenheiser - AE2S, Inc. | C:\Data\Projects\GIS Projects\FM Area Diversion\Projects\Land Acquisition\Project Work Package\Project Wide\Overall LA Maps\MOU byTownship 8 x11.mxd



Stanley

FM Area Diversion
Map Date: 2/11/2021





Pleasant

FM Area Diversion
Map Date: 2/11/2021





CONTRACT NUMBER: MOU – Rights of Way in North Dakota

PROJECT NAME: MOU

CONSULTANT NAME: Cass County and Cass County Water Resource District

DATE SUBMITTED: April 27, 2021


SUBMITTED BY: Peggy Harter/Jacobs

LEGAL REVIEW

 X APPROVED AS IS

 APPROVED WITH COMMENTS

 NOT APPROVED

Legal Sign-Off (signature): 

Printed Name: John T. Shockley

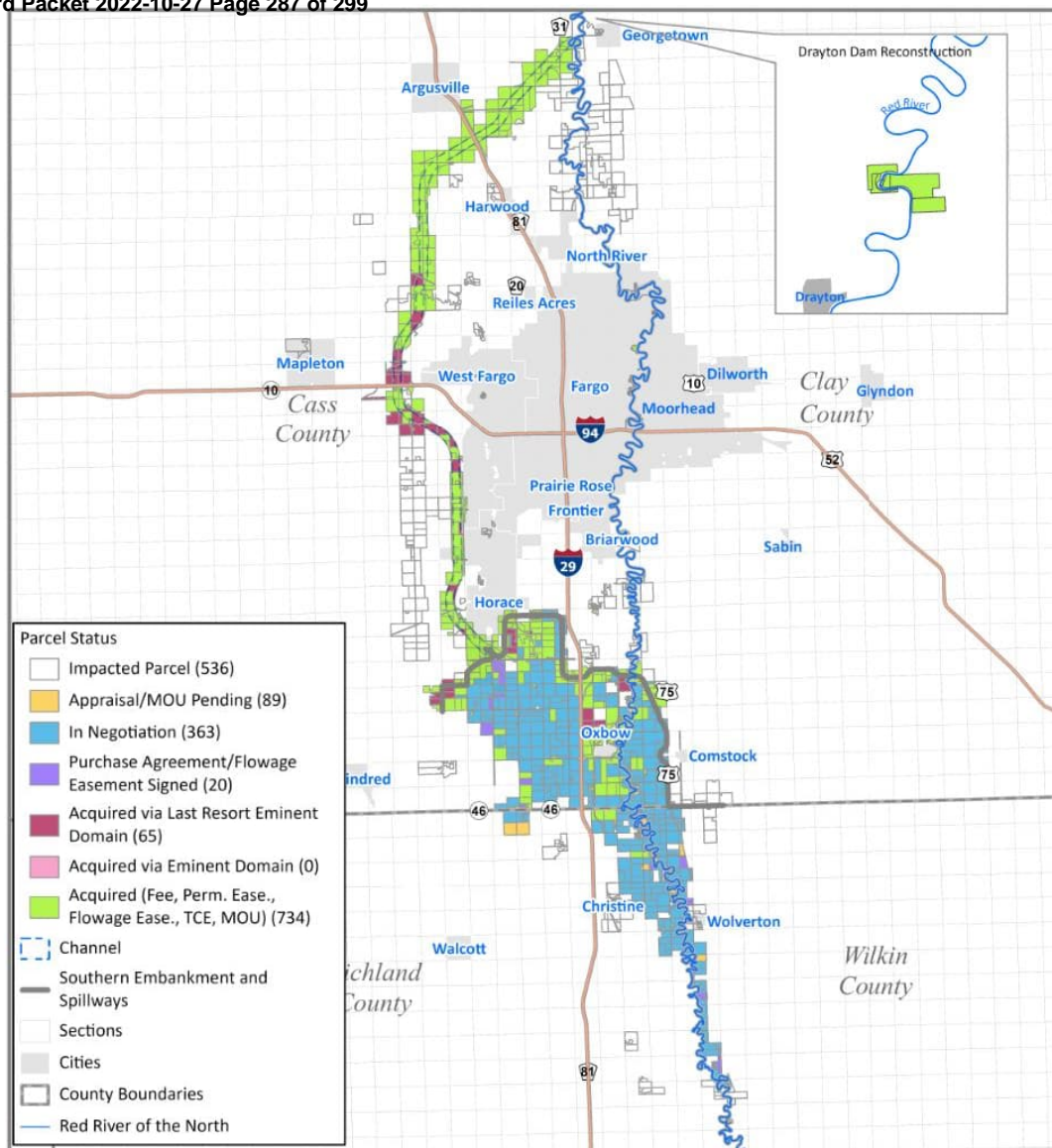
Date of Sign-Off: 4-27-2021



METRO
FLOOD
DIVERSION
AUTHORITY

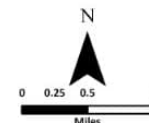
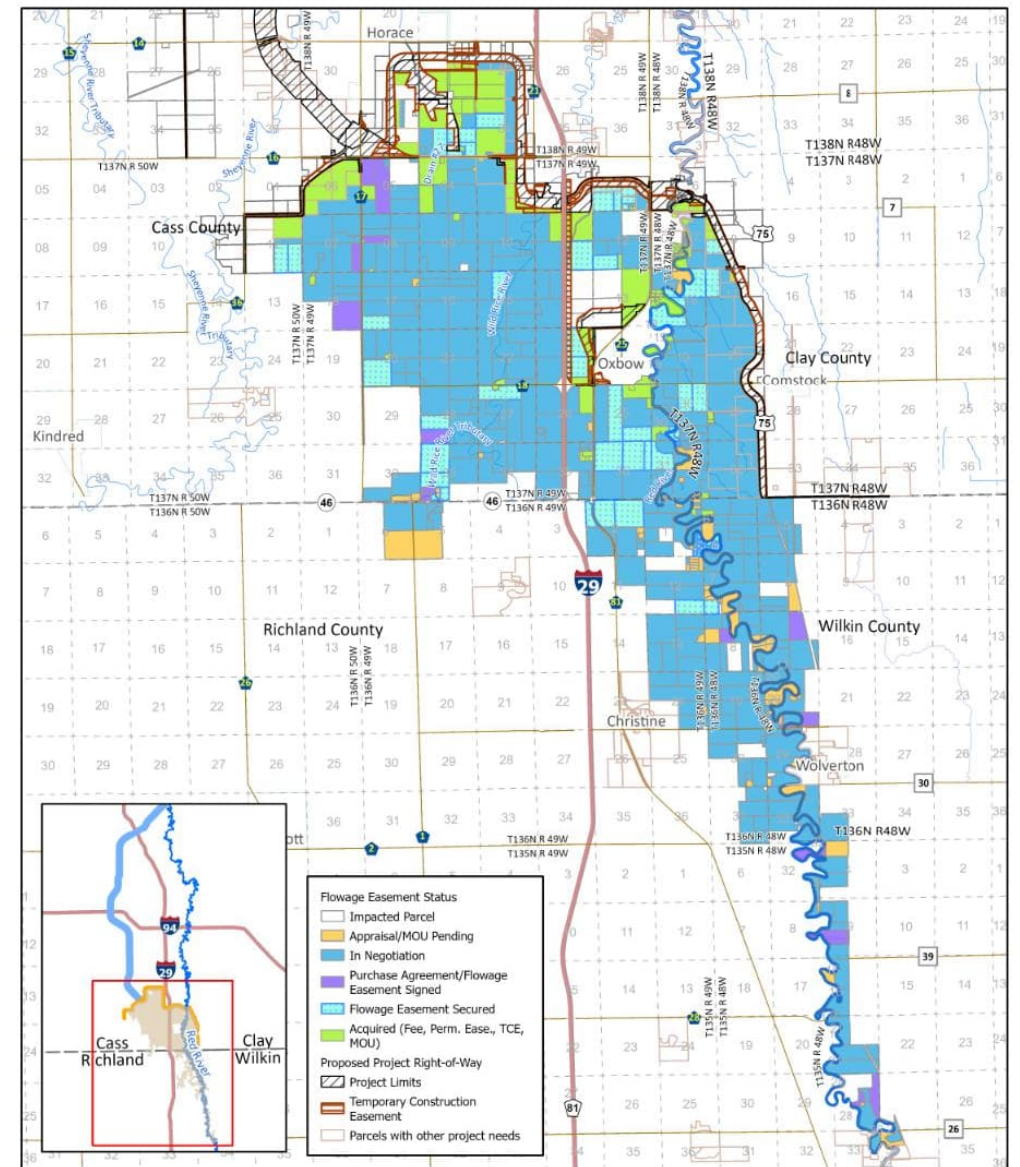
October 2022





PROPERTY ACQUISITION STATUS REPORT

Date: 10/18/2022



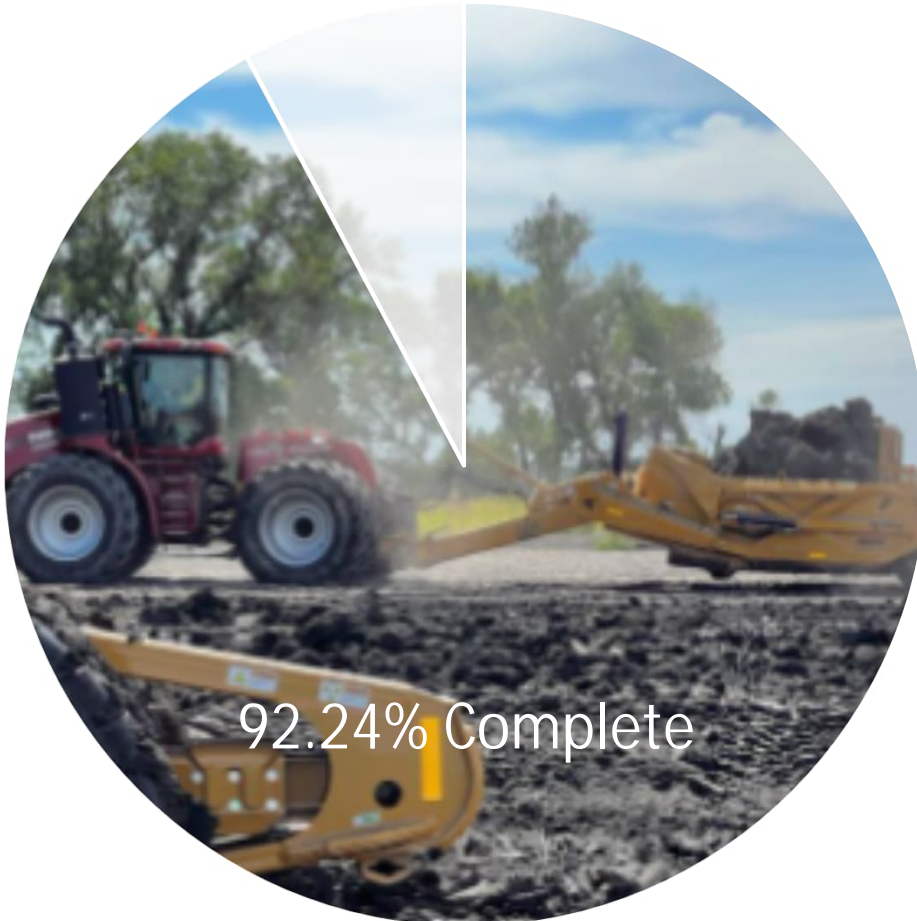
FLOWAGE EASEMENT ACQUISITION STATUS REPORT

Date: 10/18/2022



Property Acquisition Progress

Construction Footprint*



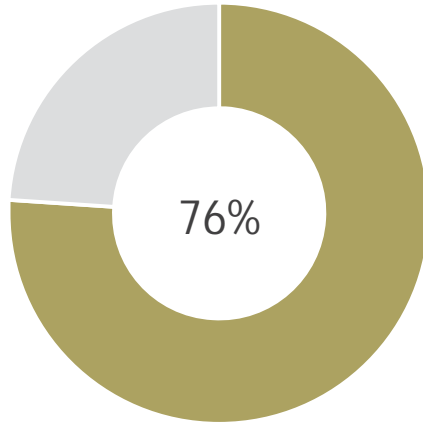
UMA Footprint**



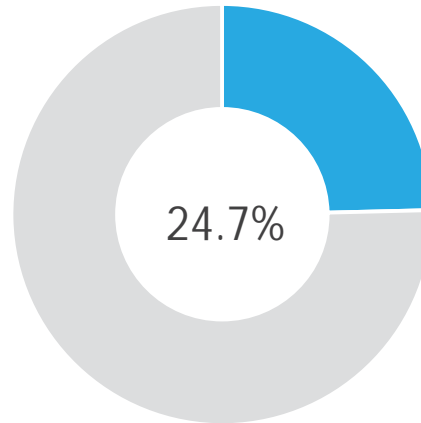
* Includes SWDCAI, SEAI, In-Town, Oxbow and Drayton

** Does not include parcels affected by or within Christine or Wolverton ring levees

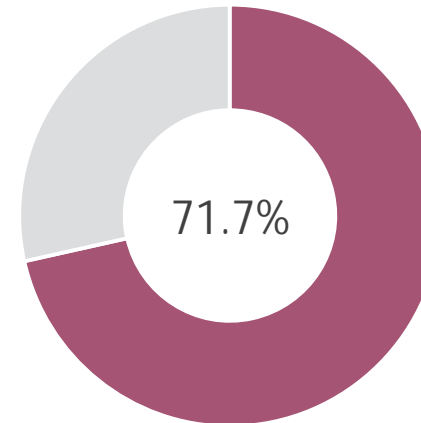
Property Acquisition Progress by Location



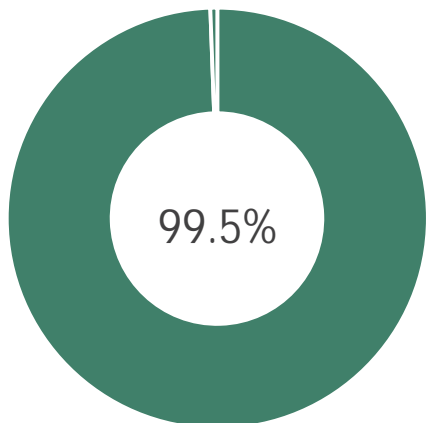
Southern Embankment & Associated Infrastructure



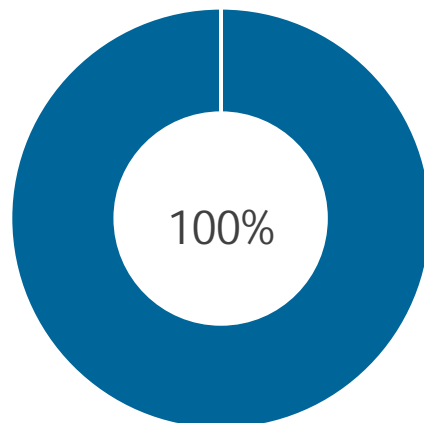
Upstream Mitigation Area



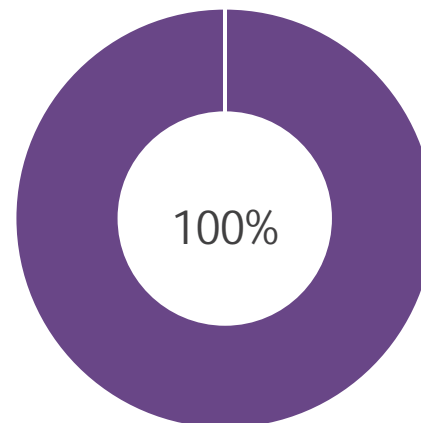
Environmental Monitoring Easements



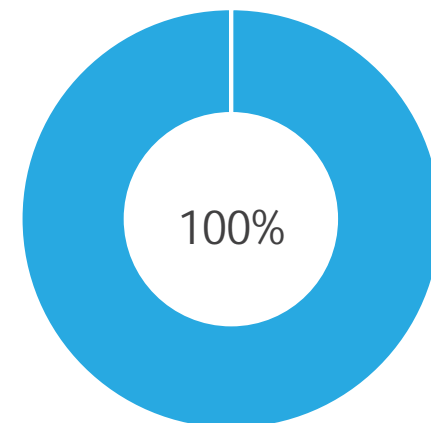
Stormwater Diversion Channel



Oxbow-Hickson-Bakke



MFDA-Constructed In-Town Levees



Drayton Dam Mitigation

Property Acquisition Status Report

Key Activities

- Continue negotiating settlement agreements for existing eminent domain actions
- Finalizing appraisal reports and making purchase offers for SE-2B and Phase 3 Flowage Easement properties
- Planning and coordination for the batch #1 of last written offers for flowage easements, including development of a communications plan and planning two public meetings in early November focused on crop insurance and flowage easement
- Finalized the guidance document and process for mitigation of structures on the fringe areas of the UMA
- Developed a memo to USACE requesting authorization for mapping properties out of Mitigation Zone 1 and for raising roads in the UMA



City of Fargo Work Plan for Projects Bid in 2022

Executive Summary

October 19, 2022

The following executive summary provides an overview of the status of City of Fargo revised work plan for Local Flood Protection and Associated Infrastructure (LFPAI) component of the FM Area Diversion as of October 2022.

OVERVIEW

Local Flood Protection and Associated Infrastructure, formerly referenced as the In-Kind Work Plan or In-Town Projects, has been developed and approved by the Diversion Authority Board and the Member Entities. The LFPAI summarizes the additional impacts and measures that need to be implemented to accommodate a flow through the Fargo-Moorhead urban area that produces a river stage of 37 feet during a 100-year flood event. Member entities include the - City of Fargo, City of Moorhead, Cass County, Cass County Joint Water Resource District and Clay County. LFPAI project development through construction is led by the member entity jurisdiction where the construction is occurring.

BOARD HISTORY

The Metro Flood Diversion Authority(MFDA) approved the “2022 Cash Budget” at their December 16, 2021, meeting. The 2022 Cash Budget included all costs associated with the City of Fargo 2022 Work Plan for a total approved budget of \$25,000,000 for the City of Fargo Work Plan.

The MFDA then approved the “Resolution Approving the Procedure for Requesting that the City of Fargo Undertake Development of Comprehensive Project In-Kind Work Elements and Authorizing the Reimbursement of Such Development Costs and Expenses” at their January 27, 2022, meeting.

In April 2022, the MFDA approved an updated work plan for the City of Fargo for three projects to be bid for construction in 2022. The updated work plan revised the budgets for the three projects with an estimated savings or budget reduction of (\$976,940).

In July 2022, the MFDA approved an updated work plan for the City of Fargo for the projects to be bid in 2022. In summary, the MFDA approved a budget increase for two of the City of Fargo projects to be bid in 2022 including FM-22-C1 as the bids came in \$375,000 higher than the engineer’s estimate and for FM-21-A1 as the engineer’s estimate increased for this bank stabilization project due to additional erosion of the riverbank for an increase of \$1,292,500. This resulted in a collective budget increase for all four City of Fargo projects to be bid in 2022 of approximately \$700,000.

CITY OF FARGO 2022 PROJECTS BID WORK PLAN – Revised October 2022

Since the July 2022 MFDA Board meeting, the City of Fargo has received and rejected bids for one project that was anticipated to begin construction in 2022.

FM-21-A1 Revised to FM-21-A2 – Erosion protection and bank stabilization of the South University Floodwall

- July 2022 approved project budget based on updated engineer's estimate = \$2,805,000
- The increase in the engineer's estimate in July 2022 was based on the following items:
 - The area of the riverbank to be armored with rock rip rap needed to be expanded due to the riverbank failure area increasing since the original estimate had been put together. The area increased was slightly less than double.
 - The addition of pavement removal and replacement on 52nd Avenue S to repair the roadway where the bank failure has extended into it. This cost accounts for approximately \$75k of the increased cost.
 - The current bidding market and inflation impacts.
- The City of Fargo received only one bid on the project in September 2022 with the construction cost 135% over the engineer's estimate. The City of Fargo rejected the bid in October 2022 and followed up with contractors that received plans.
- The City of Fargo and the project engineer have developed a revised project estimate based on feedback received from contractors. This resulted in the following project revisions:
 - The project number was revised from FM-21-A1 to FM-21-A2.
 - City of Fargo plans to rebid the project in 2022 with changes noted below.
 - Increasing the project estimated cost by \$330k. The additional cost for the project is due to the City of Fargo/MFDA taking over some of the risk for potential impacts of a flood by adding a demobilization/remobilization bid item as well as slight adjustments to a few of the bid item prices. The demobilization/remobilization bid item will not be paid unless the river goes above a river stage of 30 feet for three weeks when the contractor is on site.

FM-21-A2: 2022 Engineer's Estimate including engineering and contingency = \$3,135,000

Request Budget Increase = \$330,000

If the proposed motion below is approved, City of Fargo project FM-21-A2 will have a budget increase of \$330,000. It is important to note that this project increase and total project cost will be part of the 2023 Cash Budget and therefore we are not requesting an amendment to the 2022 Cash Budget.

PROPOSED MOTION

Per the "Resolution Approving the Procedure for Requesting that the City of Fargo Undertake Development of Comprehensive Project In-Kind Work Elements and Authorizing the Reimbursement of Such Development Costs and Expenses" I move to approve the Revised 2022 Development Plan Summary Sheets and the Estimated Total Project Costs (attached) for the following City of Fargo Project:

- FM-21-A2 – Erosion Protection & Bank Stabilization of the South University Floodwall, for an increased budget of \$330,000 and a new total budget of \$3,135,000



Development Plan Summary Sheet

Contract Number FM-21-A2 (Formerly FM-21-A1)
 Project Name Red River Erosion Protection & Bank Stabilization
 Member Entity City of Fargo
 Date Submitted: 10/12/2022 Member Entity Contact Nathan Boerboom

Design Services

Approach: ☒ Competitive ☒ Existing Firm: Houston Engineering Contract value: 120,000.00

Subconsultants

Braun Intertec

Services

Geotechnical Engineering

Estimated Cost for Design Professional Services (A)

Start of Design: 2021

\$ 120,000.00

Design Completion: 10/2022

Percentage Complete : 99 %

Property Acquisition

Estimated Cost for Property Acquisition (B)

\$ 0

Estimated Cost for Property Acquisition Services (C)

\$ 0

Start of Property Acquisition: _____

Acquisition Complete: _____

Property Acquisition Needed by: _____

Percentage Complete _____ %

Construction

Estimated Cost for Construction (D)*

\$ 2,600,000.00

Start of Construction: _____

Construction Complete: _____

Percentage Complete: 0 %

* Includes Utility Relocation and Misc. Costs - see attached estimate for additional details.

Construction Services

Approach: ☒ Competitive ☒ Existing Firm: Houston Engineering Contract value: 130,000.00

Subconsultants

Braun Intertec

Services

Material Testing

Estimated Cost for Construction Professional Services (E)

\$ 130,000.00

Percentage Complete: 0 %

ESTIMATED TOTAL PROJECT COST (A+B+C+D+E)
 CONTINGENCY (10%)

\$ 2,850,000.00
 \$ 285,000.00

FY20 22 TOTAL PROJECT BUDGET AMOUNT:

\$ 3,135,000.00

☐
☐

Compliant with (Member entity) _____ procurement and/or purchasing procedures.

Compliant with WIFIA requirements.

Contract Number	FM-21-A2 (Formerly FM-21-A1)
Project Name	Red River Erosion Protection & Bank Stabilization
Member Entity	City of Fargo
Member Entity Contact	Nathan Boerboom

Contractor	TBD
Contract Value	\$
Change Order __	Value \$:
Change Order __	Value \$:
Change Order __	Value \$:
Change Order __	Value \$:
Total Cost = Contract Value + All Change Orders = \$ 	

Services

[illegible]

Construction Complete: _____

_____ Compliant with (Member entity) procurement and/or purchasing procedures.
 _____ Compliant with WIFIA requirements.

Additional Notes:

This project is necessary due to a failure of the river bank along South University Drive north of 52nd Avenue S. The failure of the river bank is due to erosion occurring on the outside meander of the river. The failure has resulted in a portion of the existing floodwall along South University Drive to have moved towards the river. This movement of the floodwall is currently being monitored by Fargo and a repair project will need to occur on it in the next couple of years. This project is intended to reduce the erosion of the river bank by sloping back portions of the river bank and placing rock rip rap along the bank. By reducing the erosion, the movement on the river bank should be minimized so that the existing floodwall does not experience any additional damage.

The original project, FM-21-A1, recently received bids with one submitted. The submitted bid was over the Engineer's Estimate and after a review of it, as well as conversations with contractors, the City decided to reject the bid received and rebid the project. Based on the feedback from the contractors, we are adjusting the construction timeline to allow for more time to complete the project, clarifying the tolerance requirements of the rock placement, and adding bid items for potential flooding conditions that could impact the contractor, which will reduce unknowns at the time of bidding.



Fargo Moorhead Metro Flood Diversion Safety Plan

RRVA and ASN

Rikk Wampler



Major Project Accomplishments Health and Safety

- 60,000 Hours without an Injury
- 70 Employees Orientated
- 42 Pieces of Equipment Operating

KPI's	Reporting Period	YTD	Project to Date
Lost Time Incident Rate	0	0	0
Total Recordable Injury Rate (TRIR)	0	0	0
Severity Rate	0	0	0
Days Away Restricted Transferred (DART)	0	0	0
Near Misses	0	0	0
Recordable Events	0	0	0



Las Vegas City Center Project



- \$9.2 Billion Project
- 3 years
- 6 direct contractors were killed
- 9 sub-contractors were killed
- 15 workers died during the three-year construction period.
- The "City Cemetery Project"





How do we keep from becoming City Center?

What is our plan?

- Project Orientation and Training Programs (LMS)
- Robust Safety Auditing Program. Safety Audits Daily.
- Leadership Accountability. Safety Starts at the Top.
- Immediately correcting any unsafe condition.
- Prioritizing Safety as our No. 1 Core Value.
- Start every meeting and every day emphasizing that safety is our goal.
- Never make our employees feel as though a dollar or a date is more important than their health, their well-being or their life.

