



Technical Advisory Group Recommendation

Meeting Date: 12/13/2017

RECOMMENDATION FOR ACTION:

The Technical Advisory Group has reviewed and recommends approval of the following Contract Action(s).

SUMMARY OF CONTRACTING ACTION:

Per the contract review and approval procedures that were adopted by the Diversion Authority on November 10, 2016, the Owner’s Program Management Consultant (PMC) or Engineer of Record (EOR) shall submit a construction Change Order request to the Technical Advisory Group. The Technical Advisory Group shall review the Change Order request during its next regular meeting after receiving the Change Order request, and make a recommendation as to approval or denial of the Change Order request.

The Owner’s Representative has prepared the following Contract Action(s):

Description	Budget Estimate (\$)
WP-43CD: Meyer Contracting, Inc.	
<i>Change Order #02</i>	<i>\$508,207.56</i>
<ul style="list-style-type: none"> • Incorporate WCD-001 and WCD-002 • Add additional borrow pit stripping • Add additional utility removals, protection, adjustments, relocations, and damage repair • Add temporary access road 	

Summary of Contracting History and Current Contract Action:

The MFDA awarded the WP-43CD (OHB Ring Levee – Phases C and D) construction contract to Meyer Contracting, Inc. on July 13, 2017.

Since the start of construction, several contract change items have been identified. Change Order No. 2: incorporates WCD-001 and WCD-002; adds additional borrow pit stripping; adds additional utility removals, protection, adjustments, relocations, and damage repair; and adds a temporary access road.

Below is a summary of contracting history to date along with the current contracting action.

Original Agreement or Amendment	Budget (\$) Change	Original Project Cost	Revised Project Cost	Project Start	Project Completion	Comments
Original Contract	\$0.00	\$10,399,476.21		09-Aug-17	31-Oct-18	Contract Award to Meyer Consulting, Inc.
Change Order No. 1	\$7,383.47		\$10,406,859.68	09-Aug-17	31-Oct-18	Add heat-shrink sleeves, additional steel pipe bedding, backfill, and time.
Change Order No. 2	\$508,207.56		\$10,915,067.24	09-Aug-17	31-Oct-18	Incorporate WCD-001 and WCD-002; add additional borrow pit stripping;

Original Agreement or Amendment	Budget (\$) Change	Original Project Cost	Revised Project Cost	Project Start	Project Completion	Comments
						utility work; and a temporary access road.

Financial Considerations:

Attached for your review and action is draft CO-02. The PMC and the EOR have reviewed CO-02 and feel the proposed costs and level of effort are reasonable. This change order increases the total Contract Price \$508,207.56. The change order consists of the following items:

1. Removing utilities outside of scope: Several small utilities along the footprint of the WP-43C levee were not included in a demolition or construction contract and needed to be removed to construct the levee.
 - a. Work Change Directive No. 1 (WCD-001) authorized removal of utilities under the footprint of the WP-43C levee that were not included in other contracts.
 - b. This work was done on a time and material basis and the EOR concurred with Contractor’s submittal.
 - c. This change adds Bid Item 0149, *CO-2: Removing utilities outside of scope*: lump sum quantity 1.0 LS at the Contract Unit Price of \$31,932.01 per LS for a price increase of \$31,932.01.

2. Additional borrow pit stripping: During topsoil stripping operations, unsuitable material was discovered that could not be used for levee or roadway embankment material. A disposal site was not available at the time of the discovery and to minimize cost and schedule impacts the material was placed adjacent to the borrow site until a decision could be made on where to dispose of it.
 - a. This change includes removal and stockpiling of the material.
 - b. As construction of the levee was nearing completion and the OCC golf course construction followed, it was determined that the OCC golf course could be used as a spoil area.
 - i. This site was close to the project site and significantly reduce the hauling cost to the Owner, versus hauling it miles away to an offsite spoil area. WCD No. 2 authorized Meyer to place and spread this material in the OCC golf course grading area.
 - c. This work was done on a time and material basis and the EOR concurred with Contractor’s submittal.
 - d. This change adds Bid Item 0150, *CO-2: Additional borrow pit stripping*: lump sum quantity 1.0 LS at the Contract Unit Price of \$38,606.86 per LS for a price increase of \$38,606.86.

3. Subcut in levee footprint: Field identified unsuitable material in the footprint of the WP-43C levee is required to be remove per the project specifications.
 - a. WCD-001 authorized removal and placement of unsuitable levee material in the golf course spoil area at an agreed to unit rate \$4.00 per CY.
 - b. The Engineer verified quantity removed was 9,990 CY.
 - c. This change adds Bid Item 0151, *CO-2: Subcut in levee footprint*: unit rate quantity of 9,990 CY at the Contract Unit Price of \$4.00 per CY for a price increase of \$39,960.00.

4. Repair unmarked water pipe: A 3-inch PVC water line was damaged due to inaccurate utility location markings, and the Contractor repaired the damage on a time and materials basis.
 - a. The Engineer agreed that this is a reimbursable cost and concurred with the Contractor's proposed costs.
 - b. This change adds Bid Item 0152, *CO-2: Repair unmarked water pipe*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$3,534.25 per LS for a price increase of \$3,534.25.
5. Golf course pond dirt: To minimize costs and schedule delays, and also allowing the Contractor to use a portion of Oxbow Drive as a haul road, this pond excavation work was deducted from Landscapes Unlimited golf course contract and added to this contract at a negotiated unit rate.
 - a. WCD-001 authorized removal and placement in the golf course spoil area of golf course pond material at an agreed to unit rate \$4.00 per CY. The Engineer verified quantity removed was 3,725 CY.
 - b. This change adds Bid Item 0153, *CO-2: Golf course pond dirt*: unit rate quantity of 3,725 CY at the Contract Unit Price of \$4.00 per CY for a price increase of \$14,900.00.
6. Pothole & protect unmarked Oxbow utilities: During installation of the 8-inch sanitary sewer line on Oxbow Drive the Contractor encountered several unmarked utilities. The Contractor pothole marked the utilities and protected them during construction, and requested reimbursement of costs to mark and protect these utility lines.
 - a. The Engineer agreed that this is a reimbursable cost and concurred with the Contractor's proposed costs.
 - b. This change adds Bid Item 0154, *CO-2: Pothole & protect unmarked Oxbow utilities*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$1,927.60 per LS for a price increase of \$1,927.60.
7. Additional traffic control: Additional traffic control signage was coordinated with the Cass County Highway Department and ND DOT, and was added to better control and direct traffic around the project site.
 - a. WCD-001 authorized additional traffic control at an agreed to lump sum rate.
 - b. This change adds Bid Item 0155, *CO-2: Additional traffic control*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$3,885.00 per LS for a price increase of \$3,885.00.
8. Adjust STMH-1 to match ex. 18" RCP: During installation of manhole STMH-1, it was determined that the existing 18-inch diameter RCP storm sewer pipe was approximately 5-feet higher than indicated and could not be lowered. Because the manhole had already been cast and delivered to the site, the Contractor had to modify it in the field to fit field conditions. The Contractor requested reimbursement of their time and material costs to field modify STMH-1.
 - a. The Engineer agreed that this is a reimbursable cost and concurred with the Contractor's proposed costs.
 - b. This change adds Bid Item 0156, *CO-2: Adjust STMH-1 to match ex. 18" RCP*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$4,706.46 per LS for a price increase of \$4,706.46.
9. Oxbow watermain realignment: A utility conflict was identified in the field during installation of the new storm sewer on Oxbow Drive. The existing water main conflicted with the new storm sewer.
 - a. It was determined that it would be easier and less expensive to relocate the water line, and the Contractor was directed to do the work. The Contractor requested reimbursement of their time and material costs to reroute a portion of the water main on Oxbow Drive.

- b. The Engineer agreed that this is a reimbursable cost and concurred with the Contractor's proposed time and materials costs.
 - c. This change adds Bid Item 0157, *CO-2: Oxbow watermain realignment*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$17,027.45 per LS for a price increase of \$17,027.45.
10. Redirect 3IN WM to 6IN WM: A utility installation scheduling conflict was identified during construction of the Highway 81 roadway embankment. To minimize cost and schedule impacts to the Highway 81 roadway embankment work, the Contractor incurred costs to redirect a 3-inch water main into an existing 6-inch water main to maintain service and free-up the space for installation of a communications utility.
 - a. The Contractor requested reimbursement of their time and material costs to reroute a portion of the 3-inch water main into a 6-inch water main.
 - b. The Engineer agreed that this is a reimbursable cost and concurred with the Contractor's proposed time and materials costs.
 - c. This change adds Bid Item 0158, *CO-2: Redirect 3IN WM to 6IN WM*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$5,644.72 per LS for a price increase of \$5,644.72.
11. Move unsuitable material to golf course: During topsoil stripping operations, unsuitable material was discovered that could not be used for levee or roadway embankment material. A disposal site was not available at the time of the discovery and to minimize cost and schedule impacts the material was placed adjacent to the borrow site until a decision could be made on where to place it.
 - a. After at disposal site was identified, Work Change Directive No. 2 (WCD-002) authorized the loading and hauling of the 14,875 CY of unsuitable material to the golf course disposal site at a negotiated unit rate cost.
 - b. This change adds Bid Item 0159, *CO-2: Move unsuitable material to golf course*: unit price quantity 14,875 CY at the Contract Unit Price of \$4.75 per CY for a price increase of \$70,656.25.
12. Additional ARVs: The contract includes relocation of two (2) existing City of Fargo sanitary sewer force mains. Two (2) Air Release Valves (ARVs) that are required by the City of Fargo were not included on the plans.
 - a. The Contractor provided a cost proposal to added the City of Fargo specified valves and associated equipment and the Engineer concurred with the Contractor's proposed costs.
 - b. This change adds Bid Item 0160, *CO-2: Additional ARVs*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$7,189.16 per LS for a price increase of \$7,189.16.
13. Temporary access road south of Riverbend Road: Due to a project site access conflict between the WP-43CD Contractor and the WP-43E2F contractor for a portion of Riverbend Road and as a compromise to maintain the access and work schedule for both contractors, an agreement was reached such that the WP-43CD Contractor would provide a temporary work access route to complete the remaining WP-43E2F work in exchange for access to Riverbend Road to continue levee construction.
 - a. The lump sum cost was negotiated between the Contractor and the Engineer.
 - b. This change adds Bid Item 0161, *CO-2: Temporary access road south of Riverbend Road*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$37,000.00 per LS for a price increase of \$37,000.00.

14. Cass Rural Water Casing Pipe Install: To minimize cost and schedule impacts to the Highway 81 roadway embankment work, the Contractor was requested to install a portion of a Cass Rural Water utility relocation.
 - a. WCD-001 authorized the installation of the segment of the Cass Rural Water casing pipe under the WP-43C levee.
 - b. This change adds Bid Item 0162, *CO-2: Cass Rural Water Casing Pipe Install*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$242,908.80 per LS for a price increase of \$242,908.80.
15. NCN No. 3 Owner testing cost set-off: Per NCN #3, a discontinuity in the WP-43CD pump station slab was observed and the Diversion Authority incurred \$11,671 in consulting and non-destructive concrete impact echo testing costs to determine the extent of the damage. Per the General Conditions of the Agreement, Section 14.03F, Defective Work, Costs and Damages, the Diversion Authority is deducting these testing costs from the contract price.
 - a. This change adds Bid Item 0163, *CO-2: NCN No. 3 Owner testing cost set-off*: unit rate quantity of 1.0 LS at the Contract Unit Price of (\$11,671.00) per LS for a price increase of (\$11,671.00).
16. Time Extension: Due to the changes above, the Contractor has requested and the Engineer agrees to the following contract time changes:
 - a. Milestone 5 - Levee 43C Station C15+00 to C0+00:
 - i. Add six (6) days, extending the completion date to October 16, 2017.
 - b. Milestone 6 - Oxbow Drive (Phase 2):
 - i. Add four (4) days, extending the completion date to October 19, 2017.
 - c. Milestone 6 - Highway 81 paving:
 - i. Add five (5) days, extending the completion date to October 22, 2017.
 - a. Milestone 8 - All work, except Pump Station mechanical and electrical components and finishes; bituminous road wear course:
 - a. Add one (1) day, extending the completion date to January 1, 2018.

This change amount of \$508,207.56 is included within the FY-2017 MFDA budget.

ATTACHMENT(S):

1. Draft Change Order No. 02 with unit price schedule and back-up documentation

Submitted by:



John Glatzmaier
CH2M
Metro Flood Diversion Project

December 13, 2017

Date

Nathan Boerboom, Diversion Authority Project
Manager
Concur: _____ Non-Concur: _____

Robert Zimmerman, Moorhead City Engineer
Concur: _____ Non-Concur: _____

Mark Bittner, Fargo Director of Engineering
Concur: _____ Non-Concur: _____

Jason Benson, Cass County Engineer
Concur: _____ Non-Concur: _____

David Overbo, Clay County Engineer
Concur: _____ Non-Concur: _____

Jeff Ebsch, Assistant Cass County Engineer, Diversion
Authority Project Manager
Concur: _____ Non-Concur: _____



Change Order No. 02

Date of Issuance:	<u>12/21/2017</u>	Effective Date:	<u>12/21/2017</u>
Owner:	<u>FM-Flood Diversion Authority</u>	Owner's Contract No.:	<u>WP-43CD</u>
Owner's Representative:	<u>CH2M HILL Engineers, Inc.</u>	Owner's Representative Project No.:	<u>435534</u>
Contractor:	<u>Meyer Contracting, Inc</u>	Contractor's Project No.:	<u></u>
Engineer:	<u>Houston-Moore Group, LLC</u>	Work Package No.:	<u>WP-43CD</u>
Project:	<u>OHB-Ring Levee-Phases C and D</u>	Contract Name:	<u>Oxbow-Hickson-Bakke Ring Levee</u>

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

Description:

This change order increases the contract price by \$508,207.56 as shown in the attached Change Order No. 2 Unit Price Schedule, and extends the contract time for Milestones 5, 6, 7, and 8. The Engineer reviewed these change items and recommends approval. The following items are included in this change order:

1. Removing utilities outside of scope: Several small utilities along the footprint of the WP-43C levee were not included in a demolition or construction contract and needed to be removed to construct the levee. Work Change Directive No. 1 (WCD-001) authorized removal of utilities under the footprint of the WP-43C levee that were not included in other contracts.
 - a. ADD Bid Item 0149, *CO-2: Removing utilities outside of scope*: lump sum quantity 1.0 LS at the Contract Unit Price of \$31,932.01 per LS for a price increase of \$31,932.01.
2. Additional borrow pit stripping: During topsoil stripping operations, unsuitable material was discovered that could not be used for levee or roadway embankment material. A disposal site was not available at the time of the discovery and to minimize impacts to construction scheduling the material was placed adjacent to the borrow site until a decision could be made on where to place it. This change includes removal and stockpiling of the material. Later, a disposal site became available and item #11 of this change order includes placement of this material in a golf course spoil area.
 - a. ADD Bid Item 0150, *CO-2: Additional borrow pit stripping*: lump sum quantity 1.0 LS at the Contract Unit Price of \$38,606.86 per LS for a price increase of \$38,606.86.
3. Subcut in levee footprint: Field identified unsuitable material in the footprint of the WP-43C levee is required to be removed per the project specifications. WCD-001 authorized removal and placement of unsuitable levee material in the golf course spoil area at an agreed to unit rate \$4.00 per CY. The Engineer verified quantity removed was 9,990 CY.
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 - a. ADD Bid Item 0154, *CO-2: Pothole & protect unmarked Oxbow utilities*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$1,927.60 per LS for a price increase of \$1,927.60.
7. Additional traffic control: Additional traffic control signage, as coordinated with the Cass County Highway Department and ND DOT, was added to better control and direct traffic around the project site. WCD-001 authorized additional traffic control at an agreed to lump sum rate.
 - a. ADD Bid Item 0155, *CO-2: Additional traffic control*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$3,885.00 per LS for a price increase of \$3,885.00.
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 - a. ADD Bid Item 0156, *CO-2: Adjust STMH-1 to match ex. 18" RCP*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$4,706.46 per LS for a price increase of \$4,706.46.
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 - a. ADD Bid Item 0158, *CO-2: Redirect 3IN WM to 6IN WM*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$5,644.72 per LS for a price increase of \$5,644.72.
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 - a. ADD Bid Item 0159, *CO-2: Move unsuitable material to golf course*: unit price quantity 14,875 CY at the Contract Unit Price of \$4.75 per CY for a price increase of \$70,656.25.
12. Additional ARVs: The contract includes relocation of two (2) existing City of Fargo sanitary sewer force mains. Two (2) Air Release Valves (ARVs) that are required by the City of Fargo were not included on the plans. The Contractor provided a cost proposal to add the valves and associated equipment and the Engineer concurred with the Contractor's proposed costs.
 - a. ADD Bid Item 0160, *CO-2: Additional ARVs*: unit rate quantity of 1.0 LS at the Contract Unit Price of \$7,189.16 per LS for a price increase of \$7,189.16.
13. Temporary access road south of Riverbend Road: Due to a project site access conflict between the WP-43CD Contractor and the WP-43E2F contractor for a portion of Riverbend Road and as a compromise to maintain the access and work schedule for both contractors, an agreement was reached such that the WP-43CD Contractor would provide a temporary work access route to complete the remaining WP-43E2F work in exchange for access to Riverbend Road to continue levee construction prior to freeze up. The lump sum cost was negotiated between the Contractor and the Engineer.
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 - c. Milestone 6 - Highway 81 paving:
 - i. Add five (5) days, extending the completion date to October 22, 2017.
 - a. Milestone 8 - All work, except Pump Station mechanical and electrical components and finishes; bituminous road wear course:
 - a. Add one (1) day, extending the completion date to January 1, 2018.

Attachments:

1. Change Order No. 2 Unit Price Schedule dated 12/12/2017
2. HMG revised Change Order No. 2 recommendation memorandum dated 11/29/2017
3. NCN No. 3 Notice of Cost Set-off dated 12/6/17

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES <i>[note changes in Milestones if applicable]</i>
Original Contract Price: 10,399,476.21	Original Contract Times: Substantial Completion: <u>July 31, 2018</u> Ready for Final Payment: <u>October 31, 2018</u>
Contract Price prior to this Change Order: 10,406,859.68	Contract Times prior to this Change Order: Substantial Completion: <u>August 01, 2018</u> Ready for Final Payment: <u>October 31, 2018</u>
[Increase] [Decrease] of this Change Order: 508,207.56	[Increase] [Decrease] of this Change Order:
Contract Price incorporating this Change Order: 10,915,067.24	Contract Times with all approved Change Orders: Substantial Completion: <u>August 01, 2018</u> Ready for Final Payment: <u>October 31, 2018</u>

<p>RECOMMENDED:</p> <p>By: _____</p> <p style="text-align: center;">Owner's Representative <small>(Authorized Signature)</small></p> <p>Name: <u>Nathan Boerboom</u></p> <p>Title: <u>Project Manager</u></p> <p>Date: _____</p>	<p>ACCEPTED:</p> <p>By: _____</p> <p style="text-align: center;">Owner <small>(Authorized Signature)</small></p> <p>Name: <u>Robert W. Wilson</u></p> <p>Title: <u>Co-Executive Director</u></p> <p>Date: _____</p>	<p>ACCEPTED:</p> <p>By: _____</p> <p style="text-align: center;">Contractor <small>(Authorized Signature)</small></p> <p>Name: <u>Verlyn Schoep</u></p> <p>Title: <u>President</u></p> <p>Date: _____</p>
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WP-43CD
Oxbow-Hickson-Bakke Ring Levee-Phases C and D

Change Order 2 Unit Price Schedule
 DATE: 12/12/2017



WP-43CD - Oxbow-Hickson-Bakke Ring Levee-Phases C and D											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT
0001	Mobilization	LS	1	\$544,802.00	\$ 544,802.00				1	\$544,802.00	\$ 544,802.00
0002	Demolition	LS	1	\$324,840.00	\$ 324,840.00				1	\$324,840.00	\$ 324,840.00
0003	Clearing and Grubbing	LS	1	\$29,057.00	\$ 29,057.00				1	\$29,057.00	\$ 29,057.00
0004	Temporary Erosion Protection	LS	1	\$66,363.00	\$ 66,363.00				1	\$66,363.00	\$ 66,363.00
0005	Traffic Control	LS	1	\$8,422.00	\$ 8,422.00				1	\$8,422.00	\$ 8,422.00
0006	Care of Water	LS	1	\$44,037.00	\$ 44,037.00				1	\$44,037.00	\$ 44,037.00
0007	Health and Safety	LS	1	\$228,608.00	\$ 228,608.00				1	\$228,608.00	\$ 228,608.00
0008	Work Limit Fencing	LF	33,682	\$1.50	\$ 50,523.00				33682	\$1.50	\$ 50,523.00
0009	Turf Establishment - Zone 1	AC	26	\$304.50	\$ 7,977.90				26	\$304.50	\$ 7,977.90
0010	Turf Establishment - Zone 3	AC	33	\$1,254.00	\$ 41,758.20				33	\$1,254.00	\$ 41,758.20
0011	Turf Establishment - Zone 4	AC	10	\$1,452.00	\$ 14,520.00				10	\$1,452.00	\$ 14,520.00
0012	Topsoil Stripping	SY	143,910	\$1.20	\$ 172,692.00				143910	\$1.20	\$ 172,692.00
0013	Excavation – Common (North Pond)	CY	158,915	\$5.50	\$ 874,032.50				158915	\$5.50	\$ 874,032.50
0014	Inspection Trench	LF	5,274	\$11.00	\$ 58,014.00				5274	\$11.00	\$ 58,014.00
0015	Topsoil	SY	116,850	\$1.00	\$ 116,850.00				116850	\$1.00	\$ 116,850.00
0016	Aggregate Base - Levee top	LF	5,306	\$13.25	\$ 70,304.50				5306	\$13.25	\$ 70,304.50
0017	Aggregate Base - Pump Station Access Road	LF	1,450	\$24.00	\$ 34,800.00				1450	\$24.00	\$ 34,800.00
0018	Low Flow Channel And Pond Access	LF	1,742	\$160.00	\$ 278,720.00				1742	\$160.00	\$ 278,720.00
0019	Levee Access Gate	EA	2	\$12,216.00	\$ 24,432.00				2	\$12,216.00	\$ 24,432.00
0020	Installation of Electrical Conduit furnished by others	LF	855	\$2.90	\$ 2,479.50				855	\$2.90	\$ 2,479.50
0021	Imported fill for backfilling 829 Riverbend Rd	CY	1,500	\$7.30	\$ 10,950.00				1500	\$7.30	\$ 10,950.00
0022	Remove and Replace Unstable Subgrade Material	CY	500	\$74.00	\$ 37,000.00				500	\$74.00	\$ 37,000.00
0023	Gravity Drain Inlet Structure	LS	1	\$59,057.00	\$ 59,057.00				1	\$59,057.00	\$ 59,057.00

WP-43CD - Oxbow-Hickson-Bakke Ring Levee-Phases C and D											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT
0024	Pump Station Structure	LS	1	\$1,392,662.00	\$ 1,392,662.00				1	\$1,392,662.00	\$ 1,392,662.00
0025	Pump Station Process Equipment	LS	1	\$60,000.00	\$ 60,000.00				1	\$60,000.00	\$ 60,000.00
0026	Forcemain Piping	LF	575	\$262.50	\$ 150,937.50				575	\$262.50	\$ 150,937.50
0027	Gatewell	LS	1	\$561,313.00	\$ 561,313.00				1	\$561,313.00	\$ 561,313.00
0028	Storm Sewer RCP w/ Catch Basins, Manholes and Connections	LS	1	\$852,711.00	\$ 852,711.00				1	\$852,711.00	\$ 852,711.00
0029	Transition Structure 1 and Appurtenances	LS	1	\$25,898.00	\$ 25,898.00				1	\$25,898.00	\$ 25,898.00
0030	Pre-Construction Pipe Repair	SF	1,000	\$4.40	\$ 4,400.00				1000	\$4.40	\$ 4,400.00
0031	Install Storm Sewer 42-inch Steel Pipe Sections Furnished by Others	LS	1	\$97,059.00	\$ 97,059.00				1	\$97,059.00	\$ 97,059.00
0032	Cathodic Protection System for Steel Pipe	LS	1	\$31,173.00	\$ 31,173.00				1	\$31,173.00	\$ 31,173.00
0033	Transition Structure 2 and Appurtenances	LS	1	\$26,265.00	\$ 26,265.00				1	\$26,265.00	\$ 26,265.00
0034	Gravity Drain Outlet Structure with Duckbill Check Valve	LS	1	\$129,038.00	\$ 129,038.00				1	\$129,038.00	\$ 129,038.00
0035	Excavation – Common (Gravity Outfall)	CY	44,500	\$6.90	\$ 307,050.00				44500	\$6.90	\$ 307,050.00
0036	Riprap with Filter	TN	1,500	\$114.00	\$ 171,000.00				1500	\$114.00	\$ 171,000.00
0037	Pump Station Electrical System	LS	1	\$488,000.00	\$ 488,000.00				1	\$488,000.00	\$ 488,000.00
0038	Pump Station Communications System	LS	1	\$1,600.00	\$ 1,600.00				1	\$1,600.00	\$ 1,600.00
0039	Gatewell Electrical System	LS	1	\$12,000.00	\$ 12,000.00				1	\$12,000.00	\$ 12,000.00
0040	Pump Station HVAC Mechanical System	LS	1	\$30,303.00	\$ 30,303.00				1	\$30,303.00	\$ 30,303.00
0041	Topsoil Stripping	SY	5,950	\$1.90	\$ 11,305.00				5950	\$1.90	\$ 11,305.00
0042	Sign - Remove & Reinstall	EA	8	\$100.00	\$ 800.00				8	\$100.00	\$ 800.00
0043	Mailbox - Remove & Reinstall	EA	5	\$315.00	\$ 1,575.00				5	\$315.00	\$ 1,575.00
0044	Temporary Mailbox	LS	1	\$1,575.00	\$ 1,575.00				1	\$1,575.00	\$ 1,575.00
0045	Curb & Gutter - Remove	LF	3,550	\$0.95	\$ 3,372.50				3550	\$0.95	\$ 3,372.50
0046	Asphalt - Remove	SY	4,800	\$4.50	\$ 21,600.00				4800	\$4.50	\$ 21,600.00
0047	Concrete Driveway - Remove	SY	205	\$6.00	\$ 1,230.00				205	\$6.00	\$ 1,230.00
0048	Asphalt Driveway - Remove	SY	45	\$8.80	\$ 396.00				45	\$8.80	\$ 396.00
0049	Sanitary Sewer - Remove	LF	1,380	\$12.00	\$ 16,560.00				1380	\$12.00	\$ 16,560.00

WP-43CD - Oxbow-Hickson-Bakke Ring Levee-Phases C and D											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT
0050	Sanitary Sewer Manhole - Remove	EA	2	\$515.50	\$ 1,031.00				2	\$515.50	\$ 1,031.00
0051	Sanitary Sewer - 8" PVC SDR 35	LF	2,175	\$58.50	\$ 127,237.50				2175	\$58.50	\$ 127,237.50
0052	Sanitary Sewer Main - Televised	LF	2,175	\$1.50	\$ 3,262.50				2175	\$1.50	\$ 3,262.50
0053	Steel Casing - 10"	LF	32	\$123.00	\$ 3,936.00				32	\$123.00	\$ 3,936.00
0054	Sanitary Sewer Service Connection	EA	7	\$2,770.00	\$ 19,390.00				7	\$2,770.00	\$ 19,390.00
0055	Sanitary Sewer – Connect to Existing	EA	2	\$1,905.00	\$ 3,810.00				2	\$1,905.00	\$ 3,810.00
0056	Sanitary Sewer Manhole	EA	12	\$6,602.00	\$ 79,224.00				12	\$6,602.00	\$ 79,224.00
0057	Water Main – Remove	LF	460	\$8.90	\$ 4,094.00				460	\$8.90	\$ 4,094.00
0058	Water Main – Connect to Existing	EA	1	\$2,730.00	\$ 2,730.00				1	\$2,730.00	\$ 2,730.00
0059	Water Main – 6"	LF	10	\$103.00	\$ 1,030.00				10	\$103.00	\$ 1,030.00
0060	Hydrant – Remove & Replace	EA	1	\$6,561.00	\$ 6,561.00				1	\$6,561.00	\$ 6,561.00
0061	Gate Valve & Box – 6"	EA	1	\$1,698.00	\$ 1,698.00				1	\$1,698.00	\$ 1,698.00
0062	Temporary Bypass Pumping	LS	1	\$3,781.00	\$ 3,781.00				1	\$3,781.00	\$ 3,781.00
0063	Subgrade Preparation	SY	4,970	\$6.80	\$ 33,796.00				4970	\$6.80	\$ 33,796.00
0064	Reinforcement Fabric	SY	4,970	\$1.30	\$ 6,461.00				4970	\$1.30	\$ 6,461.00
0065	Aggregate Base Course - 7"	SY	4,970	\$3.00	\$ 14,910.00				4970	\$3.00	\$ 14,910.00
0066	Perforated PVC Drain Tile - 4"	LF	2,980	\$5.30	\$ 15,794.00				2980	\$5.30	\$ 15,794.00
0067	Sump Pump - Connect to Drain Tile	EA	6	\$365.50	\$ 2,193.00				6	\$365.50	\$ 2,193.00
0068	Curb & Gutter - 24" Highback	LF	2,820	\$16.50	\$ 46,530.00				2820	\$16.50	\$ 46,530.00
0069	Curb & Gutter - 24" Mountable	LF	160	\$24.50	\$ 3,920.00				160	\$24.50	\$ 3,920.00
0070	Asphalt Base Course - 5"	SY	3,920	\$19.75	\$ 77,420.00				3920	\$19.75	\$ 77,420.00
0071	Asphalt Wear Course - 2"	SY	3,920	\$8.50	\$ 33,320.00				3920	\$8.50	\$ 33,320.00
0072	Concrete Driveway - 6"	SY	250	\$64.75	\$ 16,187.50				250	\$64.75	\$ 16,187.50
0073	Topsoil Replacement	SY	7,310	\$2.30	\$ 16,813.00				7310	\$2.30	\$ 16,813.00
0074	Turf Establishment - Zone 2	AC	1.5	\$3,026.00	\$ 4,539.00				2	\$3,026.00	\$ 4,539.00
0075	Temporary Access	LS	1	\$12,106.00	\$ 12,106.00				1	\$12,106.00	\$ 12,106.00

WP-43CD - Oxbow-Hickson-Bakke Ring Levee-Phases C and D

ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT
0076	Portable Traffic Signals	EA	2	\$6,000.00	\$ 12,000.00				2	\$6,000.00	\$ 12,000.00
0077	Storm Sewer 15-inch RCP	LF	211	\$49.25	\$ 10,391.75				211	\$49.25	\$ 10,391.75
0078	Storm Sewer 18-inch RCP	LF	13	\$65.75	\$ 854.75				13	\$65.75	\$ 854.75
0079	Storm Sewer 24-inch RCP	LF	209	\$86.50	\$ 18,078.50				209	\$86.50	\$ 18,078.50
0080	Storm Sewer 27-inch RCP	LF	617	\$103.50	\$ 63,859.50				617	\$103.50	\$ 63,859.50
0081	Storm Sewer 30-inch RCP	LF	291	\$113.50	\$ 33,028.50				291	\$113.50	\$ 33,028.50
0082	Storm Sewer 36-inch RCP	LF	454	\$155.50	\$ 70,597.00				454	\$155.50	\$ 70,597.00
0083	Storm Sewer 42-inch RCP	LF	34	\$210.50	\$ 7,157.00				34	\$210.50	\$ 7,157.00
0084	Storm Sewer 54-inch RCP	LF	935	\$307.00	\$ 287,045.00				935	\$307.00	\$ 287,045.00
0085	Storm Sewer 66-inch RCP	LF	352	\$417.50	\$ 146,960.00				352	\$417.50	\$ 146,960.00
0086	Storm Sewer 72-inch RCP	LF	97	\$482.50	\$ 46,802.50				97	\$482.50	\$ 46,802.50
0087	Flared End Section – 72" RCP	EA	1	\$3,726.00	\$ 3,726.00				1	\$3,726.00	\$ 3,726.00
0088	Trash Rack – 72"	EA	1	\$3,952.00	\$ 3,952.00				1	\$3,952.00	\$ 3,952.00
0089	Storm Sewer Control Structure – 60-inch Precast	EA	1	\$21,712.00	\$ 21,712.00				1	\$21,712.00	\$ 21,712.00
0090	Storm Sewer Manhole – 60-inch Precast	EA	6	\$7,364.00	\$ 44,184.00				6	\$7,364.00	\$ 44,184.00
0091	Storm Sewer Manhole – 72-inch Precast	EA	3	\$9,922.00	\$ 29,766.00				3	\$9,922.00	\$ 29,766.00
0092	Storm Sewer Manhole – 96-inch Precast	EA	1	\$15,564.00	\$ 15,564.00				1	\$15,564.00	\$ 15,564.00
0093	Junction Storm Sewer Manhole – 144-inch Precast	EA	2	\$31,801.00	\$ 63,602.00				2	\$31,801.00	\$ 63,602.00
0094	Storm Sewer Curb Inlets – 2' x 3'	EA	8	\$3,084.00	\$ 24,672.00				8	\$3,084.00	\$ 24,672.00
0095	Storm Sewer - Remove	LF	2,280	\$18.50	\$ 42,180.00				2280	\$18.50	\$ 42,180.00
0096	Storm Sewer Manhole - Remove	EA	2	\$564.00	\$ 1,128.00				2	\$564.00	\$ 1,128.00
0097	Storm Sewer Catch Basin - Remove	EA	8	\$564.00	\$ 4,512.00				8	\$564.00	\$ 4,512.00
0098	Storm Sewer – Connect to Existing	EA	1	\$1,808.00	\$ 1,808.00				1	\$1,808.00	\$ 1,808.00
0099	Removal Of Pavement	TON	11,410	\$6.80	\$ 77,588.00				11410	\$6.80	\$ 77,588.00
0100	Removal Of Culverts-All Types & Sizes	LF	136	\$13.75	\$ 1,870.00				136	\$13.75	\$ 1,870.00
0101	Common Excavation-Type A	CY	8,411	\$3.20	\$ 26,915.20				8411	\$3.20	\$ 26,915.20

WP-43CD - Oxbow-Hickson-Bakke Ring Levee-Phases C and D

ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT
0102	Topsoil	CY	6,812	\$5.80	\$ 39,509.60				6812	\$5.80	\$ 39,509.60
0103	Borrow-Excavation	CY	59,746	\$3.90	\$ 233,009.40				59746	\$3.90	\$ 233,009.40
0104	Water	M GAL	883	\$15.00	\$ 13,245.00				883	\$15.00	\$ 13,245.00
0105	Subgrade Preparation- Type A	STA	4	\$882.00	\$ 3,528.00				4	\$882.00	\$ 3,528.00
0106	Seeding Class II	ACRE	10	\$472.00	\$ 4,918.24				10	\$472.00	\$ 4,918.24
0107	Temporary Cover Crop	ACRE	10	\$127.00	\$ 1,323.34				10	\$127.00	\$ 1,323.34
0108	Straw Mulch	ACRE	21	\$304.50	\$ 6,345.78				21	\$304.50	\$ 6,345.78
0109	Fiber Rolls 12in	LF	1,160	\$2.30	\$ 2,668.00				1160	\$2.30	\$ 2,668.00
0110	Remove Fiber Rolls 12in	LF	385	\$0.35	\$ 134.75				385	\$0.35	\$ 134.75
0111	Salvaged Base Course	TON	9,439	\$18.50	\$ 174,621.50				9439	\$18.50	\$ 174,621.50
0112	Tack Coat	GAL	1,366	\$4.90	\$ 6,693.40				1366	\$4.90	\$ 6,693.40
0113	Superpave FAA 42	TON	5,028	\$41.00	\$ 206,148.00				5028	\$41.00	\$ 206,148.00
0114	Cored Sample	EA	21	\$85.00	\$ 1,785.00				21	\$85.00	\$ 1,785.00
0115	Pg. 58-28 Asphalt Cement	TON	302	\$450.00	\$ 135,900.00				302	\$450.00	\$ 135,900.00
0116	Traffic Control Signs	UNIT	3,923	\$2.00	\$ 7,846.00				3923	\$2.00	\$ 7,846.00
0117	Type III Barricade	EA	23	\$115.00	\$ 2,645.00				23	\$115.00	\$ 2,645.00
0118	Delineator Drums	EA	25	\$10.00	\$ 250.00				25	\$10.00	\$ 250.00
0119	Tubular Markers	EA	81	\$3.00	\$ 243.00				81	\$3.00	\$ 243.00
0120	Traffic Control	L SUM	1	\$3,496.00	\$ 3,496.00				1	\$3,496.00	\$ 3,496.00
0121	Portable Changeable Message Sign	EA	2	\$3,000.00	\$ 6,000.00				2	\$3,000.00	\$ 6,000.00
0122	Geosynthetic Material Type R1	SY	16,100	\$1.40	\$ 22,540.00				16100	\$1.40	\$ 22,540.00
0123	Pipe Conc Reinf 241n CL III	LF	110	\$88.75	\$ 9,762.50				110	\$88.75	\$ 9,762.50
0124	End Sect-Conc Reinf 24in	EA	2	\$1,017.00	\$ 2,034.00				2	\$1,017.00	\$ 2,034.00
0125	Pipe Corr Steel .0641n 24in	LF	102	\$73.00	\$ 7,446.00				102	\$73.00	\$ 7,446.00
0126	End Sect Corr Steel .0641n 24in	EA	4	\$372.00	\$ 1,488.00				4	\$372.00	\$ 1,488.00
0127	Flat Sheet For Signs-Type XI Refl Sheeting	SF	6	\$22.00	\$ 138.60				6	\$22.00	\$ 138.60

WP-43CD - Oxbow-Hickson-Bakke Ring Levee-Phases C and D

ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT
0128	Steel Galv Posts-Telescoping Perforated Tube	LF	17	\$16.00	\$ 270.40				17	\$16.00	\$ 270.40
0129	Pvmt Mk Painted 4in Line	LF	11,012	\$0.35	\$ 3,854.20				11012	\$0.35	\$ 3,854.20
0130	Pvmt Mk Painted 8in Line	LF	260	\$0.35	\$ 91.00				260	\$0.35	\$ 91.00
0131	Dust Palliative Material	GAL	5,452	\$3.30	\$ 17,991.60				5452	\$3.30	\$ 17,991.60
0132	Force Main - 6" PVC	LF	2,700	\$20.00	\$ 54,000.00				2700	\$20.00	\$ 54,000.00
0133	Force Main - 8" PVC	LF	2,700	\$24.25	\$ 65,475.00				2700	\$24.25	\$ 65,475.00
0134	Sanitary Manhole - Type "E"	EA	2	\$21,368.00	\$ 42,736.00				2	\$21,368.00	\$ 42,736.00
0135	Remove SS Force Main	EA	2	\$1,804.00	\$ 3,608.00				2	\$1,804.00	\$ 3,608.00
0136	Force Main - Connect to Existing	EA	4	\$2,154.00	\$ 8,616.00				4	\$2,154.00	\$ 8,616.00
0137	Plug Valve - 6"	EA	2	\$1,659.00	\$ 3,318.00				2	\$1,659.00	\$ 3,318.00
0138	Plug Valve - 8"	EA	2	\$2,011.00	\$ 4,022.00				2	\$2,011.00	\$ 4,022.00
0139	Sanitary Sewer Force Main Fittings	LBS	326	\$40.00	\$ 13,040.00				326	\$40.00	\$ 13,040.00
0140	15" RCP ST	LF	40	\$121.00	\$ 4,840.00				40	\$121.00	\$ 4,840.00
0141	Gravel - Class 5	CY	25	\$81.25	\$ 2,031.25				25	\$81.25	\$ 2,031.25
0142	4" Insulation	SY	45	\$87.25	\$ 3,926.25				45	\$87.25	\$ 3,926.25
0143	18" Steel Casing Pipe w/ CLSM	LF	460	\$229.50	\$ 105,570.00				460	\$229.50	\$ 105,570.00
0144	Cathodic Protection System	LS	1	\$40,036.00	\$ 40,036.00				1	\$40,036.00	\$ 40,036.00
0145	Topsoil Stripping	SY	19000	\$0.40	\$ 7,600.00				19000	\$0.40	\$ 7,600.00
0146	Topsoil Spread	SY	19000	\$0.95	\$ 18,050.00				19000	\$0.95	\$ 18,050.00
0147	Turf Establishment - Zone 3	AC	3.9	\$1,254.00	\$ 4,890.60				4	\$1,254.00	\$ 4,890.60
0148	Chang Order #1	EA	1.0	\$7,383.47	\$ 7,383.47				1	\$7,383.47	\$ 7,383.47
0149	CO-2: Removing utilities outside of scope	LS				1	\$ 31,932.01	\$ 31,932.01	1	\$ 31,932.01	\$ 31,932.01
0150	CO-2: Additional borrow pit stripping	LS				1	\$ 38,606.86	\$ 38,606.86	1	\$ 38,606.86	\$ 38,606.86
0151	CO-2: Subcut in levee footprint	CY				9990	\$ 4.00	\$ 39,960.00	9990	\$ 4.00	\$ 39,960.00
0152	CO-2: Repair unmarked water pipe	LS				1	\$ 3,534.25	\$ 3,534.25	1	\$ 3,534.25	\$ 3,534.25
0153	CO-2: Golf course pond dirt	CY				3725	\$ 4.00	\$ 14,900.00	3725	\$ 4.00	\$ 14,900.00

WP-43CD - Oxbow-Hickson-Bakke Ring Levee-Phases C and D											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT	QUANTITY	UNIT PRICE	AMOUNT
0154	CO-2: Pothole & protect unmarked Oxbow utilities	LS				1	\$ 1,927.60	\$ 1,927.60	1	\$ 1,927.60	\$ 1,927.60
0155	CO-2: Additional traffic control	LS				1	\$ 3,885.00	\$ 3,885.00	1	\$ 3,885.00	\$ 3,885.00
0156	CO-2: Adjust STMH-1 to match ex. 18" RCP	LS				1	\$ 4,706.46	\$ 4,706.46	1	\$ 4,706.46	\$ 4,706.46
0157	CO-2: Oxbow watermain realignment	LS				1	\$ 17,027.45	\$ 17,027.45	1	\$ 17,027.45	\$ 17,027.45
0158	CO-2: Redirect 3IN WM to 6IN WM	LS				1	\$ 5,644.72	\$ 5,644.72	1	\$ 5,644.72	\$ 5,644.72
0159	CO-2: Move unsuitable material to golf course	CY				14875	\$ 4.75	\$ 70,656.25	14875	\$ 4.75	\$ 70,656.25
0160	CO-2: Additional ARVs	LS				1	\$ 7,189.16	\$ 7,189.16	1	\$ 7,189.16	\$ 7,189.16
0161	CO-2: Temporary access road south of Riverbend Road	LS				1	\$ 37,000.00	\$ 37,000.00	1	\$ 37,000.00	\$ 37,000.00
0162	CO-2: Cass Rural Water Casing Pipe Install	LS				1	\$ 242,908.80	\$ 242,908.80	1	\$ 242,908.80	\$ 242,908.80
0163	CO-2: NCN No. 3 Owner testing cost set-off	LS				1	\$ (11,671.00)	\$ (11,671.00)	1	\$ (11,671.00)	\$ (11,671.00)
WP-43CD - TOTAL AMOUNT			CURRENT BUDGET		\$ 10,406,859.68	NET CHANGE		\$ 508,207.56	NEW BUDGET		\$ 10,915,067.24

Memorandum

OHB 43CD Change Order No. 2 Recommendation

To: John Glatzmaier, PE; CH2M Project Manager
From: Christopher M. Gross, PE; HMG Project Manager
Date: November 29, 2017
Project: OHB Work Package 43CD

1. Description

OHB Work Package 43CD is the phase of construction on the Oxbow-Hickson-Bakke Ring Levee mitigation project of the overall FM Diversion Project. WP-43CD included 5,550 LF of earthen levee, Pump Station and Gatewell Structure with Outfall, 5,400 LF of Storm Sewer, 2,300 LF of Gravity Sanitary Sewer, 5,400 LF of Sanitary Forcemain, 3,475 LF of City Street, 3,165 LF of Cass County Highway 81 Road Raise, and other components in Cass County, North Dakota. A construction contract in the amount of \$10,399,476.21 was awarded to Meyer Contracting, Inc. on July 14, 2017. Construction on WP-43CD began on August 9, 2017 and will continue until the summer of 2018. To date, approximately 60% of the overall project is completed.

2. Change Order Requests from Meyer Contracting

Meyer COR Code	WCD Appr.	Description	Qty	Unit	Unit Price	Total
9000003	1	Removing utilities outside of scope	1	LS	\$31,932.01	\$31,932.01
9000004		Additional borrow pit stripping	1	LS	\$38,606.86	\$38,606.86
9000005	1	Subcut in levee footprint	9,990	CY	\$4.00	\$39,960.00
9000007		Repair unmarked water pipe	1	LS	\$3,534.25	\$3,534.25
9000010	1	Golf course pond dirt	3,725	CY	\$4.00	\$14,900.00
9000011		Pothole & protect unmarked Oxbow utilities	1	LS	\$1,927.60	\$1,927.60
9000014	1	Additional traffic control	1	LS	\$3,885.00	\$3,885.00
9000015		Adjust STMH-1 to match ex. 18" RCP	1	LS	\$4,706.46	\$4,706.46
9000016		Oxbow watermain realignment	1	LS	\$17,027.45	\$17,027.45
9000018		Redirect 3IN WM to 6IN WM	1	LS	\$5,644.72	\$5,644.72
9000021	2	Move unsuitable material to golf course	14,875	CY	\$4.75	\$70,656.25
9000026		Additional ARVs	1	LS	\$7,189.16	\$7,189.16
9000027		Temporary access road south of Riverbend Road	1	LS	\$37,000.00	\$37,000.00
					TOTAL	\$ 276,969.76

The change order requests listed above have been reviewed by the HMG design team and are being recommended for approval. Some of the work items have been authorized by prior Contract Documents (ie. work change directives) while the remaining items have not been authorized but were completed by Meyer and are being requested for Owner approval. A short summary of each item is below. The complete supporting documentation provided by Meyer Contracting is also attached to this Memo.

COR 9000003 - Removing utilities outside of scope – this work included removing utilities under the 43C levee footprint that were not removed by the demolition contractors. This work was included in Work Change Directive No. 1 approved on September 20, 2017 by the Diversion Authority. This work was done on a T & M basis with HMG concurring with the T & M submitted by Meyer Contracting.

COR 9000004 - Additional borrow pit stripping – this work included removing material from the borrow pit area that was not suitable for levee or roadway embankment. This work was done on a T & M basis with HMG concurring with the T & M submitted by Meyer Contracting.

COR 9000005 - Subcut in levee footprint – this work included removing material from the 43C levee footprint area that was not suitable for levee embankment. This work was included in Work Change Directive No. 1 approved on September 20, 2017 by the Diversion Authority. This work was done on a negotiated unit price basis with HMG surveying the area of unsuitable material prior to and after removal of the material to determine the actual volume removed.

COR 9000007 - Repair unmarked water pipe – this work included repairing unmarked Cass Rural Water lines that were located in the wrong location. This work was done on a T & M basis with HMG concurring with the T & M submitted by Meyer Contracting.

COR 9000010 - Golf course pond dirt – this work included excavating a portion of the golf course pond in lieu of Landscapes Unlimited to allow Meyer Contracting to use Oxbow Drive as a haul road. This work was included in Work Change Directive No. 1 approved on September 20, 2017 by the Diversion Authority. This work was done on a negotiated unit price basis with HMG surveying the area of unsuitable material prior to and after excavation of the material to determine the actual volume excavated.

COR 9000011 - Pothole & protect unmarked Oxbow utilities – this work included additional potholing work that was required for utilities not located by the City of Oxbow utility company. This work was done on a T & M basis with HMG concurring with the T & M submitted by Meyer Contracting.

COR 9000014 – Additional traffic control – this work included installing additional traffic control measures along Cass County Highway 81 and Interstate 29 along the detour route that were not included in the initial traffic control plan. This was coordinated with the Cass County Highway Department and the ND Department of Transportation. This work was included in Work Change Directive No. 1 approved on September 20, 2017 by the Diversion Authority. This work was done on a negotiated unit price basis. HMG concurs with the costs submitted by Meyer Contracting.

COR 9000015 - Adjust STMH-1 to match ex. 18" RCP – this work included modification to STMH-1 to match the existing invert of the 18" RCP pipe from Sunset Drive. Work included adding manhole cinder blocks to raise the manhole elevation as well as filling in the opening of the manhole on the lower section. This work was done on a T & M basis with HMG concurring with the T & M submitted by Meyer Contracting.

COR 9000016 - Oxbow watermain realignment – this work included the removal and relocation of 200 LF of existing City of Oxbow watermain along Oxbow Drive that was in a different location than what was shown on the record drawings used during design of the project. This work was done on a T & M basis with HMG concurring with the T & M submitted by Meyer Contracting.

COR 9000018 - Redirect 3IN WM to 6IN WM – this work included redirecting a portion of Cass Rural Water's 3 inch water transmission line in order to accommodate construction in order to minimize any delay in levee and roadway completion prior to winter weather. This work was done on a T & M basis with HMG concurring with the T & M submitted by Meyer Contracting.

COR 9000021 - Move unsuitable material to golf course – this work included excavating, hauling, and placing unsuitable material from the north borrow pit into the spoil area of the Oxbow Country Club. The leveling and the shaping/grading of this material was completed by the Oxbow County Club. This work was included in Work Change Directive No. 2 approved on October 19, 2017 by the Diversion Authority. This work was done on a negotiated unit price basis with HMG surveying the area of unsuitable material prior to excavation of the material to determine the actual volume excavated, hauled, and placed.

COR 9000026 - Additional ARVs – this work included the addition of 2 air relief valves at the request of the City of Fargo, owner of sanitary forcemain. The 2 valves were installed in a manhole already included in the project design. This work was done on a T & M basis with HMG concurring with the T & M submitted by Meyer Contracting.

COR 9000027 - Temporary access road south of Riverbend Road – this work included the installation of a temporary access road on the south end of the 43C levee to accommodate the removal of Riverbend Road to allow construction of the last portion of the 43C levee but to also maintain the demolition contractor's access to their work areas. This work was done on a Lump Sum basis with HMG concurring with the Lump Sum submitted by Meyer Contracting.

The total change order amount being requested is \$276,969.76. This amounts to 2.66% of the original contract amount which HMG believes is within the reasonable range of change order amounts for this size of project.

The updated completion dates of the affected Milestones are as follows:

- Milestone 5 – increased to October 16, 2017
- Milestone 6 (Oxbow Drive) – increased to October 19, 2017
- Milestone 6 (Highway 81) – increased to October 22, 2017
- Milestone 8 – increased to January 1, 2018

3. Utility Work Completed by Meyer Contracting

Meyer COR Code	Description	Qty	Unit	Unit Price	Total
	Cass Rural Water Casing Pipe Install	1	LS	\$242,908.08	\$242,908.08

As part of Work Change Directive No. 1 approved on September 20, 2017 by the Diversion Authority, Meyer Contracting was directed to furnish and install a portion of the Cass Rural Water utility relocation work, specifically, the portion of work under the levee footprint. By allowing Meyer Contracting to complete this work, Meyer Contracting was able to determine and control the overall construction schedule in this area since Cass Rural Water had a 1-2 month lead time. This work included furnishing and installing 300 LF of 16” steel casing pipe, 400 LF of 8” fusible PVC carrier pipe, cathodic protection, welding, and other associated work.

The total change order amount being requested is \$242,908.08. This amount is being reported separately and not as a percentage of the original contract amount since this work is part of the utility relocation costs. However, as explained above, in order to maintain a tight construction schedule; it was in the best interest of the project to have Meyer Contracting complete the work.



October 20, 2017

Mr. Christopher M Gross, Project Manager
Moore Engineering, Inc.
925 10th Ave E
West Fargo, ND 58078

Subject: Oxbow – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Change Order Request – Removing Utilities Outside of Scope

Dear Mr. Gross,

We have been required to remove utilities in the levee footprint that were not in the scope of our contract. This extra work was performed as directed to prepare the footprint of the levee to enable us to perform our contract work.

Please understand that delays in giving us access to the site such as this one have and will continue to cause a substantial negative impact on our schedule and our costs. We have invested substantial equipment and manpower in this project; we estimate our daily cost to be approximately \$75,000 per day. Anything that can be done to mitigate additional delays is appreciated and is necessary to reduce and eliminate any additional costs related to standby and decreased productivity.

Based on the aforementioned information and calculation of cost impact we hereby request additional compensation in the amount of \$31,932.01. Additionally, we believe this had a schedule impact of four calendar days and we request that the contract time be adjusted as such.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a light blue horizontal line.

Jeremy Gibbs
Meyer Contracting, Inc.

Work Change Directive Summary of Costs

Meyer Project Number: 171297
Owner Contract Number: WP-43CD
Owner Contract Name: Oxbow-Hickson-Bakke Ring Levee - Phases C & D
Change Order Request Number: 9000003
Change Order Request Name/Desc.: Removing Utilities Outside of Scope

LABOR ONLY

TOTAL: \$1,969.50

SUBSTANCE

	Unit	Quantity	Unit Cost		TOTAL:	\$1,656.51
(Use \$75 for MN & \$120 for ND)	10.83-HR Day/Person	13.80	\$120.00			

EQUIPMENT w/OPERATOR

TOTAL: \$28,306.00

MATERIALS & RENTAL EQUIPMENT

Description	Unit	Quantity	Unit Cost	Tax (%)	Total Cost
					\$0.00
					\$0.00
					\$0.00
					\$0.00
					\$0.00
Management & Overhead (10%)					\$0.00
TOTAL:					\$0.00

SUBCONTRACTORS

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

MOBILIZATION

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

TOTAL: \$31,932.01

Removing Utilities Outside of Scope		Date		Date		Date		Date		Date		Date		Date		Date	
		8/22/2017		8/23/2017		8/26/2017		8/28/2017		8/30/2017		8/31/2017		9/1/2017		9/5/2017	
Pc360Lc-10 Komatsu Excavator W/Ripper Tooth	\$247.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Ec460Cl Or Ec480Cl Volvo Excavator	\$266.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	3.50	\$931.00
Ec460Cl Or Ec480Cl Volvo Excavator W/Compaction Wheel	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator	\$266.00		\$0.00		\$0.00		\$0.00		\$0.00	11.50	\$3,059.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Concrete Pulverizer	\$303.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Ripper Tooth	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Compaction Wheel	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
349El Caterpillar Excavator - Variable Gauge	\$276.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc800Lc-8 Komatsu Excavator	\$401.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Dozers																	
D5Klgp Caterpillar Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D5Klgp Caterpillar Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
700Jlgp John Deere Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
700Jlgp John Deere Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D51 Komatsu Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D51 Komatsu Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
850K John Deere Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
850C John Deere Dozer	\$195.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D61Px Komatsu Dozer	\$190.00		\$0.00		\$0.00		\$0.00		\$0.00	7.50	\$1,425.00		\$0.00		\$0.00		\$0.00
D65 Komatsu Dozer	\$195.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D65 Komatsu Dozer W/Gps System	\$213.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Tlxw Or D6Tlgp Caterpillar Dozer	\$195.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Tlxw Or D6Tlgp Caterpillar Dozer W/Gps System	\$213.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Nlgp Caterpillar Dozer	\$190.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Nlgp Caterpillar Dozer W/Gps System	\$208.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Loaders																	
L70F Volvo Wheel Loader	\$162.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
950G, H Or K Caterpillar Wheel Loader	\$181.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
L120E Volvo Wheel Loader	\$181.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
L110E Or F Volvo Wheel Loader	\$181.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
953C Caterpillar Track Loader	\$167.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Scrapers																	
621B Caterpillar Scraper	\$213.00		\$0.00		\$0.00		\$0.00		\$0.00	21.00	\$4,473.00		\$0.00		\$0.00		\$0.00
621B Caterpillar Scraper W/Gps	\$231.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
627M Caterpillar Scraper (Rental)	\$386.00		\$0.00		\$0.00		\$0.00	9.00	\$3,474.00		\$0.00		\$0.00		\$0.00		\$0.00
Motor Graders																	
140H, 143H Or 140M Caterpillar Motor Grader	\$182.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
140H, 143H Or 140M Caterpillar Motor Grader W/Gps	\$200.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Compactors																	
54" Smooth Drum Or Sheepsfoot Compactor	\$142.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
66" Smooth Drum Or Sheepsfoot Compactor	\$145.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
84" Smooth Drum Or Sheepsfoot Compactor	\$160.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	5.50	\$880.00		\$0.00
Rt-820 Wacker Vibratory Walk Behind Compactor	\$36.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Wacker Plate Compactor	\$17.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Offroad Trucks																	
A30 Volvo Articulated Truck	\$226.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	1.50	\$339.00		\$0.00
Hm400 Komatsu Articulated Truck	\$252.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
A40F Volvo Articulated Truck	\$252.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
A30 Volvo Articulated Water Tanker Truck	\$225.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pumps																	
8" Mwi Dewatering Pump	\$45.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
4" Hydra-Tech Hydraulic Pump	\$45.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Farm Equipment																	



October 24, 2017

Christopher M Gross, PE, CFM
moore engineering, inc.
925 10th Avenue East
West Fargo, ND 58078

Subject: Oxbow – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Additional Borrow Pit Stripping

Dear Mr. Gross,

Meyer was directed to remove unsuitable material from the North Pond. Please see the attached time & materials cost summarization for the initial stockpiling of the additional borrow pit stripping.

We hereby request additional compensation in the amount of \$38,606.86. Additionally, we believe this had a schedule impact of five calendar days and we request that the contract time be adjusted as such.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a light blue horizontal line.

Jeremy Gibbs
Meyer Contracting, Inc.

Work Change Directive Summary of Costs

Meyer Project Number: 171297
Owner Contract Number: WP-43CD
Owner Contract Name: Oxbow-Hickson-Bakke Ring Levee - Phases C & D
Change Order Request Number: 9000004
Change Order Request Name/Desc.: Additional Borrow Pit Stripping

LABOR ONLY

TOTAL: \$1,060.50

SUBSTANCE

	Unit	Quantity	Unit Cost		
(Use \$75 for MN & \$120 for ND)	10.83-HR Day/Person	15.93	\$120.00	TOTAL:	\$1,911.36

EQUIPMENT w/OPERATOR

TOTAL: \$35,635.00

MATERIALS & RENTAL EQUIPMENT

Description	Unit	Quantity	Unit Cost	Tax (%)	Total Cost
					\$0.00
					\$0.00
					\$0.00
					\$0.00
					\$0.00
Management & Overhead (10%)					\$0.00
TOTAL:					\$0.00

SUBCONTRACTORS

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

MOBILIZATION

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

TOTAL: \$38,606.86

Additional Borrow Pit Stripping		Date		Date		Date		Date		Date		Date		Date		Date	
		8/30/2017		8/31/2017		9/1/2017		9/2/2017		9/5/2017		9/6/2017					
Pc360Lc-10 Komatsu Excavator W/Ripper Tooth	\$247.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Ec460Cl Or Ec480Cl Volvo Excavator	\$266.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Ec460Cl Or Ec480Cl Volvo Excavator W/Compaction Wheel	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator	\$266.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Concrete Pulverizer	\$303.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Ripper Tooth	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Compaction Wheel	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
349El Caterpillar Excavator - Variable Gauge	\$276.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc800Lc-8 Komatsu Excavator	\$401.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Dozers																	
D5Klgp Caterpillar Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D5Klgp Caterpillar Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
700Jlgp John Deere Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
700Jlgp John Deere Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D51 Komatsu Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D51 Komatsu Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
850K John Deere Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
850C John Deere Dozer	\$195.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D61Px Komatsu Dozer	\$190.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D65 Komatsu Dozer	\$195.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D65 Komatsu Dozer W/Gps System	\$213.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Twx Or D6Tlgp Caterpillar Dozer	\$195.00		\$0.00	4.00	\$780.00	5.00	\$975.00		\$0.00	11.50	\$2,242.50		\$0.00		\$0.00		\$0.00
D6Twx Or D6Tlgp Caterpillar Dozer W/Gps System	\$213.00		\$0.00		\$0.00		\$0.00	8.00	\$1,704.00	7.50	\$1,597.50	5.50	\$1,171.50		\$0.00		\$0.00
D6Nlgp Caterpillar Dozer	\$190.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Nlgp Caterpillar Dozer W/Gps System	\$208.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Loaders																	
L70F Volvo Wheel Loader	\$162.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
950G, H Or K Caterpillar Wheel Loader	\$181.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
L120E Volvo Wheel Loader	\$181.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
L110E Or F Volvo Wheel Loader	\$181.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
953C Caterpillar Track Loader	\$167.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Scrapers																	
621B Caterpillar Scraper	\$213.00	6.50	\$1,384.50	21.00	\$4,473.00	12.00	\$2,556.00	16.00	\$3,408.00	35.00	\$7,455.00	20.00	\$4,260.00		\$0.00		\$0.00
621B Caterpillar Scraper W/Gps	\$231.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
627M Caterpillar Scraper (Rental)	\$386.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00	9.00	\$3,474.00		\$0.00		\$0.00
Motor Graders																	
140H, 143H Or 140M Caterpillar Motor Grader	\$182.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
140H, 143H Or 140M Caterpillar Motor Grader W/Gps	\$200.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Compactors																	
54" Smooth Drum Or Sheepsfoot Compactor	\$142.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
66" Smooth Drum Or Sheepsfoot Compactor	\$145.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
84" Smooth Drum Or Sheepsfoot Compactor	\$160.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Rt-820 Wacker Vibratory Walk Behind Compactor	\$36.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Wacker Plate Compactor	\$17.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Offroad Trucks																	
A30 Volvo Articulated Truck	\$226.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Hm400 Komatsu Articulated Truck	\$252.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
A40F Volvo Articulated Truck	\$252.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
A30 Volvo Articulated Water Tanker Truck	\$225.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pumps																	
8" Mwi Dewatering Pump	\$45.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
4" Hydra-Tech Hydraulic Pump	\$45.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Farm Equipment																	

WORK CHANGE DIRECTIVE

01

TO: Meyer Contracting PROJECT NO.: WP-43CD
PROJECT: OHB Ring Levee – Phases C and D (Levee, Pump Station, Road and Utility Improvements)
OWNER: Metro Flood Diversion Authority
ENGINEER: Houston-Moore Group
OWNER'S REPRESENTATIVE: CH2M

DESCRIPTION OF WORK:

The work includes:

1 – Removal of unsuitable soil material under the footprint of the levee due to remant electrical, communication, sanitary/storm sewer, or water service lines from demolition contracts. Excavated material will be placed in Zone B backfill areas of the 43E.2.E demolition contract. Work will be done on a T & M basis with an estimated time frame of 3-4 days with 2 scrapers and other misc. equipment. 2017 equipment rates are attached to this WCD.

2 – Removal of unsuitable soil material under the footprint of the levee such as sand lenses, excessive organic material, etc. as determined by the geotechnical engineer during inspection trench construction. Unsuitable material will be placed in the spoil area of the golf course rough grade. Estimated quantity to be removed is 3,000 CY at a rate of \$4.00/CY.

3 – Additional traffic control measures not included in the original Contract Bid Documents. This included coverings of "Oxbow" wording on Exit 54 signs, adding post mounted signs along Main Avenue, adding skid mounts to existing signs along Main Avenue, add "slow down" signs just north of Bakke Subdivision as agreed to by Cass County Highway Engineers and Pleasant Township. Estimated cost of additional traffic control measures is \$3,885.00.

4 – OCC golf course excavation near Oxbow Drive and levee crossing. Excavated material will be placed in the spoil area of the golf course rough grade for LU to fine grade. Estimated quantity to be removed is 2,000 CY at a rate of \$4.00/CY.

5 – Installation of 16" steel casing pipe and 8" fusible PVC pipe for the Cass Rural Water utility relocation under the levee near Station B125+25 on the west side of County Road 81. Work will also include installation of the cathodic protection and temporary connection to the existing 6" waterline. Estimated cost to be \$242,908.08 as indicated in the September 14, 2017 Bid Proposal received from Meyer Contracting, Inc. (see attached).

REASON FOR CHANGE(S):

1. Due to remant electrical, communication, sanitary/storm sewer, or water service lines from the demolition contracts, Meyer needed to remove these utilities prior to constructing the levee.
2. Due to unsuitable material found during construction of the inspection trench, material was removed and suitable levee embankment material was installed.
3. Additional traffic control signs and sign covers were added along Interstate 29 to better direct traffic around project area.
4. In order to better accommodate construction schedules of both Meyer Contracting and Landscapes Unlimited, Meyer Contracting will excavate the remaining portion of the golf course pond near Oxbow Drive.

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Receptive


9/20/17
D

B


9/20/17
D

Meyer Contracting Equipment Rates

January 1, 2017 - December 31, 2017

Skid loaders/Multi-terrain loaders	T&M rate (w/op)
259 multi-terrain loader	\$123.00
259 multi-terrain loader w/jackhammer	\$142.00
259 multi-terrain loader w/auger	\$142.00
259 multi-terrain loader w/sweeper	\$142.00
259 multi-terrain loader w/silt fence plow	\$142.00
259 multi-terrain loader w/soil conditioner	\$142.00
259 multi-terrain loader w/angle blade	\$142.00
259 multi-terrain loader w/cold planer	\$142.00
259 multi-terrain loader w/tiller	\$142.00
259 multi-terrain loader w/brush mower	\$142.00
259 multi-terrain loader w/smooth drum compactor	\$142.00
279 multi-terrain loader	\$137.00
279 multi-terrain loader w/listed attachments above	\$156.00
262 skid loader	\$133.00
262 skid loader w/listed attachments above	\$152.00
Excavators	T&M rate (w/op)
PC35MR Komatsu excavator	\$127.00
KX161 Kubota excavator	\$127.00
KX161 Kubota excavator w/jackhammer	\$148.00
PC78MR Komatsu excavator	\$139.00
308E Caterpillar excavator	\$139.00
308E Caterpillar excavator w/jackhammer	\$195.00
308E Caterpillar excavator w/hydraulic compactor	\$193.00
EX160LC Hitachi excavator	\$144.00
PC200LC or PC228LC Komatsu excavator	\$192.00
PC200LC or PC228LC Komatsu excavator w/jackhammer	\$223.00
PC200LC or PC228LC Komatsu excavator w/hydraulic compactor	\$223.00
PC200LC or PC228LC Komatsu excavator w/compaction wheel	\$213.00
PC200LC Komatsu excavator w/helical anchor drill	\$215.00
PC228LC Komatsu excavator w/ripper tooth	\$204.00
790D John Deere excavator	\$191.00
336EL Caterpillar excavator	\$221.00
336EL Caterpillar excavator w/ripper tooth	\$232.00
336EL Caterpillar excavator w/compaction wheel	\$232.00
PC360LC-10 Komatsu excavator	\$221.00
PC360LC-10 Komatsu excavator w/ripper tooth	\$232.00
EC460CL or EC480CL Volvo excavator	\$251.00
EC460CL or EC480CL Volvo excavator w/compaction wheel	\$262.00
PC400 Komatsu excavator	\$251.00
PC400 Komatsu excavator w/concrete pulverizer	\$288.00

PC400 Komatsu excavator w/ripper tooth	\$262.00
PC400 Komatsu excavator w/compaction wheel	\$262.00
349EL Caterpillar excavator - variable gauge	\$261.00
Dozers	T&M rate (w/op)
D5KLGP Caterpillar dozer	\$155.00
D5KLGP Caterpillar dozer w/GPS system	\$173.00
700JLGP John Deere dozer	\$155.00
700JLGP John Deere dozer w/GPS system	\$173.00
D51 Komatsu dozer	\$155.00
D51 Komatsu dozer w/GPS system	\$173.00
850K John Deere dozer	\$155.00
850C John Deere dozer	\$180.00
D61PX Komatsu dozer	\$175.00
D65 Komatsu dozer	\$180.00
D65 Komatsu dozer w/GPS system	\$198.00
D6TXW or D6TLGP Caterpillar dozer	\$180.00
D6TXW or D6TLGP Caterpillar dozer w/GPS system	\$198.00
D6NLGP Caterpillar dozer	\$175.00
D6NLGP Caterpillar dozer w/GPS system	\$193.00
Loaders	T&M rate (w/op)
L70F Volvo wheel loader	\$147.00
950G, H or K Caterpillar wheel loader	\$166.00
L120E Volvo wheel loader	\$166.00
L110E or F Volvo wheel loader	\$166.00
953C Caterpillar track loader	\$152.00
Scrapers	T&M rate (w/op)
621B Caterpillar scraper	\$198.00
621B Caterpillar scraper w/GPS	\$216.00
Motor Graders	T&M rate (w/op)
140H, 143H or 140M Caterpillar motor grader	\$167.00
140H, 143H or 140M Caterpillar motor grader w/GPS	\$185.00
Compactors	T&M rate (w/op)
54" smooth drum or sheepsfoot compactor	\$127.00
66" smooth drum or sheepsfoot compactor	\$130.00
84" smooth drum or sheepsfoot compactor	\$145.00
RT-820 Wacker vibratory walk behind compactor - no operator	\$36.00
Wacker plate compactor - no operator	\$17.00
Offroad trucks	T&M rate (w/op)
A30 Volvo articulated truck	\$211.00
HM400 Komatsu articulated truck	\$237.00
A40F Volvo articulated truck	\$237.00
A30 Volvo articulated water tanker truck	\$210.00

Pumps	T&M rate (w/op)
8" MWI dewatering pump - no operator	\$45.00
4" Hydra-Tech hydraulic pump - no operator	\$45.00
Farm equipment	T&M rate (w/op)
JX80U Case farm tractor	\$140.00
JX80U Case farm tractor w/box blade	\$148.00
JX80U Case farm tractor w/Landpride brilliant seeder	\$147.00
JX80U Case farm tractor w/3-point spreader	\$138.00
JX80U Case farm tractor w/silt fence plow	\$155.00
JX80U Case farm tractor w/strawpress	\$148.00
Large farm tractor	\$179.00
Large farm tractor w/box blade	\$186.00
Large farm tractor w/construction disk	\$189.00
Large farm tractor w/water tanker trailer	\$188.00
Forklifts/Telehandlers	T&M rate (w/op)
Shop style forklift	\$118.00
TH63 Caterpillar telehandler	\$163.00
DL12 Gehl telehandler	\$163.00
TH360B Caterpillar telehandler	\$163.00
Telehandler w/work platform	\$170.00
Mobilization	T&M rate (w/op)
Lowboy tractor & trailer	\$213.00
Boom truck	\$158.00
Escort vehicle	\$118.00
On road trucks & trailers	T&M rate (w/op)
Single-axle dump truck	\$130.00
Equipment service truck	\$149.00
Tractor (no trailer)	\$150.00
Skid loader trailer - no operator	\$13.00
Vac trailer (pull behind) - no operator	\$33.00
Truck mounted drill rig	\$124.00
Concrete mixer truck	\$125.00
Water truck	\$135.00
1 ton flatbed or 1 ton pickup truck - no operator	\$29.00
Pickup truck - no operator	\$25.00
Fuel truck	\$133.00
Sport utility vehicle or car	\$30.00
Accessories/Miscellaneous equipment	T&M rate (w/op)
Topcon GPS rover setup - no operator	\$28.00
Pro Tough 400 screener - no operator	\$79.00
Grizzly screen - no operator	\$27.00
Kymco/Bobcat offroad vehicle - no operator	\$20.00

Concrete mixer - no operator	\$15.00
Concrete bucket - no operator	\$13.00
Portable concrete saw (walk behind) - no operator (blades additional charge)	\$24.00
Cellular concrete foam generator - no operator	\$20.00
185CFM-250CFM air compressor - no operator	\$33.00
375CFM air compressor - no operator	\$37.00
20KW-59KW generator - no operator	\$45.00
Trench box - no operator	\$8.00
G1 trench shoring system - no operator	\$25.00
Rock box - no operator	\$4.00
Cable roller - no operator	\$14.00
Ground-thaw unit - no operator	\$45.00
Fuel trailer/skid - no operator	\$6.00
Jobsite tool trailer/container - no operator	\$12.00
Portable welder - no operator, materials not included	\$15.00
Broce RJ300 street sweeper (throw broom)	\$130.00
Light plant - no operator	\$26.00
75P boring machine - no operator	\$15.00
Office trailer/warming shack - no operator	\$12.00
Employee travel charge	\$75.00 daily
Employee travel charge - North Dakota	\$120.00 daily

Personnel Description

	T&M rate
General Superintendent/Superintendent	\$101.00
Overtime	\$135.00
Double time	\$159.00
Carpenter/Cement Mason	\$91.00
Overtime	\$125.00
Double time	\$149.00
Laborer	\$77.00
Overtime	\$109.00
Double time	\$130.00
Driver/Mechanic	\$76.00
Overtime	\$102.00
Double time	\$125.00
Operator	\$86.00
Overtime	\$125.00
Double time	\$147.00
Surveyor w/equipment	\$130.00
Overtime	\$165.00
Double time	\$186.00
Piledriver	\$91.00
Overtime	\$125.00
Double time	\$149.00

Summary of Revisions to Traffic Control Plans

Rev. 8/23/2017

OHB Levee

WP-43CD

Section 100 Sheet 1

1. Revised R11-2-48 from 476 Units to 504 Units.
2. Revised R11-4a-60 from 93 Units to 155 Units.
3. Added SS1 for 40 Units.
4. Revised 704-1000 from 3923 Total Units to 4053 Total Units.
5. Revised 704-1052 from 23 EA to 27 EA.

Section 100 Sheet 3

1. Added Type III Barricades and Sign #62 on Paul Bunyan Drive.
2. Added a call showing the Type III Barricades and Sign #62 to be moved from the grade raise to South of Oxbow Drive work limits as contractor operations dictate.

Section 100 Sheet 4

1. Added SS1 as Sign #63.
2. Added requirements to cover a portion of the Existing Exit 54 Guide Signs (3 total signs).
3. Added requirements to cover the existing guide sign at CR 16 and CR 81 intersection.

Section 100 Sheet 5

1. Added Construction Sign Detail Sheet for SS1.

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.						
			NR	L	MA	T			
D3-36	36"x6"	STREET NAME SIGN (Sign and installation only)					6	24	
G20-1-60	60"x24"	ROAD WORK NEXT ___ MILES				4	34		
G20-1b-60	60"x24"	WORK IN PROGRESS/ NO WORK IN PROGRESS (Sign and installation only)					26		
G20-2-48	48"x24"	END ROAD WORK	2			2	19	38	
G20-4-36	36"x18"	PILOT CAR FOLLOW ME (Mounted to back of pilot car)					18		
G20-10-108	108"x48"	CONTRACTOR SIGN					64		
G20-50a-72	72"x36"	ROAD WORK NEXT ___ MILES RT & LT ARROWS					37		
G20-52a-72	72"x24"	ROAD WORK NEXT ___ MILES RT or LT ARROW					30		
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE \$80 WHEN WORKERS PRESENT					59		
G20-36	36"x24"	WORK ZONE BUSINESS SIGN DETAILS (Standard Drawing D-704-4)	31			31	16	496	
M1-1-36	36"x36"	INTERSTATE ROUTE MARKER (Post and installation only)					10		
M1-4-24	24"x24"	U.S. ROUTE MARKER (Post and installation only)					10		
M1-5-24	24"x24"	STATE ROUTE MARKER (Post and installation only)					10		
M1-6-24	24"x24"	COUNTY 81 ROUTE MARKER (Post and Installation Only)	43	10		53	10	530	
M1-6-24	24"x24"	COUNTY 18 ROUTE MARKER (Post and Installation Only)					10		
M3-1-24	24"x12"	NORTH (Mounted on route marker post)	25	9		34	7	238	
M3-2-24	24"x12"	EAST (Mounted on route marker post)					7		
M3-3-24	24"x12"	SOUTH (Mounted on route marker post)	18	3		21	7	147	
M3-4-24	24"x12"	WEST (Mounted on route marker post)					7		
M4-5-24	24"x12"	TO (Mounted on route marker post)					7		
M4-8-24	24"x12"	DETOUR (Mounted on route marker post)	41	6		47	7	329	
M4-8a-24	24"x36"	END DETOUR (Mounted on route marker post)	1			1	11	11	
M4-9-30	30"x24"	DETOUR ARROW RIGHT or LEFT/AHD AND RT or LT					15		
M4-10-48	48"x18"	DETOUR ARROW RIGHT or LEFT	2			2	23	46	
M5-1-21	21"x15"	ARROW AHD AND RT or LT (Mounted on route marker post)	15			15	7	105	
M5-2-21	21"x15"	ARROW AHD UP & RT or LT (Mounted on route marker post)	2			2	7	14	
M6-1-21	21"x15"	ARROW RT or LT (Mounted on route marker post)	15	33		48	7	336	
M6-2-21	21"x15"	ARROW UP & RT or LT (Mounted on route marker post)	2			2	7	14	
M6-3-21	21"x15"	ARROW AHD (Mounted on route marker post)	1	18		19	7	133	
R1-1-30	30"x30"	STOP	2			2	17	34	
R1-1-48	48"x48"	STOP					32		
R1-1a-18	18"x18"	STOP and SLOW PADDLE Back to Back					5		
R1-2-60	60"x60"	YIELD					29		
R2-1-24	24"x30"	SPEED LIMIT					15		
R2-1-48	48"x60"	SPEED LIMIT	2			2	39	78	
R2-1a-24	24"x18"	MINIMUM FEE \$80 (Mounted on Speed Limit post)					10		
R3-7-48	48"x48"	LEFT or RIGHT LANE MUST TURN LEFT or RIGHT					35		
R4-1-48	48"x60"	DO NOT PASS					39		
R4-7-48	48"x60"	KEEP RIGHT SYMBOL					39		
R5-1-48	48"x48"	DO NOT ENTER					35		
R5-2-24	24"x24"	NO TRUCKS	1			1	14	14	
R6-1-36	36"x12"	ONE WAY RIGHT or LEFT					13		
R7-1-12	12"x18"	NO PARKING					11		
R10-6-24	24"x36"	STOP HERE ON RED					16		
R11-2-48	48"x30"	ROAD CLOSED	3	15		18	28	504	
R11-2a-48	48"x30"	STREET CLOSED					28		
R11-3a-60	60"x30"	ROAD CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY	4			4	31	124	
R11-3c-60	60"x30"	STREET CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY					31		
R11-4a-60	60"x30"	STREET CLOSED TO THRU TRAFFIC	3	2		5	31	155	
R14-1-24	24"x18"	TRUCK ROUTE	2			2	13	26	
W1-3-48	48"x48"	RIGHT or LEFT SHARP REVERSE CURVE ARROW					35		
W1-4-48	48"x48"	RIGHT or LEFT REVERSE CURVE ARROW					35		
W1-4b-48	48"x48"	DOUBLE RIGHT or LEFT REVERSE CURVE ARROW					35		
W1-6-48	48"x24"	LARGE ARROW					26		
W3-1-48	48"x48"	STOP AHEAD SYMBOL					35		
W3-3-48	48"x48"	SIGNAL AHEAD SYMBOL					35		
W3-4-48	48"x48"	BE PREPARED TO STOP					35		
W3-5-48	48"x48"	SPEED REDUCTION AHEAD	1			1	35	35	
W4-2-48	48"x48"	RIGHT or LEFT LANE TRANSITION SYMBOL					35		
W5-1-48	48"x48"	ROAD NARROWS	1			1	35	35	
W5-8-48	48"x48"	THRU TRAFFIC RIGHT LANE					35		
W5-9-48	48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW					35		
W6-3-48	48"x48"	TWO WAY TRAFFIC SYMBOL					35		
W8-1-48	48"x48"	BUMP					35		
W8-3-48	48"x48"	PAVEMENT ENDS					35		
W8-7-48	48"x48"	LOOSE GRAVEL					35		
W8-9a-48	48"x48"	SHOULDER DROP-OFF					35		
W8-11-48	48"x48"	UNEVEN LANES					35		
W8-12-48	48"x48"	NO CENTER STRIPE					35		
W8-53-48	48"x48"	TRUCKS ENTERING HIGHWAY					35		
W8-54-48	48"x48"	TRUCKS ENTERING AHEAD or ___ FT.					35		
W8-55-48	48"x48"	TRUCKS CROSSING AHEAD or ___ FT.					35		
W8-56-48	48"x48"	TRUCKS EXITING HIGHWAY					35		
W9-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL					35		
W12-2-48	48"x48"	LOW CLEARANCE SYMBOL					35		
W13-1-24	24"x24"	___ MPH ADVISORY SPEED PLATE (Mounted on warning sign post)					11		
W13-4-48	48"x60"	RAMP ARROW					39		
W14-3-48	48"x36"	NO PASSING ZONE					23		
W20-1-48	48"x48"	ROAD WORK AHEAD or ___ FT or ___ MILE	2			2	35	70	
W20-2-48	48"x48"	DETOUR AHEAD or ___ FT	6	4		10	35	350	
W20-3-48	48"x48"	ROAD or STREET CLOSED AHEAD or ___ FT.	3			3	35	105	
W20-4-48	48"x48"	ONE LANE ROAD AHEAD or ___ FT.					35		

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.						
			NR	L	MA	T			
W20-5-48	48"x48"	RIGHT or LEFT LANE CLOSED AHEAD or ___ FT.						35	
W20-7a-48	48"x48"	FLAGGING SYMBOL						35	
W20-7k-24	24"x18"	___ FEET (Mounted on warning sign post)						10	
W20-8-48	48"x48"	STREET CLOSED						35	
W20-51-48	48"x48"	EQUIPMENT WORKING						35	
W20-52-54	54"x12"	NEXT ___ MILES (Mounted on warning sign post)						12	
W21-1a-48	48"x48"	WORKERS SYMBOL						35	
W21-2-48	48"x48"	FRESH OIL						35	
W21-3-48	48"x48"	ROAD MACHINERY AHEAD or ___ FT						35	
W21-5-48	48"x48"	SHOULDER WORK						35	
W21-5a-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED						35	
W21-5b-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED AHEAD or ___ FT.						35	
W21-6a-48	48"x48"	SURVEY CREW AHEAD						35	
W21-50-48	48"x48"	BRIDGE PAINTING AHEAD or ___ FT.						35	
W21-51-48	48"x48"	MATERIAL ON ROADWAY						35	
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK						35	
	24"x24"	TAKE TURNS (6" D letters) (Mounted on stop sign post)	2			2	11	22	

SPECIAL SIGNS									
SIGN NUMBER	SIGN SIZE	DESCRIPTION	NR	L	MA	T	TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
SS1	42"x72"	OXBOW EXIT 50	1			1	1	40	40

SPEC & CODE									
SPEC & CODE	DESCRIPTION	UNIT	NR	L	MA	T	TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
704-1000	TRAFFIC CONTROL SIGNS								4053

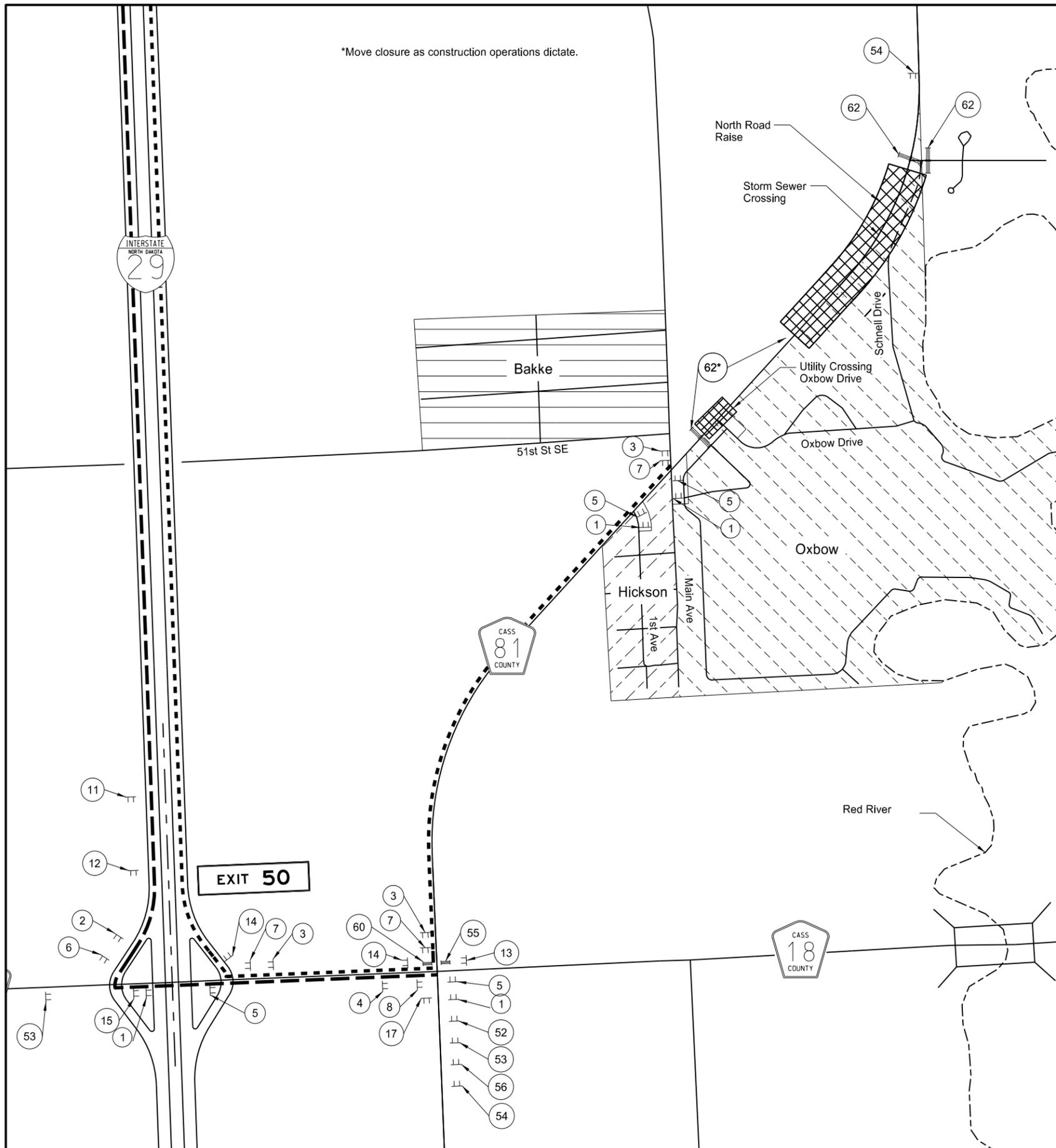
SPEC & CODE	DESCRIPTION	UNIT	QUANTITY BY PHASE NO.				TOTAL QUANTITY
			NR	L	MA	T	
			704-0100	FLAGGING	MHR		
704-1041	ATTENUATION DEVICE-TYPE B-55	EACH					
704-1043	ATTENUATION DEVICE-TYPE B-65	EACH					
704-1044	ATTENUATION DEVICE-TYPE B-70	EACH					
704-1050	TYPE I BARRICADES	EACH					
704-1051	TYPE II BARRICADES	EACH					
704-1052	TYPE III BARRICADES	EACH	10	15	2		27
704-1060	DELINEATOR DRUMS	EACH	25				25
704-1065	TRAFFIC CONES	EACH					
704-1067	TUBULAR MARKERS	EACH	31	50			81
704-1070	DELINEATOR	EACH					
704-1072	FLEXIBLE DELINEATORS	EACH					
704-1081	VERTICAL PANELS - BACK TO BACK	EACH					
704-1085	SEQUENCING ARROW PANEL - TYPE A	EACH					
704-1086	SEQUENCING ARROW PANEL - TYPE B	EACH					
704-1087	SEQUENCING ARROW PANEL - TYPE C	EACH					
704-1088	SEQUENCING ARROW PANEL - TYPE C - CROSSOVER	EACH					
704-1095	TYPE B FLASHERS	EACH					
704-1500	OBLITERATION OF PVMT MK	SF					
704-3501	PORTABLE PRECAST CONCRETE MED BARRIER	LF					
704-3510	PRECAST CONCRETE MED BARRIER - STATE FURNISHED	EACH					
704-4011	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2				2
762-0200	RAISED PAVEMENT MARKERS	EACH					
762-0420	SHORT TERM 4IN LINE - TYPE R	LF					
762-0430	SHORT TERM 4IN LINE - TYPE NR	LF					
772-2110	FLASHING BEACON - POST MOUNTED	EACH					

NOTE:
If additional signs are required, units will be calculated using the formula from Section III-19.06 of the Design Manual.
<http://www.dot.nd.gov/>

This document was originally issued and sealed by Jacob H. Loegering, Registration Number PE-9808, on 8/22/17 and the original document is stored at CH2M Engineering Inc. Fargo, ND.

Traffic Control Devices List

*Move closure as construction operations dictate.



1	2	3	4	5
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-1L-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1L-21
6	7	8	11	12
DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-2R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-2R-21
13	14	15	17	52
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-3-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24	DETOUR SOUTH M3-3-24 CASS COUNTY 81 M1-6-24	DETOUR 500 FT W20-2-48
53	54	55	56	60
DETOUR 1500 FT W20-2-48	ROAD CLOSED AHEAD W20-3-48	ROAD CLOSED 1-5 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A-60 Barricade Mounted	ROAD CLOSED 1-5 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A-60	DETOUR M4-10-48 Barricade Mounted
62				
ROAD CLOSED R11-2-48 Barricade Mounted				



Northbound Detour Route

Southbound Detour Route

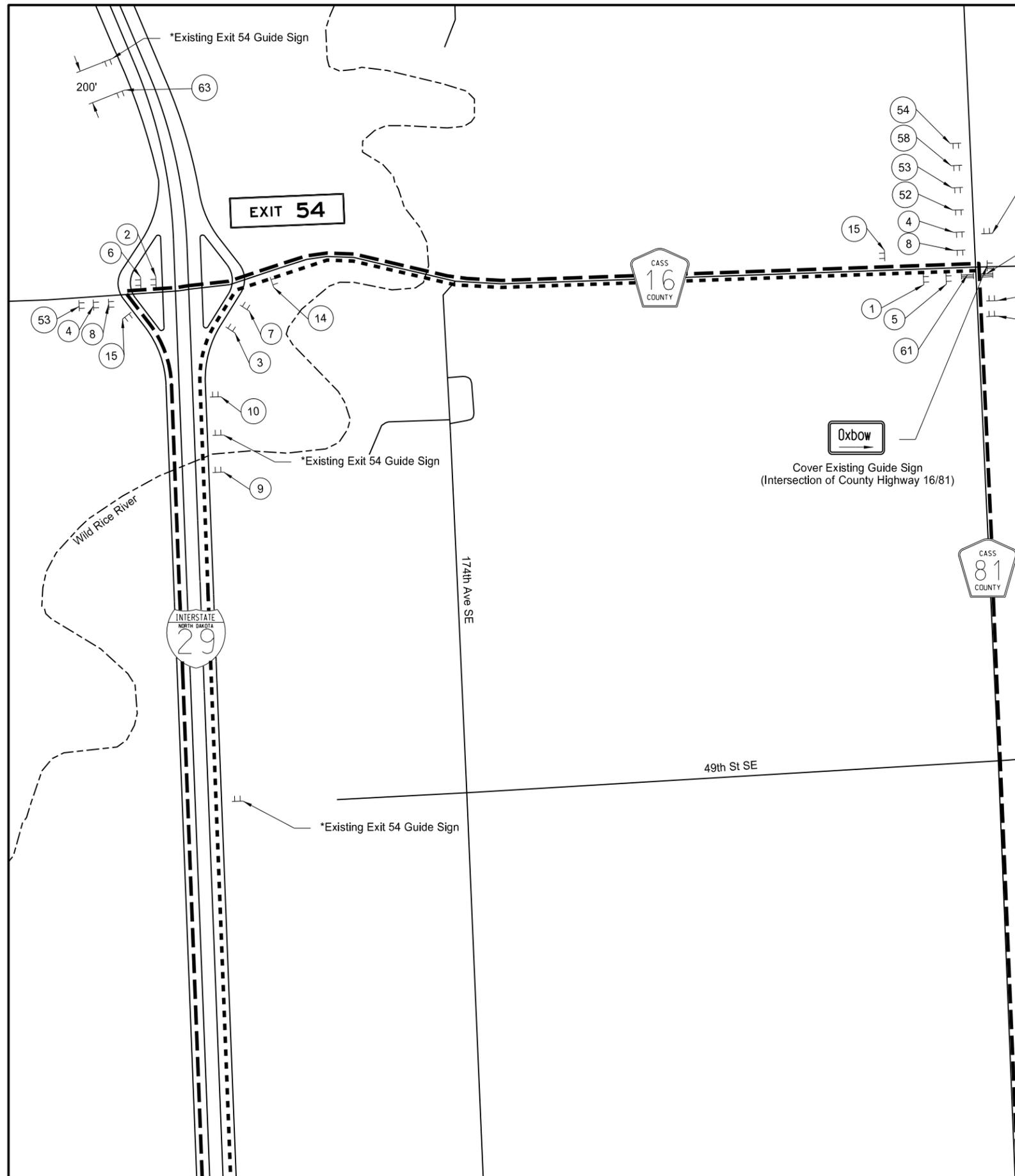


All signs shall be post mounted unless stated otherwise.



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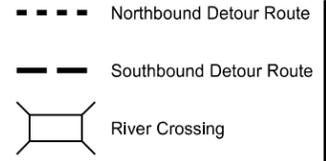
OHB Levee
County Road 81
Utility Crossing/North Road Raise Detour



1	2	3	4	5
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-1L-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1L-21
6	7	8	9	10
DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-2R-21	DETOUR NORTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-2R-21
14	15	16	52	53
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24	DETOUR NORTH M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR 500 FT W20-2-48	DETOUR 1500 FT W20-2-48
54	57	58	61	63
ROAD CLOSED AHEAD W20-3-48	ROAD CLOSED 2.5 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A-60	ROAD CLOSED 2.5 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A-60	DETOUR M4-10-48	Oxbow EXIT 50 SS1

Oxbow
Cover Existing Guide Sign
(Intersection of County Highway 16/81)

*Cover "Oxbow" on existing Exit 54 Signs. Submit method for covering for approval prior to covering.



All signs shall be post mounted unless stated otherwise.



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OHB Levee
County Road 81
Utility Crossing/North Road Raise Detour

Bid Proposal



Meyer Contracting, Inc

11000 93rd Ave North

Minneapolis, MN 55369

Contact: Verlyn Schoep

Phone: 612.735.5855

Fax: 763.391.5960

Quote To: Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.
Phone: 701.499.5857

Job Name: Water Main Relocation
OHB Levee at Oxbow

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
10	16" STEEL CASING PIPE W/CLSM	300.00	LF	579.69	173,907.00
20	CATHODIC PROTECTION	1.00	LS	30,693.89	30,693.89
25	FURNISH 8" FUSIBLE PIPE, UNLOADING, & FUSION	1.00	LS	13,796.77	13,796.77
30	INSTALL 8" FUSIBLE PVC WATERLINE	400.00	LF	28.05	11,220.00
40	TEMP. CONNECT TO EXISTING 6" WATERLINE	2.00	EA	4,355.21	8,710.42
50	WELDING MOBILIZATION	1.00	LS	4,580.00	4,580.00
GRAND TOTAL					\$242,908.08



October 2, 2017

Mr. Christopher M Gross, Project Manager
Moore Engineering, Inc.
925 10th Ave E
West Fargo, ND 58078

Subject: Oxbow – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Change Order Request – Repair Unmarked 3” Watermain

Dear Mr. Gross,

We have been required to repair an unmarked 3” PVC watermain during the construction of the Oxbow Drive sanitary sewer. This repair was caused because the locates for this water main were marked in the wrong location. We explored out 20’ wide and 8’ deep from the marked location. The water main was discovered during subsequent construction and was damaged and repairs were required. As a result of doing this additional work, we have incurred additional costs and a delay to our schedule.

Please understand that delays such as this one have and will continue to cause a substantial negative impact on our schedule and our costs. We have invested substantial equipment and manpower in this project; we estimate our daily cost to be approximately \$75,000 per day. Anything that can be done to mitigate additional delays is appreciated and is necessary to reduce and eliminate any additional costs related to standby and decreased productivity.

Based on the aforementioned information and calculation of cost impact we hereby request additional compensation in the amount of \$3,534.25. Additionally, we believe this had a schedule impact of one calendar day and we request that the contract time be adjusted as such.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a light blue horizontal line.

Jeremy Gibbs
Meyer Contracting, Inc.

Work Change Directive Summary of Costs

Meyer Project Number: 171297
Owner Contract Number: WP-43CD
Owner Contract Name: Oxbow-Hickson-Bakke Ring Levee - Phases C & D
Change Order Request Number: 9000007
Change Order Request Name/Desc.: Repair Unmarked 3" Watermain

LABOR ONLY

TOTAL: \$1,968.50

SUBSTANCE

	Unit	Quantity	Unit Cost		
(Use \$75 for MN & \$120 for ND)	10.83-HR Day/Person	2.31	\$120.00		TOTAL: \$277.01

EQUIPMENT w/OPERATOR

TOTAL: \$770.00

MATERIALS & RENTAL EQUIPMENT

Description	Unit	Quantity	Unit Cost	Tax (%)	Total Cost
Core & Main Invoice	LS	1.00	\$471.58		\$471.58
					\$0.00
					\$0.00
					\$0.00
					\$0.00
Management & Overhead (10%)					\$47.16
TOTAL:					\$518.74

SUBCONTRACTORS

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

MOBILIZATION

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

TOTAL: \$3,534.25

MEYER CONTRACTING INC
11010 93RD AVE N STE A
MAPLE GROVE MN 55369-4125

Shipped To:
INT:US HWY 81 & OXBOW DRIVE
SITE CONTACT:
BRIAN-763 203 4485
OXBOW, ND

CUSTOMER JOB- OXBOW OXBOW,ND-LEVEE

Thank you for the opportunity to serve you! We appreciate your prompt payment.

CUSTOMER PO#- OHB RING LEVEE

0303017YM	3 SDR17 PR250 YELOMINE PIPE	40	40	3.12000 FT	124.80
21I03S112T	3 MJ L/P SLEEVE (I) CP DI C153	2	2	42.41000 EA	84.82
21AMG503	3 MJXIPS PVC TRANS GASKET	4	4	2.85000 EA	11.40
21AMF8032003PV	3 MEGALUG F/PVC IPS 2003PV	4	4	22.70000 EA	90.80
21AMBN0630B	5/8X3 MJ T-HEAD B&N BLUE	16	16	2.00000 EA	32.00

WORK CHANGE DIRECTIVE

01

TO: Meyer Contracting PROJECT NO.: WP-43CD
 PROJECT: OHB Ring Levee – Phases C and D (Levee, Pump Station, Road and Utility Improvements)
 OWNER: Metro Flood Diversion Authority
 ENGINEER: Houston-Moore Group
 OWNER’S REPRESENTATIVE: CH2M

DESCRIPTION OF WORK:

The work includes:

- 1 – Removal of unsuitable soil material under the footprint of the levee due to remant electrical, communication, sanitary/storm sewer, or water service lines from demolition contracts. Excavated material will be placed in Zone B backfill areas of the 43E.2.E demolition contract. Work will be done on a T & M basis with an estimated time frame of 3-4 days with 2 scrapers and other misc. equipment. 2017 equipment rates are attached to this WCD.
- 2 – Removal of unsuitable soil material under the footprint of the levee such as sand lenses, excessive organic material, etc. as determined by the geotechnical engineer during inspection trench construction. Unsuitable material will be placed in the spoil area of the golf course rough grade. Estimated quantity to be removed is 3,000 CY at a rate of \$4.00/CY.
- 3 – Additional traffic control measures not included in the original Contract Bid Documents. This included coverings of “Oxbow” wording on Exit 54 signs, adding post mounted signs along Main Avenue, adding skid mounts to existing signs along Main Avenue, add “slow down” signs just north of Bakke Subdivision as agreed to by Cass County Highway Engineers and Pleasant Township. Estimated cost of additional traffic control measures is \$3,885.00.
- 4 – OCC golf course excavation near Oxbow Drive and levee crossing. Excavated material will be placed in the spoil area of the golf course rough grade for LU to fine grade. Estimated quantity to be removed is 2,000 CY at a rate of \$4.00/CY.
- 5 – Installation of 16” steel casing pipe and 8” fusible PVC pipe for the Cass Rural Water utility relocation under the levee near Station B125+25 on the west side of County Road 81. Work will also include installation of the cathodic protection and temporary connection to the existing 6” waterline. Estimated cost to be \$242,908.08 as indicated in the September 14, 2017 Bid Proposal received from Meyer Contracting, Inc. (see attached).

REASON FOR CHANGE(S):

1. Due to remant electrical, communication, sanitary/storm sewer, or water service lines from the demolition contracts, Meyer needed to remove these utilities prior to constructing the levee.
2. Due to unsuitable material found during construction of the inspection trench, material was removed and suitable levee embankment material was installed.
3. Additional traffic control signs and sign covers were added along Interstate 29 to better direct traffic around project area.
4. In order to better accommodate construction schedules of both Meyer Contracting and Landscapes Unlimited, Meyer Contracting will excavate the remaining portion of the golf course pond near Oxbow Drive.

5. Due to Cass Rural Water's scheduling, Cass Rural Water requested Meyer Contracting, Inc. to install the 16" casing pipe and 8" fusible PVC in order to minimize delay on the construction of the levee on the west side of County Road 81.

ATTACHMENTS (List Supporting Documents):

1. Meyer Contracting 2017 Equipment Rates (4 pages)
2. Traffic Control Drawing updates (5 pages)
3. Meyer Contracting September 14, 2017 Bid Proposal for CRW work (2 pages)

DESIGN IMPACT (List Impacts):

Is the described change outside of the design parameters? Yes / No

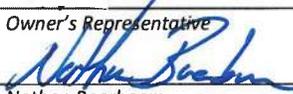
If yes, DOR and USACE signoff are required and documented below:

_____ Christopher Gross P.E. Designer of Record	_____ Date	_____ [Name] USACE PM	_____ Date
---	---------------	-----------------------------	---------------

It is understood that this Work Change Directive will not change the Contract Price or Times, but is evidence that the parties expect a Change Order to be subsequently issued reflecting the changes.

Recommended by:

Ordered by:

_____ Owner's Representative  Nothun Boerboom Engineer, City of Fargo	_____ Date 9/20/2017	_____ Owner  Michael J. Rea/Robert W. Wilson Co-Executive Director	_____ Date 9/20/17
--	----------------------------	--	--------------------------

- Copy: Owner
 Designer of Record
 USACE
 Owner's Representative

Meyer Contracting Equipment Rates

January 1, 2017 - December 31, 2017

Skid loaders/Multi-terrain loaders	T&M rate (w/op)
259 multi-terrain loader	\$123.00
259 multi-terrain loader w/jackhammer	\$142.00
259 multi-terrain loader w/auger	\$142.00
259 multi-terrain loader w/sweeper	\$142.00
259 multi-terrain loader w/silt fence plow	\$142.00
259 multi-terrain loader w/soil conditioner	\$142.00
259 multi-terrain loader w/angle blade	\$142.00
259 multi-terrain loader w/cold planer	\$142.00
259 multi-terrain loader w/tiller	\$142.00
259 multi-terrain loader w/brush mower	\$142.00
259 multi-terrain loader w/smooth drum compactor	\$142.00
279 multi-terrain loader	\$137.00
279 multi-terrain loader w/listed attachments above	\$156.00
262 skid loader	\$133.00
262 skid loader w/listed attachments above	\$152.00
Excavators	T&M rate (w/op)
PC35MR Komatsu excavator	\$127.00
KX161 Kubota excavator	\$127.00
KX161 Kubota excavator w/jackhammer	\$148.00
PC78MR Komatsu excavator	\$139.00
308E Caterpillar excavator	\$139.00
308E Caterpillar excavator w/jackhammer	\$195.00
308E Caterpillar excavator w/hydraulic compactor	\$193.00
EX160LC Hitachi excavator	\$144.00
PC200LC or PC228LC Komatsu excavator	\$192.00
PC200LC or PC228LC Komatsu excavator w/jackhammer	\$223.00
PC200LC or PC228LC Komatsu excavator w/hydraulic compactor	\$223.00
PC200LC or PC228LC Komatsu excavator w/compaction wheel	\$213.00
PC200LC Komatsu excavator w/helical anchor drill	\$215.00
PC228LC Komatsu excavator w/ripper tooth	\$204.00
790D John Deere excavator	\$191.00
336EL Caterpillar excavator	\$221.00
336EL Caterpillar excavator w/ripper tooth	\$232.00
336EL Caterpillar excavator w/compaction wheel	\$232.00
PC360LC-10 Komatsu excavator	\$221.00
PC360LC-10 Komatsu excavator w/ripper tooth	\$232.00
EC460CL or EC480CL Volvo excavator	\$251.00
EC460CL or EC480CL Volvo excavator w/compaction wheel	\$262.00
PC400 Komatsu excavator	\$251.00
PC400 Komatsu excavator w/concrete pulverizer	\$288.00

PC400 Komatsu excavator w/ripper tooth	\$262.00
PC400 Komatsu excavator w/compaction wheel	\$262.00
349EL Caterpillar excavator - variable gauge	\$261.00
Dozers	T&M rate (w/op)
D5KLGP Caterpillar dozer	\$155.00
D5KLGP Caterpillar dozer w/GPS system	\$173.00
700JLGP John Deere dozer	\$155.00
700JLGP John Deere dozer w/GPS system	\$173.00
D51 Komatsu dozer	\$155.00
D51 Komatsu dozer w/GPS system	\$173.00
850K John Deere dozer	\$155.00
850C John Deere dozer	\$180.00
D61PX Komatsu dozer	\$175.00
D65 Komatsu dozer	\$180.00
D65 Komatsu dozer w/GPS system	\$198.00
D6TXW or D6TLGP Caterpillar dozer	\$180.00
D6TXW or D6TLGP Caterpillar dozer w/GPS system	\$198.00
D6NLGP Caterpillar dozer	\$175.00
D6NLGP Caterpillar dozer w/GPS system	\$193.00
Loaders	T&M rate (w/op)
L70F Volvo wheel loader	\$147.00
950G, H or K Caterpillar wheel loader	\$166.00
L120E Volvo wheel loader	\$166.00
L110E or F Volvo wheel loader	\$166.00
953C Caterpillar track loader	\$152.00
Scrapers	T&M rate (w/op)
621B Caterpillar scraper	\$198.00
621B Caterpillar scraper w/GPS	\$216.00
Motor Graders	T&M rate (w/op)
140H, 143H or 140M Caterpillar motor grader	\$167.00
140H, 143H or 140M Caterpillar motor grader w/GPS	\$185.00
Compactors	T&M rate (w/op)
54" smooth drum or sheepsfoot compactor	\$127.00
66" smooth drum or sheepsfoot compactor	\$130.00
84" smooth drum or sheepsfoot compactor	\$145.00
RT-820 Wacker vibratory walk behind compactor - no operator	\$36.00
Wacker plate compactor - no operator	\$17.00
Offroad trucks	T&M rate (w/op)
A30 Volvo articulated truck	\$211.00
HM400 Komatsu articulated truck	\$237.00
A40F Volvo articulated truck	\$237.00
A30 Volvo articulated water tanker truck	\$210.00

Pumps	T&M rate (w/op)
8" MWI dewatering pump - no operator	\$45.00
4" Hydra-Tech hydraulic pump - no operator	\$45.00
Farm equipment	T&M rate (w/op)
JX80U Case farm tractor	\$140.00
JX80U Case farm tractor w/box blade	\$148.00
JX80U Case farm tractor w/Landpride brilliant seeder	\$147.00
JX80U Case farm tractor w/3-point spreader	\$138.00
JX80U Case farm tractor w/silt fence plow	\$155.00
JX80U Case farm tractor w/strawpress	\$148.00
Large farm tractor	\$179.00
Large farm tractor w/box blade	\$186.00
Large farm tractor w/construction disk	\$189.00
Large farm tractor w/water tanker trailer	\$188.00
Forklifts/Telehandlers	T&M rate (w/op)
Shop style forklift	\$118.00
TH63 Caterpillar telehandler	\$163.00
DL12 Gehl telehandler	\$163.00
TH360B Caterpillar telehandler	\$163.00
Telehandler w/work platform	\$170.00
Mobilization	T&M rate (w/op)
Lowboy tractor & trailer	\$213.00
Boom truck	\$158.00
Escort vehicle	\$118.00
On road trucks & trailers	T&M rate (w/op)
Single-axle dump truck	\$130.00
Equipment service truck	\$149.00
Tractor (no trailer)	\$150.00
Skid loader trailer - no operator	\$13.00
Vac trailer (pull behind) - no operator	\$33.00
Truck mounted drill rig	\$124.00
Concrete mixer truck	\$125.00
Water truck	\$135.00
1 ton flatbed or 1 ton pickup truck - no operator	\$29.00
Pickup truck - no operator	\$25.00
Fuel truck	\$133.00
Sport utility vehicle or car	\$30.00
Accessories/Miscellaneous equipment	T&M rate (w/op)
Topcon GPS rover setup - no operator	\$28.00
Pro Tough 400 screener - no operator	\$79.00
Grizzly screen - no operator	\$27.00
Kymco/Bobcat offroad vehicle - no operator	\$20.00

Concrete mixer - no operator	\$15.00
Concrete bucket - no operator	\$13.00
Portable concrete saw (walk behind) - no operator (blades additional charge)	\$24.00
Cellular concrete foam generator - no operator	\$20.00
185CFM-250CFM air compressor - no operator	\$33.00
375CFM air compressor - no operator	\$37.00
20KW-59KW generator - no operator	\$45.00
Trench box - no operator	\$8.00
G1 trench shoring system - no operator	\$25.00
Rock box - no operator	\$4.00
Cable roller - no operator	\$14.00
Ground-thaw unit - no operator	\$45.00
Fuel trailer/skid - no operator	\$6.00
Jobsite tool trailer/container - no operator	\$12.00
Portable welder - no operator, materials not included	\$15.00
Broce RJ300 street sweeper (throw broom)	\$130.00
Light plant - no operator	\$26.00
75P boring machine - no operator	\$15.00
Office trailer/warming shack - no operator	\$12.00
Employee travel charge	\$75.00 daily
Employee travel charge - North Dakota	\$120.00 daily

Personnel Description

	T&M rate
General Superintendent/Superintendent	\$101.00
Overtime	\$135.00
Double time	\$159.00
Carpenter/Cement Mason	\$91.00
Overtime	\$125.00
Double time	\$149.00
Laborer	\$77.00
Overtime	\$109.00
Double time	\$130.00
Driver/Mechanic	\$76.00
Overtime	\$102.00
Double time	\$125.00
Operator	\$86.00
Overtime	\$125.00
Double time	\$147.00
Surveyor w/equipment	\$130.00
Overtime	\$165.00
Double time	\$186.00
Piledriver	\$91.00
Overtime	\$125.00
Double time	\$149.00

Summary of Revisions to Traffic Control Plans

Rev. 8/23/2017

OHB Levee

WP-43CD

Section 100 Sheet 1

1. Revised R11-2-48 from 476 Units to 504 Units.
2. Revised R11-4a-60 from 93 Units to 155 Units.
3. Added SS1 for 40 Units.
4. Revised 704-1000 from 3923 Total Units to 4053 Total Units.
5. Revised 704-1052 from 23 EA to 27 EA.

Section 100 Sheet 3

1. Added Type III Barricades and Sign #62 on Paul Bunyan Drive.
2. Added a call showing the Type III Barricades and Sign #62 to be moved from the grade raise to South of Oxbow Drive work limits as contractor operations dictate.

Section 100 Sheet 4

1. Added SS1 as Sign #63.
2. Added requirements to cover a portion of the Existing Exit 54 Guide Signs (3 total signs).
3. Added requirements to cover the existing guide sign at CR 16 and CR 81 intersection.

Section 100 Sheet 5

1. Added Construction Sign Detail Sheet for SS1.

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.						
			NR	L	MA	T			
D3-36	36"x6"	STREET NAME SIGN (Sign and installation only)					6	24	
G20-1-60	60"x24"	ROAD WORK NEXT ___ MILES				4	34		
G20-1b-60	60"x24"	WORK IN PROGRESS/ NO WORK IN PROGRESS (Sign and installation only)					26		
G20-2-48	48"x24"	END ROAD WORK	2			2	19	38	
G20-4-36	36"x18"	PILOT CAR FOLLOW ME (Mounted to back of pilot car)					18		
G20-10-108	108"x48"	CONTRACTOR SIGN					64		
G20-50a-72	72"x36"	ROAD WORK NEXT ___ MILES RT & LT ARROWS					37		
G20-52a-72	72"x24"	ROAD WORK NEXT ___ MILES RT or LT ARROW					30		
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE \$80 WHEN WORKERS PRESENT					59		
G20-36	36"x24"	WORK ZONE BUSINESS SIGN DETAILS (Standard Drawing D-704-4)	31			31	16	496	
M1-1-36	36"x36"	INTERSTATE ROUTE MARKER (Post and installation only)					10		
M1-4-24	24"x24"	U.S. ROUTE MARKER (Post and installation only)					10		
M1-5-24	24"x24"	STATE ROUTE MARKER (Post and installation only)					10		
M1-6-24	24"x24"	COUNTY 81 ROUTE MARKER (Post and Installation Only)	43	10		53	10	530	
M1-6-24	24"x24"	COUNTY 18 ROUTE MARKER (Post and Installation Only)					10		
M3-1-24	24"x12"	NORTH (Mounted on route marker post)	25	9		34	7	238	
M3-2-24	24"x12"	EAST (Mounted on route marker post)					7		
M3-3-24	24"x12"	SOUTH (Mounted on route marker post)	18	3		21	7	147	
M3-4-24	24"x12"	WEST (Mounted on route marker post)					7		
M4-5-24	24"x12"	TO (Mounted on route marker post)					7		
M4-8-24	24"x12"	DETOUR (Mounted on route marker post)	41	6		47	7	329	
M4-8a-24	24"x36"	END DETOUR (Mounted on route marker post)	1			1	11	11	
M4-9-30	30"x24"	DETOUR ARROW RIGHT or LEFT/AHD AND RT or LT					15		
M4-10-48	48"x18"	DETOUR ARROW RIGHT or LEFT	2			2	23	46	
M5-1-21	21"x15"	ARROW AHD AND RT or LT (Mounted on route marker post)	15			15	7	105	
M5-2-21	21"x15"	ARROW AHD UP & RT or LT (Mounted on route marker post)	2			2	7	14	
M6-1-21	21"x15"	ARROW RT or LT (Mounted on route marker post)	15	33		48	7	336	
M6-2-21	21"x15"	ARROW UP & RT or LT (Mounted on route marker post)	2			2	7	14	
M6-3-21	21"x15"	ARROW AHD (Mounted on route marker post)	1	18		19	7	133	
R1-1-30	30"x30"	STOP	2			2	17	34	
R1-1-48	48"x48"	STOP					32		
R1-1a-18	18"x18"	STOP and SLOW PADDLE Back to Back					5		
R1-2-60	60"x60"	YIELD					29		
R2-1-24	24"x30"	SPEED LIMIT					15		
R2-1-48	48"x60"	SPEED LIMIT	2			2	39	78	
R2-1a-24	24"x18"	MINIMUM FEE \$80 (Mounted on Speed Limit post)					10		
R3-7-48	48"x48"	LEFT or RIGHT LANE MUST TURN LEFT or RIGHT					35		
R4-1-48	48"x60"	DO NOT PASS					39		
R4-7-48	48"x60"	KEEP RIGHT SYMBOL					39		
R5-1-48	48"x48"	DO NOT ENTER					35		
R5-2-24	24"x24"	NO TRUCKS	1			1	14	14	
R6-1-36	36"x12"	ONE WAY RIGHT or LEFT					13		
R7-1-12	12"x18"	NO PARKING					11		
R10-6-24	24"x36"	STOP HERE ON RED					16		
R11-2-48	48"x30"	ROAD CLOSED	3	15		18	28	504	
R11-2a-48	48"x30"	STREET CLOSED					28		
R11-3a-60	60"x30"	ROAD CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY	4			4	31	124	
R11-3c-60	60"x30"	STREET CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY					31		
R11-4a-60	60"x30"	STREET CLOSED TO THRU TRAFFIC	3	2		5	31	155	
R14-1-24	24"x18"	TRUCK ROUTE	2			2	13	26	
W1-3-48	48"x48"	RIGHT or LEFT SHARP REVERSE CURVE ARROW					35		
W1-4-48	48"x48"	RIGHT or LEFT REVERSE CURVE ARROW					35		
W1-4b-48	48"x48"	DOUBLE RIGHT or LEFT REVERSE CURVE ARROW					35		
W1-6-48	48"x24"	LARGE ARROW					26		
W3-1-48	48"x48"	STOP AHEAD SYMBOL					35		
W3-3-48	48"x48"	SIGNAL AHEAD SYMBOL					35		
W3-4-48	48"x48"	BE PREPARED TO STOP					35		
W3-5-48	48"x48"	SPEED REDUCTION AHEAD	1			1	35	35	
W4-2-48	48"x48"	RIGHT or LEFT LANE TRANSITION SYMBOL					35		
W5-1-48	48"x48"	ROAD NARROWS	1			1	35	35	
W5-8-48	48"x48"	THRU TRAFFIC RIGHT LANE					35		
W5-9-48	48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW					35		
W6-3-48	48"x48"	TWO WAY TRAFFIC SYMBOL					35		
W8-1-48	48"x48"	BUMP					35		
W8-3-48	48"x48"	PAVEMENT ENDS					35		
W8-7-48	48"x48"	LOOSE GRAVEL					35		
W8-9a-48	48"x48"	SHOULDER DROP-OFF					35		
W8-11-48	48"x48"	UNEVEN LANES					35		
W8-12-48	48"x48"	NO CENTER STRIPE					35		
W8-53-48	48"x48"	TRUCKS ENTERING HIGHWAY					35		
W8-54-48	48"x48"	TRUCKS ENTERING AHEAD or ___ FT.					35		
W8-55-48	48"x48"	TRUCKS CROSSING AHEAD or ___ FT.					35		
W8-56-48	48"x48"	TRUCKS EXITING HIGHWAY					35		
W9-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL					35		
W12-2-48	48"x48"	LOW CLEARANCE SYMBOL					35		
W13-1-24	24"x24"	___ MPH ADVISORY SPEED PLATE (Mounted on warning sign post)					11		
W13-4-48	48"x60"	RAMP ARROW					39		
W14-3-48	48"x36"	NO PASSING ZONE					23		
W20-1-48	48"x48"	ROAD WORK AHEAD or ___ FT or ___ MILE	2			2	35	70	
W20-2-48	48"x48"	DETOUR AHEAD or ___ FT	6	4		10	35	350	
W20-3-48	48"x48"	ROAD or STREET CLOSED AHEAD or ___ FT.	3			3	35	105	
W20-4-48	48"x48"	ONE LANE ROAD AHEAD or ___ FT.					35		

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.						
			NR	L	MA	T			
W20-5-48	48"x48"	RIGHT or LEFT LANE CLOSED AHEAD or ___ FT.						35	
W20-7a-48	48"x48"	FLAGGING SYMBOL						35	
W20-7k-24	24"x18"	___ FEET (Mounted on warning sign post)						10	
W20-8-48	48"x48"	STREET CLOSED						35	
W20-51-48	48"x48"	EQUIPMENT WORKING						35	
W20-52-54	54"x12"	NEXT ___ MILES (Mounted on warning sign post)						12	
W21-1a-48	48"x48"	WORKERS SYMBOL						35	
W21-2-48	48"x48"	FRESH OIL						35	
W21-3-48	48"x48"	ROAD MACHINERY AHEAD or ___ FT						35	
W21-5-48	48"x48"	SHOULDER WORK						35	
W21-5a-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED						35	
W21-5b-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED AHEAD or ___ FT.						35	
W21-6a-48	48"x48"	SURVEY CREW AHEAD						35	
W21-50-48	48"x48"	BRIDGE PAINTING AHEAD or ___ FT.						35	
W21-51-48	48"x48"	MATERIAL ON ROADWAY						35	
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK						35	
	24"x24"	TAKE TURNS (6" D letters) (Mounted on stop sign post)	2			2	11	22	

SPECIAL SIGNS

SIGN NUMBER	SIGN SIZE	DESCRIPTION	NR	L	MA	T	TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
SS1	42"x72"	OXBOW EXIT 50	1			1	1	40	40

SPEC & CODE

704-1000	TRAFFIC CONTROL SIGNS	TOTAL UNITS	4053
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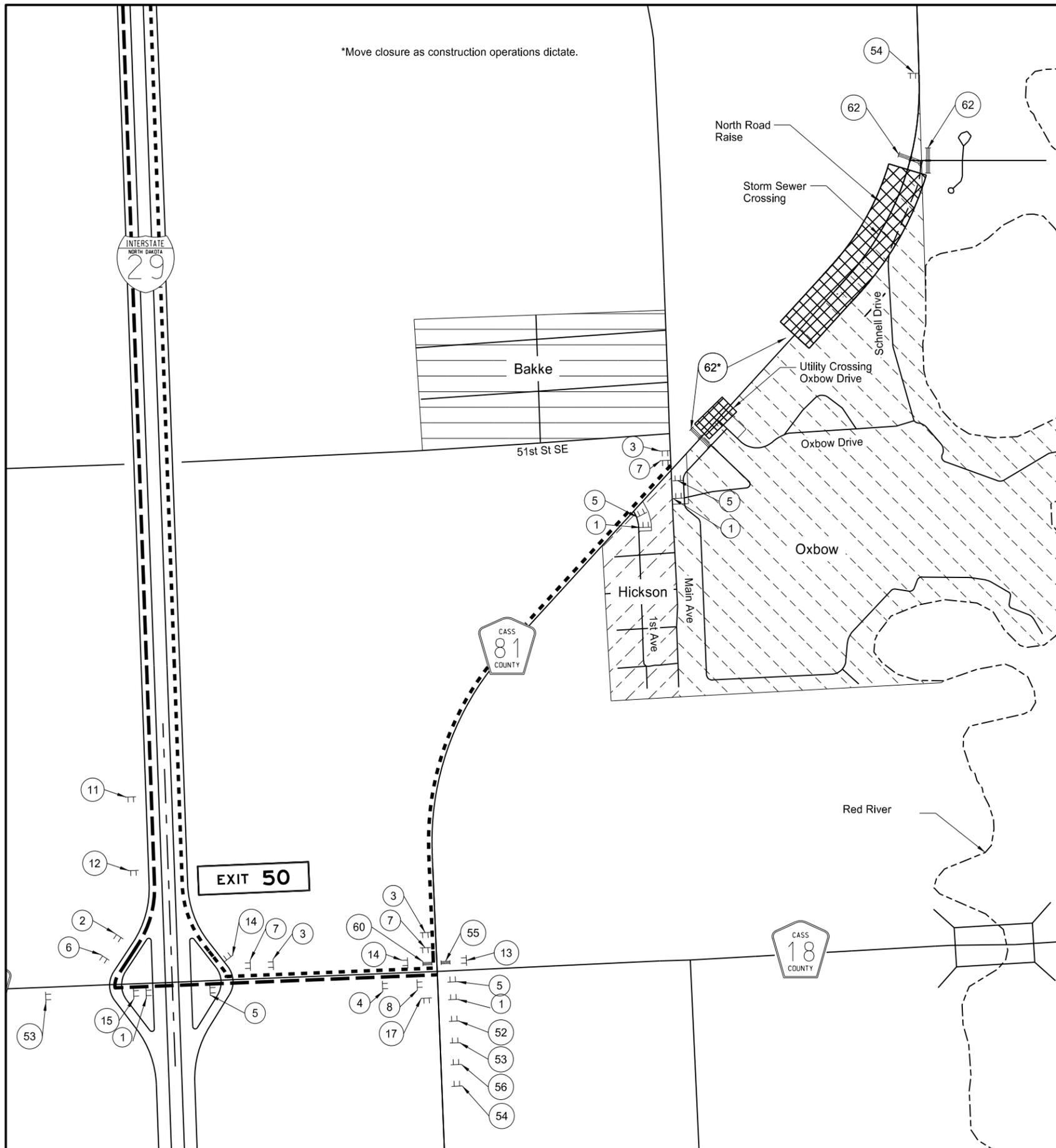
SPEC & CODE	DESCRIPTION	UNIT	QUANTITY BY PHASE NO.				TOTAL QUANTITY
			NR	L	MA	T	
			704-0100	FLAGGING	MHR		
704-1041	ATTENUATION DEVICE-TYPE B-55	EACH					
704-1043	ATTENUATION DEVICE-TYPE B-65	EACH					
704-1044	ATTENUATION DEVICE-TYPE B-70	EACH					
704-1050	TYPE I BARRICADES	EACH					
704-1051	TYPE II BARRICADES	EACH					
704-1052	TYPE III BARRICADES	EACH	10	15	2		27
704-1060	DELINEATOR DRUMS	EACH	25				25
704-1065	TRAFFIC CONES	EACH					
704-1067	TUBULAR MARKERS	EACH	31	50			81
704-1070	DELINEATOR	EACH					
704-1072	FLEXIBLE DELINEATORS	EACH					
704-1081	VERTICAL PANELS - BACK TO BACK	EACH					
704-1085	SEQUENCING ARROW PANEL - TYPE A	EACH					
704-1086	SEQUENCING ARROW PANEL - TYPE B	EACH					
704-1087	SEQUENCING ARROW PANEL - TYPE C	EACH					
704-1088	SEQUENCING ARROW PANEL - TYPE C - CROSSOVER	EACH					
704-1095	TYPE B FLASHERS	EACH					
704-1500	OBLITERATION OF PVMT MK	SF					
704-3501	PORTABLE PRECAST CONCRETE MED BARRIER	LF					
704-3510	PRECAST CONCRETE MED BARRIER - STATE FURNISHED	EACH					
704-4011	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2				2
762-0200	RAISED PAVEMENT MARKERS	EACH					
762-0420	SHORT TERM 4IN LINE - TYPE R	LF					
762-0430	SHORT TERM 4IN LINE - TYPE NR	LF					
772-2110	FLASHING BEACON - POST MOUNTED	EACH					

NOTE:
If additional signs are required, units will be calculated using the formula from Section III-19.06 of the Design Manual.
<http://www.dot.nd.gov/>

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Traffic Control Devices List

*Move closure as construction operations dictate.



1	2	3	4	5
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-1L-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1L-21
6	7	8	11	12
DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-2R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-2R-21
13	14	15	17	52
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-3-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24	SOUTH M3-3-24 CASS COUNTY 81 M1-6-24	DETOUR 500 FT W20-2-48
53	54	55	56	60
DETOUR 1500 FT W20-2-48	ROAD CLOSED AHEAD W20-3-48	ROAD CLOSED 1-5 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A-60 Barricade Mounted	ROAD CLOSED 1-5 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A-60	DETOUR M4-10-48 Barricade Mounted
62				
ROAD CLOSED R11-2-48 Barricade Mounted				

Work Area

Northbound Detour Route

Southbound Detour Route

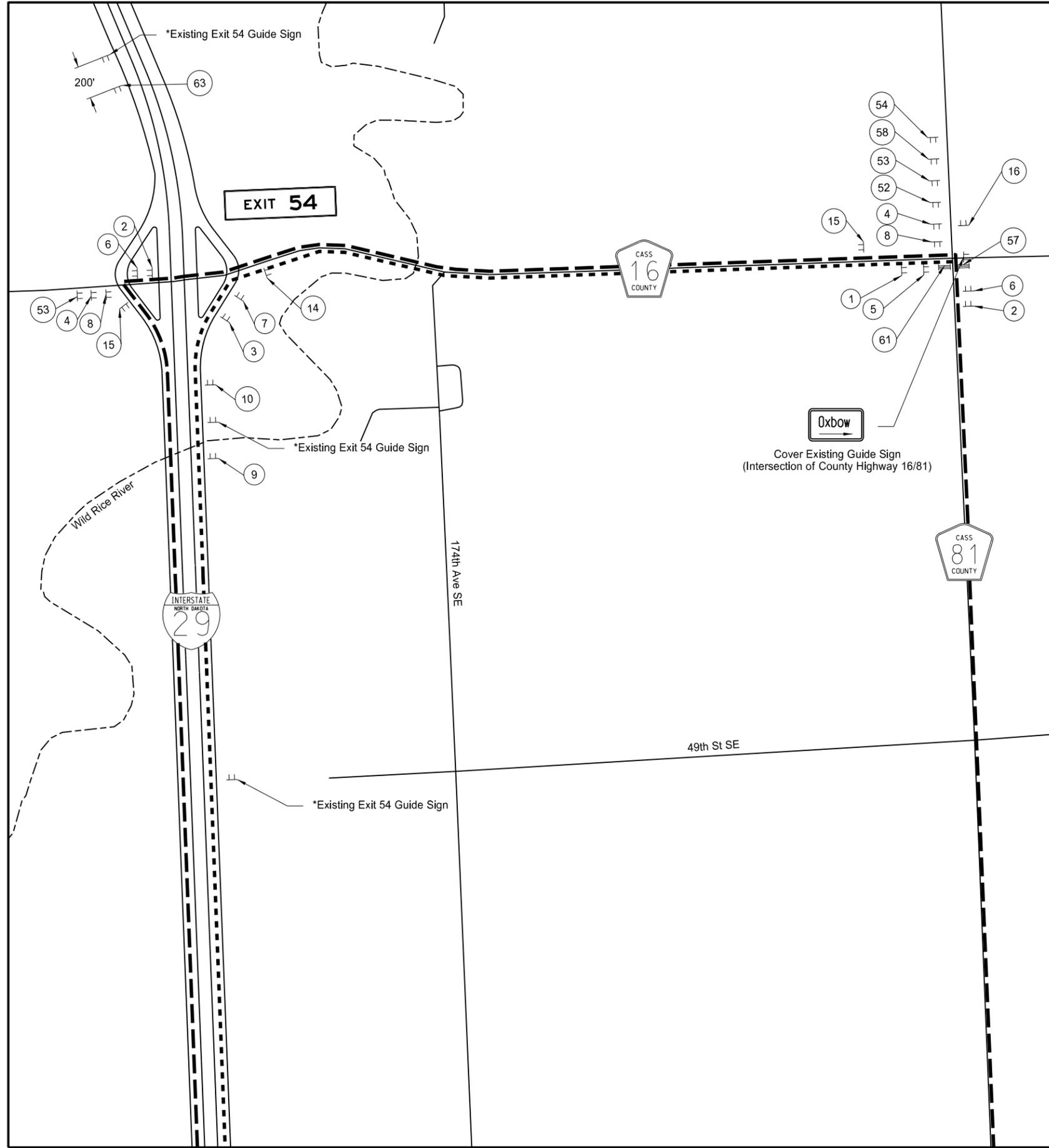
River Crossing

All signs shall be post mounted unless stated otherwise.



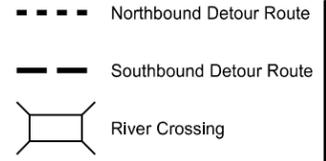
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OHB Levee
County Road 81
Utility Crossing/North Road Raise Detour



1	2	3	4	5
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 ← M5-1L-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 ← M5-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 → M5-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 → M5-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 ← M6-1L-21
6	7	8	9	10
DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 ← M6-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 → M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 → M6-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 ↗ M5-2R-21	DETOUR NORTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 ↗ M6-2R-21
14	15	16	52	53
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24	DETOUR NORTH M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR 500 FT W20-2-48	DETOUR 1500 FT W20-2-48
54	57	58	61	63
ROAD CLOSED AHEAD W20-3-48	ROAD CLOSED 2.5 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A-60	ROAD CLOSED 2.5 MILE AHEAD LOCAL TRAFFIC ONLY R11-3A-60	← DETOUR M4-10-48 Barricade Mounted	Oxbow EXIT 50 SS1

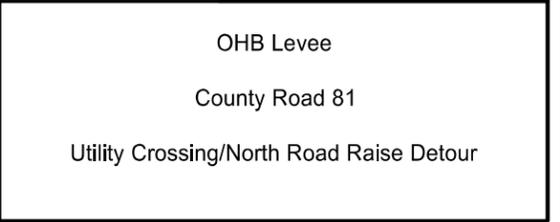
*Cover "Oxbow" on existing Exit 54 Signs. Submit method for covering for approval prior to covering.



All signs shall be post mounted unless stated otherwise.



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Bid Proposal



Meyer Contracting, Inc

11000 93rd Ave North

Minneapolis, MN 55369

Contact: Verlyn Schoep

Phone: 612.735.5855

Fax: 763.391.5960

Quote To: Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.
Phone: 701.499.5857

Job Name: Water Main Relocation
OHB Levee at Oxbow

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
10	16" STEEL CASING PIPE W/CLSM	300.00	LF	579.69	173,907.00
20	CATHODIC PROTECTION	1.00	LS	30,693.89	30,693.89
25	FURNISH 8" FUSIBLE PIPE, UNLOADING, & FUSION	1.00	LS	13,796.77	13,796.77
30	INSTALL 8" FUSIBLE PVC WATERLINE	400.00	LF	28.05	11,220.00
40	TEMP. CONNECT TO EXISTING 6" WATERLINE	2.00	EA	4,355.21	8,710.42
50	WELDING MOBILIZATION	1.00	LS	4,580.00	4,580.00
GRAND TOTAL					\$242,908.08



October 21, 2017

Mr. Christopher M Gross, Project Manager
Moore Engineering, Inc.
925 10th Ave E
West Fargo, ND 58078

Subject: Oxbow – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Change Order Request – Pothole & Protect Unmarked Oxbow Utilities

Dear Mr. Gross,

Meyer Contracting was required to locate and protect 2 unmarked waterlines and 1 unmarked electric line which crossed through the 8” sanitary trench on the west end of Oxbow Drive. Extra potholing time was required, causing a slowdown in Meyer’s production through this area.

Based on the aforementioned information and calculation of cost impact we hereby request additional compensation in the amount of \$1,927.60. Additionally, we believe this had a schedule impact of one calendar day and we request that the contract time be adjusted as such.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a light blue horizontal line.

Jeremy Gibbs
Meyer Contracting, Inc.

Work Change Directive Summary of Costs

Meyer Project Number: 171297
Owner Contract Number: WP-43CD
Owner Contract Name: Oxbow-Hickson-Bakke Ring Levee - Phases C & D
Change Order Request Number: 9000011
Change Order Request Name/Desc.: Protect Oxbow Utilities

LABOR ONLY

TOTAL: \$942.64

SUBSTANCE

	Unit	Quantity	Unit Cost	
(Use \$75 for MN & \$120 for ND) 10.83-HR Day/Person		1.11	\$120.00	TOTAL: \$132.96

EQUIPMENT w/OPERATOR

TOTAL: \$852.00

MATERIALS & RENTAL EQUIPMENT

Description	Unit	Quantity	Unit Cost	Tax (%)	Total Cost
					\$0.00
					\$0.00
					\$0.00
					\$0.00
					\$0.00
Management & Overhead (10%)					\$0.00
TOTAL:					\$0.00

SUBCONTRACTORS

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

MOBILIZATION

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

TOTAL: \$1,927.60







Date of Issuance:	<u>09/04/2017</u>	Effective Date:	<u>09/04/2017</u>
Owner:	<u>Metro Diversion Flood Authority</u>	Owner's Contract No.:	<u></u>
Contractor:	<u>Meyer Contracting</u>	Contractor's Project No.:	<u></u>
Engineer:	<u>Moore Engineering, Inc.</u>	Engineer's Project No.:	<u>1014-230</u>
Project:	<u>OHB Ring Levee</u>	Contract Name:	<u>Work Package 43 - Phases C and D</u>

Contractor is hereby directed to promptly execute this Field Order, issued in accordance with General Conditions Paragraph 11.01, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

Reference:	<u>N/A</u>	<u>Summary of Revisions - Sheet 100-1, -3, -4, & -5</u>
	<u>Specification(s)</u>	<u>Drawing(s) / Detail(s)</u>

Description:

1 – Traffic Control Updates

Make appropriate traffic control modifications as noted on the referenced traffic control drawing sheets. Payment will be made at the additional traffic control units installed as per the drawings. If modifications include items not listed in the traffic control devices list on Sheet 100-1, pricing is included in Work Change Directive No. 1.

2 – Main Avenue Improvements

Owner agrees to:

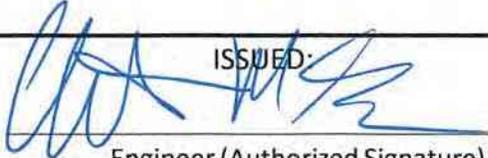
- Pay for pavement removals by measured volume converted to weight, per your submitted RFI
- Waive the requirement to weigh Salvaged Base Course (SBC) that you'll be crushing and placing on Cass County Highway 81. Meyer would verify through surveying top of subgrade and top of SBC that specified thickness of SBC has been provided.

Meyer agrees to:

- Excavate 4" of existing material from Main Avenue near Bakke Subdivision, from Cass County Highway 81 north 1,600 LF, and dispose. Estimated 500 CY
- Place, compact, and grade 4" of crushed SBC. Estimated 1,000 tons.
- Work can be performed whenever it fits conveniently with Meyer's schedule, but prior to the interim completion date.

Attachments:

- 1 – Traffic Control Drawing updates (5 pages)
- 2 – Jeffrey Ebsch August 23rd email to Todd Frerk

ISSUED:  RECEIVED: 

By: _____ By: _____
Engineer (Authorized Signature) Contractor (Authorized Signature)

Title: Designer of Record Title: _____ PROJECT MANAGER

Date: 9-15-17 Date: _____ 9/15/17

Copy to: Owner

From: [Ebsch, Jeffrey](#)
To: tfrerk@meverci.com
Cc: [Chris Gross](#)
Subject: Proposal - Main Avenue, Bakke
Date: Wednesday, August 23, 2017 10:06:18 AM

Todd

Cass County would like to propose the following to Meyer.

We would support your request to:

- Pay for pavement removals by measured volume converted to weight, per your submitted RFI
- Waive the requirement to weigh Salvaged Base Course (SBC) that you'll be crushing and placing on Cass County Highway 81. Meyer would verify through surveying top of subgrade and top of SBC, that specified thickness of SBC has been provided.

Meyer would agree to:

- Excavate 4" of existing material from Main Avenue near Bakke Subdivision, from Cass County Highway 81 north 1,600 LF, and dispose. Estimated 500 CY
- Place, compact, and grade 4" of crushed SBC. Estimated 1,000 tons.
- Work can be performed whenever it fits conveniently with Meyer's schedule, but prior to the interim completion date.

The one concern would be to make sure it's adequately crushed to meet SBC gradation spec, as this material will be used for surfacing.

This would be a no cost change proposal.

Jeffrey L. Ebsch, P.E.

Assistant County Engineer – Metro Flood Diversion Authority

Cass County Highway Department

1201 Main Avenue West

West Fargo, North Dakota 58078-1301

(701) 205-2384 **(C)**

(701) 298-2394 **(D)**

Summary of Revisions to Traffic Control Plans

Rev. 8/23/2017

OHB Levee

WP-43CD

Section 100 Sheet 1

1. Revised R11-2-48 from 476 Units to 504 Units.
2. Revised R11-4a-60 from 93 Units to 155 Units.
3. Added SS1 for 40 Units.
4. Revised 704-1000 from 3923 Total Units to 4053 Total Units.
5. Revised 704-1052 from 23 EA to 27 EA.

Section 100 Sheet 3

1. Added Type III Barricades and Sign #62 on Paul Bunyan Drive.
2. Added a call showing the Type III Barricades and Sign #62 to be moved from the grade raise to South of Oxbow Drive work limits as contractor operations dictate.

Section 100 Sheet 4

1. Added SS1 as Sign #63.
2. Added requirements to cover a portion of the Existing Exit 54 Guide Signs (3 total signs).
3. Added requirements to cover the existing guide sign at CR 16 and CR 81 intersection.

Section 100 Sheet 5

1. Added Construction Sign Detail Sheet for SS1.

Revised (2)

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	WP-43CD	100	1

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.	NO.	L	MA			
D3-36	36"x48"	STREET NAME SIGN (Sign and installation only)	4	4	4	4	6	24	
G20-1-60	60"x24"	ROAD WORK NEXT - MILES					28		
G20-15-60	60"x24"	WORK IN PROGRESS NO WORK IN PROGRESS (Sign and installation only)					10		
G20-2-48	48"x24"	END ROAD WORK	2	2	2	2	19	38	
G20-3-36	36"x18"	PILOT CAR FOLLOW ME (Mounted to back of pilot car)					18		
G20-10-108	108"x48"	CONTRACTOR SIGN					64		
G20-50a-72	72"x36"	ROAD WORK NEXT - MILES RT & LT ARROWS					30		
G20-50b-72	72"x36"	ROAD WORK NEXT - MILES RT or LT ARROW					30		
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE \$80 WHEN WORKERS PRESENT					59		
G20-36	36"x24"	WORK ZONE BUSINESS SIGN DETAILS (Standard Drawing D-704-4)	31	31	31	31	16	496	
M1-1-30	30"x30"	INTERSTATE ROUTE MARKER (Post and installation only)					10		
M1-4-24	24"x24"	U.S. ROUTE MARKER (Post and installation only)					10		
M1-5-24	24"x24"	STATE ROUTE MARKER (Post and installation only)					10		
M1-6-24	24"x24"	COUNTY BY ROUTE MARKER (Post and Installation Only)	43	18		63	10	630	
M1-6-24	24"x24"	COUNTY 18 ROUTE MARKER (Post and Installation Only)					10		
M3-1-24	24"x12"	NORTH (Mounted on route marker post)	25	9	34	34	7	238	
M3-2-24	24"x12"	EAST (Mounted on route marker post)					7		
M3-3-24	24"x12"	SOUTH (Mounted on route marker post)	18	3	21	21	7	147	
M3-4-24	24"x12"	WEST (Mounted on route marker post)					7		
M4-5-24	24"x12"	TO (Mounted on route marker post)					7		
M4-8-24	24"x12"	DETOUR (Mounted on route marker post)	41	8	47	47	7	329	
M4-8a-24	24"x36"	END DETOUR (Mounted on route marker post)	1	1	1	1	11	11	
M4-9-30	30"x24"	DETOUR ARROW RIGHT or LEFT AND RT or LT					15		
M4-10-48	48"x18"	DETOUR ARROW RIGHT or LEFT	2	2	2	2	23	46	
M6-1-21	21"x18"	ARROW AHD AND RT or LT (Mounted on route marker post)	15	15	15	15	7	105	
M6-2-21	21"x18"	ARROW AHD UP & RT or LT (Mounted on route marker post)	2	2	2	2	7	14	
M6-1-21	21"x18"	ARROW RT or LT (Mounted on route marker post)	15	33	48	48	7	336	
M6-2-21	21"x18"	ARROW UP & RT or LT (Mounted on route marker post)	2	2	2	2	7	14	
M6-3-21	21"x18"	ARROW AHD (Mounted on route marker post)	1	18	19	19	7	133	
R1-1-30	36"x30"	STOP	2	2	2	2	17	34	
R1-1-48	48"x48"	STOP					32		
R1-1a-18	18"x18"	STOP AND SLOW PADDLE Back to Back					5		
R1-2-60	60"x60"	YIELD					29		
R2-1-24	24"x30"	SPEED LIMIT					15		
R2-1-48	48"x60"	SPEED LIMIT	2	2	2	2	39	78	
R2-1a-24	24"x18"	MINIMUM FEE \$80 (Mounted on Speed Limit post)					10		
R3-1-48	48"x48"	LEFT or RIGHT LANE MUST TURN LEFT or RIGHT					35		
R4-1-48	48"x60"	DO NOT PASS					39		
R4-1-48	48"x60"	KEEP RIGHT SYMBOL					39		
R5-1-48	48"x48"	DO NOT ENTER					35		
R6-2-24	24"x24"	NO TRUCKS	1	1	1	1	14	14	
R6-1-36	36"x12"	ONE WAY RIGHT or LEFT					13		
R7-1-12	12"x18"	NO PARKING					11		
R10-6-24	24"x30"	STOP HERE ON RED					16		
R11-2-48	48"x30"	ROAD CLOSED	3	15	18	18	28	804	
R11-2a-48	48"x30"	STREET CLOSED					28		
R11-3a-60	60"x30"	ROAD CLOSED - MILES AHEAD LOCAL TRAFFIC ONLY	4	4	4	4	31	124	
R11-3b-60	60"x30"	STREET CLOSED - MILES AHEAD LOCAL TRAFFIC ONLY					31		
R11-4a-48	48"x30"	TRUCK ROUTE	3	2	5	5	31	155	
R14-1-24	24"x18"	TRUCK ROUTE	2	2	2	2	13	26	
W1-3-48	48"x48"	RIGHT or LEFT SHARP REVERSE CURVE ARROW					35		
W1-4-48	48"x48"	RIGHT or LEFT REVERSE CURVE ARROW					35		
W1-4b-48	48"x48"	DOUBLE RIGHT or LEFT REVERSE CURVE ARROW					35		
W1-6-48	48"x24"	LARGE ARROW					28		
W1-1-48	48"x48"	STOP AHEAD SYMBOL					35		
W3-3-48	48"x48"	SIGNAL AHEAD SYMBOL					35		
W3-4-48	48"x48"	BE PREPARED TO STOP					35		
W5-4-48	48"x48"	SPEED REDUCTION AHEAD	1	1	1	1	28	28	
W4-2-48	48"x48"	RIGHT or LEFT LANE TRANSITION SYMBOL					35		
W5-1-48	48"x48"	ROAD NARROWS	1	1	1	1	35	35	
W1-5-48	48"x48"	THRU TRAFFIC RIGHT LANE					35		
W5-9-48	48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW					35		
W5-3-48	48"x48"	TWO WAY TRAFFIC SYMBOL					35		
W1-1-48	48"x48"	BUMP					35		
W5-3-48	48"x48"	PAVEMENT ENDS					35		
W5-7-48	48"x48"	LOOSE GRAVEL					35		
W5-9a-48	48"x48"	SHOULDER DROP-OFF					35		
W5-11-48	48"x48"	UNEVEN LANES					35		
W5-12-48	48"x48"	NO CENTER STRIPE					35		
W5-33-48	48"x48"	TRUCKS ENTERING HIGHWAY					35		
W5-54-48	48"x48"	TRUCKS ENTERING AHEAD or FT					35		
W5-55-48	48"x48"	TRUCKS CROSSING AHEAD or FT					35		
W5-56-48	48"x48"	TRUCKS EXITING HIGHWAY					35		
W5-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL					35		
W12-2-48	48"x48"	LOW CLEARANCE SYMBOL (Mounted on warning sign post)					11		
W13-1-24	24"x24"	MIR ADVISORY SPEED PLATE (Mounted on warning sign post)					39		
W13-4-48	48"x60"	RAMP ARROW					23		
W5-1-48	48"x48"	NO PASSING ZONE					35		
W20-1-48	48"x48"	ROAD WORK AHEAD or FT or MILE	2	2	2	2	38	76	
W20-2-48	48"x48"	DETOUR AHEAD or FT	6	4	10	10	35	350	
W20-3-48	48"x48"	ROAD or STREET CLOSED AHEAD or FT	3	3	3	3	35	105	
W20-4-48	48"x48"	ONE LANE ROAD AHEAD or FT					35		

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.	NO.	L	MA			
W20-5-48	48"x48"	RIGHT or LEFT LANE CLOSED AHEAD or FT					35		
W20-7a-48	48"x48"	FLAGGING SYMBOL					10		
W20-7b-24	24"x18"	FEET (Mounted on warning sign post)					35		
W20-8-48	48"x48"	STREET CLOSED					35		
W20-51-48	48"x48"	EQUIPMENT WORKING					12		
W20-52-54	54"x12"	NEXT - MILES (Mounted on warning sign post)					35		
W21-1a-48	48"x48"	WORKERS SYMBOL					35		
W21-2-48	48"x48"	FRESH OIL					35		
W21-3-48	48"x48"	ROAD MACHINERY AHEAD or FT					35		
W21-5-48	48"x48"	SHOULDER WORK					35		
W1-5b-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED					35		
W21-5b-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED AHEAD or FT					35		
W21-6a-48	48"x48"	SURVEY CREW AHEAD					35		
W21-5b-48	48"x48"	BRIDGE PAINTING AHEAD or FT					35		
W21-51-48	48"x48"	MATERIAL ON ROADWAY					35		
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK					35		
	24"x24"	TAKE TURNS (8" D letters) (Mounted on stop sign post)	2	2	2	2	11	22	

SPECIAL SIGNS	SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT	UNITS PER AMOUNT	UNITS SUB TOTAL
				BY PHASE NO.	NO.	L	MA			
SS1	42"x72"	OXBOW EXIT 50		1			1	1	40	40

SPEC & CODE	TRAFFIC CONTROL SIGNS	TOTAL UNITS	4053
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SPEC & CODE	DESCRIPTION	UNIT	QUANTITY BY PHASE NO.				TOTAL QUANTITY
			NR	L	MA	T	
704-0100	FLAGGING	MHR					
704-1041	ATTENUATION DEVICE TYPE B-55	EACH					
704-1043	ATTENUATION DEVICE TYPE B-65	EACH					
704-1044	ATTENUATION DEVICE TYPE B-70	EACH					
704-1050	TYPE B BARRICADES	EACH					
704-1051	TYPE C BARRICADES	EACH					
704-1062	TYPE B BARRICADES	EACH	10	16	2	27	27
704-1060	DELINEATOR DRUMS	EACH	25			25	25
704-1055	TRAFFIC CONES	EACH					
704-1067	TUBULAR MARKERS	EACH	31	50		81	81
704-1070	DELINEATOR	EACH					
704-1072	FLEXIBLE DELINEATORS	EACH					
704-1081	VERTICAL PANELS - BACK TO BACK	EACH					
704-1085	SEQUENCING ARROW PANEL - TYPE A	EACH					
704-1086	SEQUENCING ARROW PANEL - TYPE B	EACH					
704-1087	SEQUENCING ARROW PANEL - TYPE C	EACH					
704-1088	SEQUENCING ARROW PANEL - TYPE C - CROSSOVER	EACH					
704-1095	TYPE B FLASHERS	EACH					
704-1500	OBLETATION OF PVMT MK	SE					
704-3501	PORTABLE PRECAST CONCRETE MED BARRIER	LF					
704-5110	PRECAST CONCRETE MED BARRIER - STATE FURNISHED	EACH					
704-4011	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2			2	2
762-0200	RAISED PAVEMENT MARKERS	EACH					
762-0430	SHORT TERM 4IN LINE - TYPE E	LF					
762-0430	SHORT TERM 4IN LINE - TYPE NR	LF					
772-2110	FLASHING BEACON - POST MOUNTED	EACH					

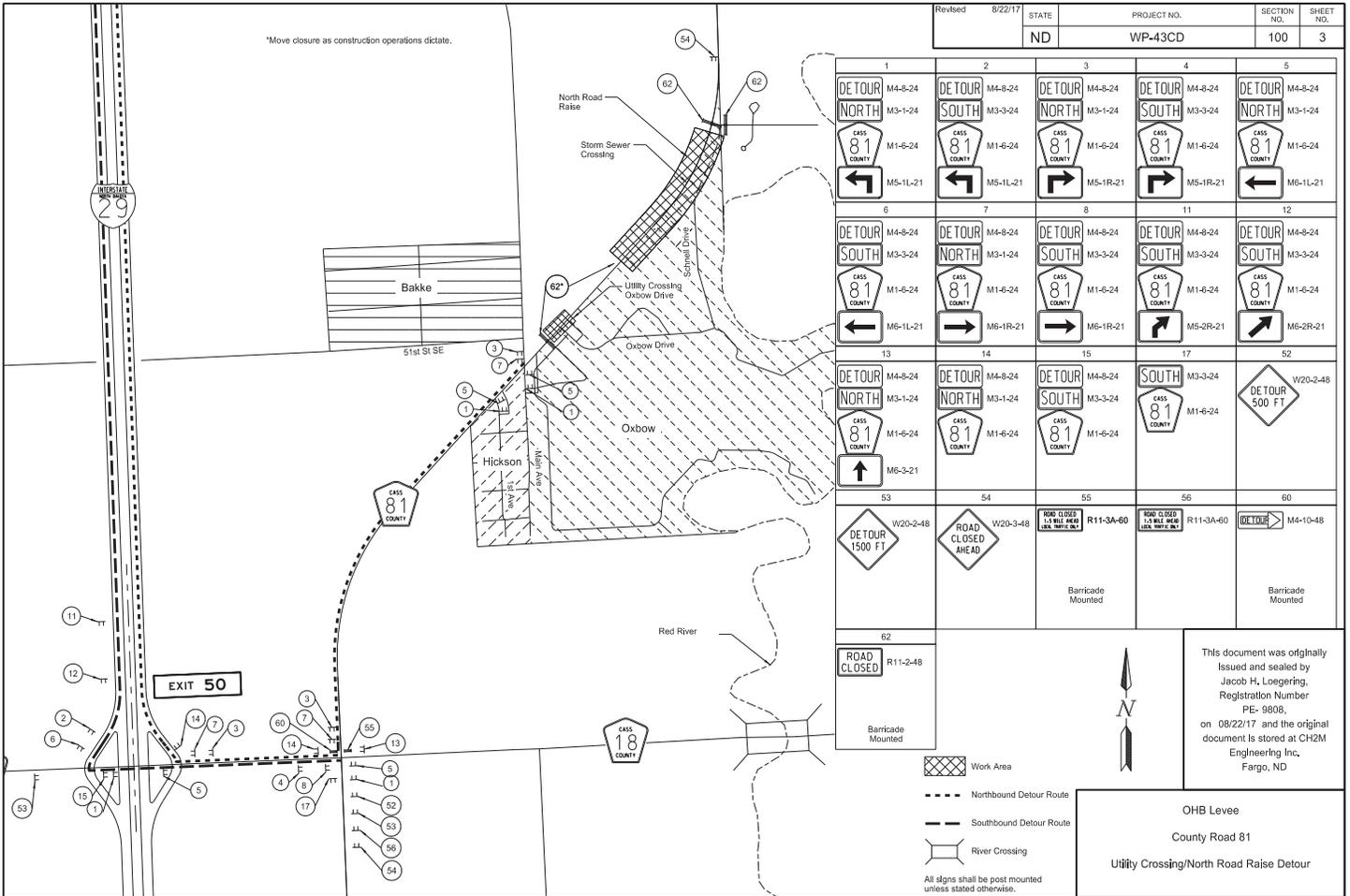
NOTE:
If additional signs are required, units will be calculated using the formula from Section III-19.06 of the Design Manual.
<http://www.dot.nd.gov/>

This document was originally issued and sealed by Jacob H. Loegering, Registration Number PE-9808, on 8/22/17 and the original document is stored at CH2M Engineering Inc. Fargo, ND.

Traffic Control Devices List

*Move closure as construction operations dictate.

Revised	8/22/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	WP-43CD	100	3



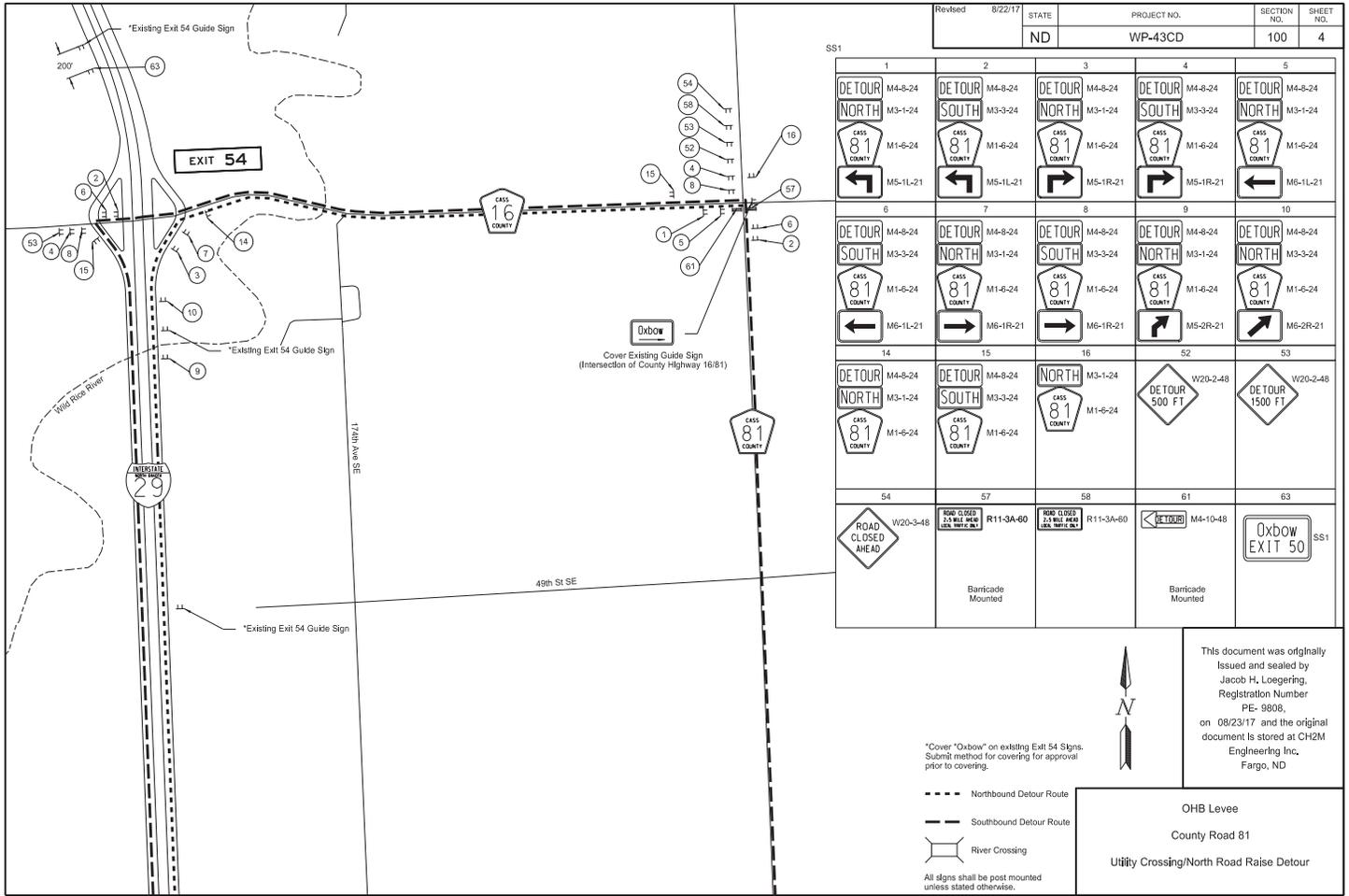
1	2	3	4	5
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-1L-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1L-21
6	7	8	11	12
DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M5-2R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-2R-21
13	14	15	17	52
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-3-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24	DETOUR SOUTH M3-3-24 CASS COUNTY 81 M1-6-24	DETOUR 500 FT W20-2-48
53	54	55	56	60
DETOUR 1500 FT W20-2-48	ROAD CLOSED AHEAD W20-3-48	ROAD CLOSED 1/4 MILE AHEAD R11-3A-60	ROAD CLOSED 1/4 MILE AHEAD R11-3A-60	DETOUR M4-10-48 Barricade Mounted
62				
ROAD CLOSED R11-2-48 Barricade Mounted				

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OHB Levee
County Road 81
Utility Crossing/North Road Raise Detour

- Work Area
- Northbound Detour Route
- Southbound Detour Route
- River Crossing
- All signs shall be post mounted unless stated otherwise.

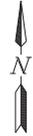


Revised	8/22/17	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
		ND	WP-43CD	100	4

1	2	3	4	5
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 MS-1L-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 MS-1L-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 MS-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 MS-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 MS-1L-21
6	7	8	9	10
DETOUR SOUTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M6-1L-21	DETOUR NORTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-1R-21	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24 M5-2R-21	DETOUR NORTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24 M6-2R-21
14	15	16	52	53
DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR SOUTH M4-8-24 M3-3-24 CASS COUNTY 81 M1-6-24	DETOUR NORTH M4-8-24 M3-1-24 CASS COUNTY 81 M1-6-24	DETOUR 500 FT W20-2-48	DETOUR 500 FT W20-2-48
54	57	58	61	63
ROAD CLOSED AHEAD W20-3-48	ROAD CLOSED 2.5 MI. AHEAD R11-3A-60	ROAD CLOSED 2.5 MI. AHEAD R11-3A-60	DETOUR M4-10-48	Oxbow EXIT 50 SS1

*Cover "Oxbow" on existing Exit 54 Signs. Submit method for covering for approval prior to covering.

- Northbound Detour Route
 - Southbound Detour Route
 - River Crossing
- All signs shall be post mounted unless stated otherwise.



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OHB Levee
County Road 81
Utility Crossing/North Road Raise Detour

WORK CHANGE DIRECTIVE

01

TO: Meyer Contracting PROJECT NO.: WP-43CD
 PROJECT: OHB Ring Levee – Phases C and D (Levee, Pump Station, Road and Utility Improvements)
 OWNER: Metro Flood Diversion Authority
 ENGINEER: Houston-Moore Group
 OWNER’S REPRESENTATIVE: CH2M

DESCRIPTION OF WORK:

The work includes:

- 1 – Removal of unsuitable soil material under the footprint of the levee due to remant electrical, communication, sanitary/storm sewer, or water service lines from demolition contracts. Excavated material will be placed in Zone B backfill areas of the 43E.2.E demolition contract. Work will be done on a T & M basis with an estimated time frame of 3-4 days with 2 scrapers and other misc. equipment. 2017 equipment rates are attached to this WCD.
- 2 – Removal of unsuitable soil material under the footprint of the levee such as sand lenses, excessive organic material, etc. as determined by the geotechnical engineer during inspection trench construction. Unsuitable material will be placed in the spoil area of the golf course rough grade. Estimated quantity to be removed is 3,000 CY at a rate of \$4.00/CY.
- 3 – Additional traffic control measures not included in the original Contract Bid Documents. This included coverings of “Oxbow” wording on Exit 54 signs, adding post mounted signs along Main Avenue, adding skid mounts to existing signs along Main Avenue, add “slow down” signs just north of Bakke Subdivision as agreed to by Cass County Highway Engineers and Pleasant Township. Estimated cost of additional traffic control measures is \$3,885.00.
- 4 – OCC golf course excavation near Oxbow Drive and levee crossing. Excavated material will be placed in the spoil area of the golf course rough grade for LU to fine grade. Estimated quantity to be removed is 2,000 CY at a rate of \$4.00/CY.
- 5 – Installation of 16” steel casing pipe and 8” fusible PVC pipe for the Cass Rural Water utility relocation under the levee near Station B125+25 on the west side of County Road 81. Work will also include installation of the cathodic protection and temporary connection to the existing 6” waterline. Estimated cost to be \$242,908.08 as indicated in the September 14, 2017 Bid Proposal received from Meyer Contracting, Inc. (see attached).

REASON FOR CHANGE(S):

1. Due to remant electrical, communication, sanitary/storm sewer, or water service lines from the demolition contracts, Meyer needed to remove these utilities prior to constructing the levee.
2. Due to unsuitable material found during construction of the inspection trench, material was removed and suitable levee embankment material was installed.
3. Additional traffic control signs and sign covers were added along Interstate 29 to better direct traffic around project area.
4. In order to better accommodate construction schedules of both Meyer Contracting and Landscapes Unlimited, Meyer Contracting will excavate the remaining portion of the golf course pond near Oxbow Drive.

5. Due to Cass Rural Water's scheduling, Cass Rural Water requested Meyer Contracting, Inc. to install the 16" casing pipe and 8" fusible PVC in order to minimize delay on the construction of the levee on the west side of County Road 81.

ATTACHMENTS (List Supporting Documents):

1. Meyer Contracting 2017 Equipment Rates (4 pages)
2. Traffic Control Drawing updates (5 pages)
3. Meyer Contracting September 14, 2017 Bid Proposal for CRW work (2 pages)

DESIGN IMPACT (List Impacts):

Is the described change outside of the design parameters? Yes / No

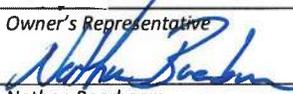
If yes, DOR and USACE signoff are required and documented below:

_____ Christopher Gross P.E. Designer of Record	_____ Date	_____ [Name] USACE PM	_____ Date
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It is understood that this Work Change Directive will not change the Contract Price or Times, but is evidence that the parties expect a Change Order to be subsequently issued reflecting the changes.

Recommended by:

Ordered by:

_____ Owner's Representative  Nothun Boerboom Engineer, City of Forgo	_____ Date 9/20/2017	_____ Owner  Michael J. Rea/Robert W. Wilson Co-Executive Director	_____ Date 9/20/17
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- Copy: Owner
 Designer of Record
 USACE
 Owner's Representative

Summary of Revisions to Traffic Control Plans

Rev. 8/23/2017

OHB Levee

WP-43CD

Section 100 Sheet 1

1. Revised R11-2-48 from 476 Units to 504 Units.
2. Revised R11-4a-60 from 93 Units to 155 Units.
3. Added SS1 for 40 Units.
4. Revised 704-1000 from 3923 Total Units to 4053 Total Units.
5. Revised 704-1052 from 23 EA to 27 EA.

Section 100 Sheet 3

1. Added Type III Barricades and Sign #62 on Paul Bunyan Drive.
2. Added a call showing the Type III Barricades and Sign #62 to be moved from the grade raise to South of Oxbow Drive work limits as contractor operations dictate.

Section 100 Sheet 4

1. Added SS1 as Sign #63.
2. Added requirements to cover a portion of the Existing Exit 54 Guide Signs (3 total signs).
3. Added requirements to cover the existing guide sign at CR 16 and CR 81 intersection.

Section 100 Sheet 5

1. Added Construction Sign Detail Sheet for SS1.

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.						
			NR	L	MA	T			
D3-36	36"x6"	STREET NAME SIGN (Sign and installation only)					6	24	
G20-1-60	60"x24"	ROAD WORK NEXT ___ MILES				4	34		
G20-1b-60	60"x24"	WORK IN PROGRESS/ NO WORK IN PROGRESS (Sign and installation only)					26		
G20-2-48	48"x24"	END ROAD WORK	2			2	19	38	
G20-4-36	36"x18"	PILOT CAR FOLLOW ME (Mounted to back of pilot car)					18		
G20-10-108	108"x48"	CONTRACTOR SIGN					64		
G20-50a-72	72"x36"	ROAD WORK NEXT ___ MILES RT & LT ARROWS					37		
G20-52a-72	72"x24"	ROAD WORK NEXT ___ MILES RT or LT ARROW					30		
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE \$80 WHEN WORKERS PRESENT					59		
G20-36	36"x24"	WORK ZONE BUSINESS SIGN DETAILS (Standard Drawing D-704-4)	31			31	16	496	
M1-1-36	36"x36"	INTERSTATE ROUTE MARKER (Post and installation only)					10		
M1-4-24	24"x24"	U.S. ROUTE MARKER (Post and installation only)					10		
M1-5-24	24"x24"	STATE ROUTE MARKER (Post and installation only)					10		
M1-6-24	24"x24"	COUNTY 81 ROUTE MARKER (Post and Installation Only)	43	10		53	10	530	
M1-6-24	24"x24"	COUNTY 18 ROUTE MARKER (Post and Installation Only)					10		
M3-1-24	24"x12"	NORTH (Mounted on route marker post)	25	9		34	7	238	
M3-2-24	24"x12"	EAST (Mounted on route marker post)					7		
M3-3-24	24"x12"	SOUTH (Mounted on route marker post)	18	3		21	7	147	
M3-4-24	24"x12"	WEST (Mounted on route marker post)					7		
M4-5-24	24"x12"	TO (Mounted on route marker post)					7		
M4-8-24	24"x12"	DETOUR (Mounted on route marker post)	41	6		47	7	329	
M4-8a-24	24"x36"	END DETOUR (Mounted on route marker post)	1			1	11	11	
M4-9-30	30"x24"	DETOUR ARROW RIGHT or LEFT/AHD AND RT or LT					15		
M4-10-48	48"x18"	DETOUR ARROW RIGHT or LEFT	2			2	23	46	
M5-1-21	21"x15"	ARROW AHD AND RT or LT (Mounted on route marker post)	15			15	7	105	
M5-2-21	21"x15"	ARROW AHD UP & RT or LT (Mounted on route marker post)	2			2	7	14	
M6-1-21	21"x15"	ARROW RT or LT (Mounted on route marker post)	15	33		48	7	336	
M6-2-21	21"x15"	ARROW UP & RT or LT (Mounted on route marker post)	2			2	7	14	
M6-3-21	21"x15"	ARROW AHD (Mounted on route marker post)	1	18		19	7	133	
R1-1-30	30"x30"	STOP	2			2	17	34	
R1-1-48	48"x48"	STOP					32		
R1-1a-18	18"x18"	STOP and SLOW PADDLE Back to Back					5		
R1-2-60	60"x60"	YIELD					29		
R2-1-24	24"x30"	SPEED LIMIT					15		
R2-1-48	48"x60"	SPEED LIMIT	2			2	39	78	
R2-1a-24	24"x18"	MINIMUM FEE \$80 (Mounted on Speed Limit post)					10		
R3-7-48	48"x48"	LEFT or RIGHT LANE MUST TURN LEFT or RIGHT					35		
R4-1-48	48"x60"	DO NOT PASS					39		
R4-7-48	48"x60"	KEEP RIGHT SYMBOL					39		
R5-1-48	48"x48"	DO NOT ENTER					35		
R5-2-24	24"x24"	NO TRUCKS	1			1	14	14	
R6-1-36	36"x12"	ONE WAY RIGHT or LEFT					13		
R7-1-12	12"x18"	NO PARKING					11		
R10-6-24	24"x36"	STOP HERE ON RED					16		
R11-2-48	48"x30"	ROAD CLOSED	3	15		18	28	504	
R11-2a-48	48"x30"	STREET CLOSED					28		
R11-3a-60	60"x30"	ROAD CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY	4			4	31	124	
R11-3c-60	60"x30"	STREET CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY					31		
R11-4a-60	60"x30"	STREET CLOSED TO THRU TRAFFIC	3	2		5	31	155	
R14-1-24	24"x18"	TRUCK ROUTE	2			2	13	26	
W1-3-48	48"x48"	RIGHT or LEFT SHARP REVERSE CURVE ARROW					35		
W1-4-48	48"x48"	RIGHT or LEFT REVERSE CURVE ARROW					35		
W1-4b-48	48"x48"	DOUBLE RIGHT or LEFT REVERSE CURVE ARROW					35		
W1-6-48	48"x24"	LARGE ARROW					26		
W3-1-48	48"x48"	STOP AHEAD SYMBOL					35		
W3-3-48	48"x48"	SIGNAL AHEAD SYMBOL					35		
W3-4-48	48"x48"	BE PREPARED TO STOP					35		
W3-5-48	48"x48"	SPEED REDUCTION AHEAD	1			1	35	35	
W4-2-48	48"x48"	RIGHT or LEFT LANE TRANSITION SYMBOL					35		
W5-1-48	48"x48"	ROAD NARROWS	1			1	35	35	
W5-8-48	48"x48"	THRU TRAFFIC RIGHT LANE					35		
W5-9-48	48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW					35		
W6-3-48	48"x48"	TWO WAY TRAFFIC SYMBOL					35		
W8-1-48	48"x48"	BUMP					35		
W8-3-48	48"x48"	PAVEMENT ENDS					35		
W8-7-48	48"x48"	LOOSE GRAVEL					35		
W8-9a-48	48"x48"	SHOULDER DROP-OFF					35		
W8-11-48	48"x48"	UNEVEN LANES					35		
W8-12-48	48"x48"	NO CENTER STRIPE					35		
W8-53-48	48"x48"	TRUCKS ENTERING HIGHWAY					35		
W8-54-48	48"x48"	TRUCKS ENTERING AHEAD or ___ FT.					35		
W8-55-48	48"x48"	TRUCKS CROSSING AHEAD or ___ FT.					35		
W8-56-48	48"x48"	TRUCKS EXITING HIGHWAY					35		
W9-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL					35		
W12-2-48	48"x48"	LOW CLEARANCE SYMBOL					35		
W13-1-24	24"x24"	___ MPH ADVISORY SPEED PLATE (Mounted on warning sign post)					11		
W13-4-48	48"x60"	RAMP ARROW					39		
W14-3-48	48"x36"	NO PASSING ZONE					23		
W20-1-48	48"x48"	ROAD WORK AHEAD or ___ FT or ___ MILE	2			2	35	70	
W20-2-48	48"x48"	DETOUR AHEAD or ___ FT	6	4		10	35	350	
W20-3-48	48"x48"	ROAD or STREET CLOSED AHEAD or ___ FT.	3			3	35	105	
W20-4-48	48"x48"	ONE LANE ROAD AHEAD or ___ FT.					35		

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED				TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
			BY PHASE NO.						
			NR	L	MA	T			
W20-5-48	48"x48"	RIGHT or LEFT LANE CLOSED AHEAD or ___ FT.						35	
W20-7a-48	48"x48"	FLAGGING SYMBOL						35	
W20-7k-24	24"x18"	___ FEET (Mounted on warning sign post)						10	
W20-8-48	48"x48"	STREET CLOSED						35	
W20-51-48	48"x48"	EQUIPMENT WORKING						35	
W20-52-54	54"x12"	NEXT ___ MILES (Mounted on warning sign post)						12	
W21-1a-48	48"x48"	WORKERS SYMBOL						35	
W21-2-48	48"x48"	FRESH OIL						35	
W21-3-48	48"x48"	ROAD MACHINERY AHEAD or ___ FT						35	
W21-5-48	48"x48"	SHOULDER WORK						35	
W21-5a-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED						35	
W21-5b-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED AHEAD or ___ FT.						35	
W21-6a-48	48"x48"	SURVEY CREW AHEAD						35	
W21-50-48	48"x48"	BRIDGE PAINTING AHEAD or ___ FT.						35	
W21-51-48	48"x48"	MATERIAL ON ROADWAY						35	
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK						35	
	24"x24"	TAKE TURNS (6" D letters) (Mounted on stop sign post)	2			2	11	22	

SPECIAL SIGNS

SIGN NUMBER	SIGN SIZE	DESCRIPTION	NR	L	MA	T	TOTAL AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
SS1	42"x72"	OXBOW EXIT 50	1			1	1	40	40

SPEC & CODE

704-1000	TRAFFIC CONTROL SIGNS	TOTAL UNITS	4053
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SPEC & CODE	DESCRIPTION	UNIT	QUANTITY BY PHASE NO.				TOTAL QUANTITY
			NR	L	MA	T	
			704-0100	FLAGGING	MHR		
704-1041	ATTENUATION DEVICE-TYPE B-55	EACH					
704-1043	ATTENUATION DEVICE-TYPE B-65	EACH					
704-1044	ATTENUATION DEVICE-TYPE B-70	EACH					
704-1050	TYPE I BARRICADES	EACH					
704-1051	TYPE II BARRICADES	EACH					
704-1052	TYPE III BARRICADES	EACH	10	15	2		27
704-1060	DELINEATOR DRUMS	EACH	25				25
704-1065	TRAFFIC CONES	EACH					
704-1067	TUBULAR MARKERS	EACH	31	50			81
704-1070	DELINEATOR	EACH					
704-1072	FLEXIBLE DELINEATORS	EACH					
704-1081	VERTICAL PANELS - BACK TO BACK	EACH					
704-1085	SEQUENCING ARROW PANEL - TYPE A	EACH					
704-1086	SEQUENCING ARROW PANEL - TYPE B	EACH					
704-1087	SEQUENCING ARROW PANEL - TYPE C	EACH					
704-1088	SEQUENCING ARROW PANEL - TYPE C - CROSSOVER	EACH					
704-1095	TYPE B FLASHERS	EACH					
704-1500	OBLITERATION OF PVMT MK	SF					
704-3501	PORTABLE PRECAST CONCRETE MED BARRIER	LF					
704-3510	PRECAST CONCRETE MED BARRIER - STATE FURNISHED	EACH					
704-4011	PORTABLE CHANGEABLE MESSAGE SIGN	EACH	2				2
762-0200	RAISED PAVEMENT MARKERS	EACH					
762-0420	SHORT TERM 4IN LINE - TYPE R	LF					
762-0430	SHORT TERM 4IN LINE - TYPE NR	LF					
772-2110	FLASHING BEACON - POST MOUNTED	EACH					

NOTE:
If additional signs are required, units will be calculated using the formula from Section III-19.06 of the Design Manual.
<http://www.dot.nd.gov/>

This document was originally issued and sealed by Jacob H. Loegering, Registration Number PE-9808, on 8/22/17 and the original document is stored at CH2M Engineering Inc. Fargo, ND.

Traffic Control Devices List

Work Change Directive Summary of Costs

Meyer Project Number: 171297
Owner Contract Number: WP-43CD
Owner Contract Name: Oxbow-Hickson-Bakke Ring Levee - Phases C & D
Change Order Request Number: 9000014
Change Order Request Name/Desc.: Additional Traffic Control - Special Signs

LABOR ONLY

TOTAL: \$0.00

SUBSTANCE

	Unit	Quantity	Unit Cost		TOTAL:
(Use \$75 for MN & \$120 for ND) 8-HR Day/Person		0.00	\$120.00		\$0.00

EQUIPMENT w/OPERATOR

TOTAL: \$0.00

MATERIALS & RENTAL EQUIPMENT

Description	Unit	Quantity	Unit Cost	Tax (%)	Total Cost
North Star Invoice	LS	1.00	\$3,700.00		\$3,700.00
					\$0.00
					\$0.00
					\$0.00
					\$0.00
Management & Overhead (10%)					\$185.00
TOTAL:					\$3,885.00

SUBCONTRACTORS

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

MOBILIZATION

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

TOTAL: \$3,885.00



NorthStar Safety, Inc.

794 West Main Avenue
 West Fargo, ND 58078
 Tel: 701-282-2110
 Fax: 701-281-1400
 www.northstarsafety.com

CHANGE ORDER - 9/12/17

<u>Project</u>	<u>Job No.</u>	<u>Location</u>	<u>State</u>	<u>Bid Date</u>
Oxbow-Hickson-Bakke Ring Levee-Phases C and D WP 43CD		Cass County	North Dakota	7/6/2017

NorthStar Safety, Inc. (NSI) will supply and install all signs, barricades and channelization devices listed below. All daily maintenance, relocating and/or resetting devices would be the contractor's responsibility. NSI would return upon completion of the project to remove all items supplied by us. Our quote is based on the completion dates stated in the proposal and does NOT include flagging, pilot car operations, providing notifications, removal and resetting mailboxes, orange safety fence, or jersey barrier.

<u>Item No.</u>	<u>Description</u>	<u>Unit</u>	<u>Quantity</u>	<u>Unit Price</u>	<u>Bid Amount</u>
CO	Extra Traffic Control	LS	1	\$ 3,700.00	\$ 3,700.00

- * - Work Included in Extra Traffic Control:
 - 1 - 72" x 48" Special Sign
 - 1 - 24" x 30" Special Sign
 - 1 - 30" x 18" Special Sign
 - 4 - Interstate Signs (covered and eventually uncovered)

Payments are to be made by progress payments. If a bond is required, add \$4.50/M. Our quote does NOT include Railway Protection Insurance, TERO or any other contract charges. This proposal may be withdrawn if not accepted within 30 days.

Authorized
 Acceptance
 Signature _____
 Print Name _____

Authorized
 Signature 

 Stephan Lindemann
 Cell: 701-219-1731
 E-mail: slindemann@northstarsafety.com



October 18, 2017

Christopher M Gross, PE, CFM
Moore Engineering, Inc.
925 10th Avenue East
West Fargo, ND 58078

Subject: Oxbow – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Adjust STMH-1 to Match Existing 18” RCP

Dear Mr. Gross,

The existing 18" RCP to be connected to STMH-1 was 5 feet higher than plan drawings showed. We were required to cut the top of 72" barrel section and raise the MH.

Based on the aforementioned information and calculation of cost impact we hereby request additional compensation in the amount of \$4,706.46. Additionally, we believe this had a schedule impact of one calendar day and we request that the contract time be adjusted as such.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a light blue horizontal line.

Jeremy Gibbs
Meyer Contracting, Inc.

Work Change Directive Summary of Costs

Meyer Project Number: 171297
Owner Contract Number: WP-43CD
Owner Contract Name: Oxbow-Hickson-Bakke Ring Levee - Phases C & D
Change Order Request Number: 9000015
Change Order Request Name/Desc.: Adjust STMH-1 to Match Existing 18" RCP

LABOR ONLY

TOTAL: \$1,910.05

SUBSTANCE

	Unit	Quantity	Unit Cost		
(Use \$75 for MN & \$120 for ND)	10.83-HR Day/Person	2.77	\$120.00		TOTAL: \$332.41

EQUIPMENT w/OPERATOR

TOTAL: \$2,365.00

MATERIALS & RENTAL EQUIPMENT

Description	Unit	Quantity	Unit Cost	Tax (%)	Total Cost
Manhole Blocks	EA	30.00	\$3.00		\$90.00
					\$0.00
					\$0.00
					\$0.00
					\$0.00
Management & Overhead (10%)					\$9.00
TOTAL:					\$99.00

SUBCONTRACTORS

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

MOBILIZATION

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

TOTAL: \$4,706.46

Sewer and Water
2017 PRICE LIST

<u>Manhole Adjusting Rings</u>	<u>PRICE</u>	<u>#PER PALLET</u>	<u>WT. PER ITEM</u>
24" X 2" M.H. Rings	\$11.53	20	80 LBS
24" X 3" M.H. Rings	\$16.51	15	112 LBS
24" X 4" M.H. Rings	\$21.80	10	150 LBS
24" X 6" M.H. Rings	\$32.59	7	220 LBS
24" X 12" M.H. Rings	\$64.36	4	435 LBS
26" X 2" M.H. Rings	\$11.97	20	115 LBS
26" X 4" M.H. Rings	\$23.73	10	205 LBS
27" X 2" M.H. Rings	\$11.54	20	88 LBS
27" X 3" M.H. Rings	\$16.51	15	125 LBS
27" X 4" M.H. Rings	\$21.80	10	160 LBS
27" X 6" M.H. Rings	\$32.59	7	235 LBS
27" X 12' M.H. Rings	\$64.36	4	460 LBS
30" X 2" M.H. Rings	\$15.27	20	80 LBS
30" X 4" M.H. Rings	\$28.73	10	150 LBS
36" X 2" M.H. Rings	\$28.15	20	105 LBS
Hydrant Blocks	\$13.33	20	97 LBS
Horseshoes	\$14.73	20	95 LBS
Catch Basins (2'X3'X2")	\$17.82	20	104 LBS
Catch Basins (2'X3'X 3")	\$25.11	12	160 LBS
Catch Basins (2'X3'X4")	\$32.21	10	195 LBS
Catch Basins (2'X3'x6")	\$47.41	7	257 LBS
Manhole Block	\$3.00	60	50 LBS
4"X8"X16" Solid Block	\$3.24	72	35 LBS
6"X8"X16" Solid Block	\$3.49	48	54 LBS
8"X8"X16" Solid Block	\$4.24	36	75 LBS
Headwalls 4"	\$145.00		210 LBS
Headwalls 6"	\$150.00		320 LBS
Headwalls 8"	\$165.00		320 LBS
Manhole Brick	\$0.77	540 OR 270	5 LBS
Spec Mix TCC 4250	\$9.88	40	80 LBS
Spec Mix FOB TCC Concrete	\$8.50	40	
Type 1 Portland Cement	\$15.75	40	94 LBS
Air Entrainment 32oz jug	\$10.00		
Eull's Pallet Deposit	\$12.00		40 LBS
Spec Mix TCC Pallet	\$20.00		40 LBS

Used 1/2 pallet of manhole blocks



October 22, 2017

Mr. Christopher M Gross, Project Manager
Moore Engineering, Inc.
925 10th Ave E
West Fargo, ND 58078

Subject: Oxbow – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Change Order Request – Reroute Oxbow Drive Watermain

Dear Mr. Gross,

Meyer was directed in the field to reroute the Oxbow Drive watermain because the existing watermain was within the alignment of the new storm sewer line. As a result of doing this additional work, we have incurred additional costs and a delay to our schedule.

Based on the aforementioned information and calculation of cost impact we hereby request additional compensation in the amount of \$17,027.45. Additionally, we believe this had a schedule impact of two calendar days and we request that the contract time be adjusted as such.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a light blue horizontal line.

Jeremy Gibbs
Meyer Contracting, Inc.

Work Change Directive Summary of Costs

Meyer Project Number: 171297
Owner Contract Number: WP-43CD
Owner Contract Name: Oxbow-Hickson-Bakke Ring Levee - Phases C & D
Change Order Request Number: 9000016
Change Order Request Name/Desc.: Oxbow Drive Watermain Realignment

LABOR ONLY

TOTAL: \$5,240.79

SUBSTANCE

	Unit	Quantity	Unit Cost		
(Use \$75 for MN & \$120 for ND)	10.83-HR Day/Person	7.89	\$120.00		TOTAL: \$947.37

EQUIPMENT w/OPERATOR

TOTAL: \$6,874.00

MATERIALS & RENTAL EQUIPMENT

Description	Unit	Quantity	Unit Cost	Tax (%)	Total Cost
DSG Invoice	LS	1.00	\$3,416.89	5.500	\$3,604.82
					\$0.00
					\$0.00
					\$0.00
					\$0.00
Management & Overhead (10%)					\$360.48
TOTAL:					\$3,965.30

SUBCONTRACTORS

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

MOBILIZATION

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

TOTAL: \$17,027.45

Oxbow Drive Watermain Realignment		Date		Date		Date		Date		Date		Date		Date		Date	
		9/19/2017		9/20/2017 (2 crews)													
Pc360Lc-10 Komatsu Excavator W/Ripper Tooth	\$247.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Ec460Cl Or Ec480Cl Volvo Excavator	\$266.00	8.00	\$2,128.00	5.00	\$1,330.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Ec460Cl Or Ec480Cl Volvo Excavator W/Compaction Wheel	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator	\$266.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Concrete Pulverizer	\$303.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Ripper Tooth	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc400 Komatsu Excavator W/Compaction Wheel	\$277.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
349El Caterpillar Excavator - Variable Gauge	\$276.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pc800Lc-8 Komatsu Excavator	\$401.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Dozers																	
D5Klgp Caterpillar Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D5Klgp Caterpillar Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
700Jlgp John Deere Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
700Jlgp John Deere Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D51 Komatsu Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D51 Komatsu Dozer W/Gps System	\$188.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
850K John Deere Dozer	\$170.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
850C John Deere Dozer	\$195.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D61Px Komatsu Dozer	\$190.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D65 Komatsu Dozer	\$195.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D65 Komatsu Dozer W/Gps System	\$213.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Tlxw Or D6Tlgp Caterpillar Dozer	\$195.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Tlxw Or D6Tlgp Caterpillar Dozer W/Gps System	\$213.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Nlgp Caterpillar Dozer	\$190.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
D6Nlgp Caterpillar Dozer W/Gps System	\$208.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Loaders																	
L70F Volvo Wheel Loader	\$162.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
950G, H Or K Caterpillar Wheel Loader	\$181.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
L120E Volvo Wheel Loader	\$181.00	3.00	\$543.00	3.00	\$543.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
L110E Or F Volvo Wheel Loader	\$181.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
953C Caterpillar Track Loader	\$167.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Scrapers																	
621B Caterpillar Scraper	\$213.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
621B Caterpillar Scraper W/Gps	\$231.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
627M Caterpillar Scraper (Rental)	\$386.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Motor Graders																	
140H, 143H Or 140M Caterpillar Motor Grader	\$182.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
140H, 143H Or 140M Caterpillar Motor Grader W/Gps	\$200.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Compactors																	
54" Smooth Drum Or Sheepsfoot Compactor	\$142.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
66" Smooth Drum Or Sheepsfoot Compactor	\$145.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
84" Smooth Drum Or Sheepsfoot Compactor	\$160.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Rt-820 Wacker Vibratory Walk Behind Compactor	\$36.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Wacker Plate Compactor	\$17.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Offroad Trucks																	
A30 Volvo Articulated Truck	\$226.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Hm400 Komatsu Articulated Truck	\$252.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
A40F Volvo Articulated Truck	\$252.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
A30 Volvo Articulated Water Tanker Truck	\$225.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Pumps																	
8" Mwi Dewatering Pump	\$45.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
4" Hydra-Tech Hydraulic Pump	\$45.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00		\$0.00
Farm Equipment																	

INVOICE DATE	INVOICE NO.
09/21/17	D329542

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DAKOTA SUPPLY GROUP
 SDS 12-2439
 PO BOX 86
 MINNEAPOLIS, MN. 55486-2439
 701-237-9440



Type: 77

Page 01

DATE ORDERED	DATE SHIPPED	PICK TICKET NO.	WRITTEN BY	CUSTOMER PURCHASE ORDER NO.	JOB NUMBER JOB NAME
09/18/17	09/21/17	D329542	KLL	171297	

SOLD TO: MEYER CONTRACTING INC
 032243 11000 93RD AVE NORTH
 MAPLE GROVE, MN 55369

SHIP TO: MEYER CONTRACTING INC
 OXBOW COUNTRY CLUB
 BRIAN 763-203-4485
 HICKSON, ND 58047

	DESCRIPTION		QUANTITY ORDERED	UNIT MSR	QUANTITY B/O	QUANTITY SHIPPED	UNIT PRICE	PER	AMOUNT
001	6C9 6" C900 PVC 235PSI DR18 20FT NORTHERN PIPE PRODUCTS INC	021489	300 200	FT		300	6.21	FT	1863.00
002	EBA2008PV 8 MJ PVC MEGALUG RESTRAINT EBAA EBAA IRON SALES INC	117463	4	EA		4	52.17	EA	208.68
003	6MJ90L 6"X 90 MJ DI BEND L/ACC TYLER UNION	022453	2 1	EA		2	52.89	EA	105.78
004	6MJTL 6" MJ DI TEE L/ACC TYLER UNION	022496	1	EA		1	76.50	EA	76.50
005	6MJPL 6" MJ DI PLUG TYLER UNION	022602	1	EA		1	27.98	EA	27.98
006	6MJ22L 6 X 22 MJ DI BEND L/ACC TYLER UNION	022473	1	EA		1	39.34	EA	39.34
007	CMKNT96 6 MJ PVC STARGRIP RESTRAINT 4000 STAR PIPE PRODUCTS	135686	22 10	EA		22	25.95	EA	570.90
008	VRM-06 6" RW MJ GATE VALVE AFC L/ACC AMERICAN FLOW CONTROL	136824	3 1	EA		3	734.76	EA	2204.28

Thank You!

A SERVICE CHARGE OF UP TO 1.5% (18% ANNUAL) IS MADE ON PAST DUE ACCOUNTS.

			SUBTOTAL	
			OTHER TAX	
SHIPPED VIA	SHIPPED FROM	DUE DATE	INVOICE TOTAL	

CONTINUED

Please note our remittance address is for PAYMENTS ONLY. All other correspondence should be sent to your local DSG branch. Save time and money: Dakota Supply Group Inc. offers ACH payments and electronic invoicing by fax or email. Please contact us if you are interested!

INVOICE DATE	INVOICE NO.
09/21/17	D329542

REMIT TO

DAKOTA SUPPLY GROUP
 SDS 12-2439
 PO BOX 86
 MINNEAPOLIS, MN. 55486-2439
 701-237-9440



Type: 77

Page 02

DATE ORDERED	DATE SHIPPED	PICK TICKET NO.	WRITTEN BY	CUSTOMER PURCHASE ORDER NO.	JOB NUMBER JOB NAME
09/18/17	09/21/17	D329542	KLL	171297	

SOLD TO: MEYER CONTRACTING INC
 032243 11000 93RD AVE NORTH
 MAPLE GROVE, MN 55369

SHIP TO: MEYER CONTRACTING INC
 OXBOW COUNTRY CLUB
 BRIAN 763-203-4485
 HICKSON, ND 58047

	DESCRIPTION		QUANTITY ORDERED	UNIT MSR	QUANTITY B/O	QUANTITY SHIPPED	UNIT PRICE	PER	AMOUNT
009	VRM-08 8" RW MJ GATE VALVE AFC L/ACC AMERICAN FLOW CONTROL	136825	2	EA		2	1169.33	EA	2338.66
010	VX668SHD 668S VAL BX HVY DUTY 3 PC S BOX 3 PC = 26THD + 60HD + 36BHD SIGMA IMPORT (VB268LA) STAR IMPORT (VB668SHD) SIGMA CORPORATION	136902	5	EA		5	121.99	EA	609.95
011	514LID 5-1/4" WTR DROP LID 6850-55-60 SIGMA# VB2600W STAR# VBLIDW TYLER UNION	022395	1 5	EA		5	10.77	EA	53.85
012	VXAA VAL BX ADPTR II F/3"-8" AFC TO FIT 2PC VALVE BOX ADAPTOR INC	076465	1 5	EA		5	35.65	EA	178.25
013	8MJGK 8" MJ PLAIN RUBBER GSKT TYLER UNION	022419	4	EA		4	2.62	EA	10.48
014	6MJGK 6" MJ PLAIN RUBBER GSKT TYLER UNION	022418	8 23	EA		23	2.19	EA	50.37
015	6MJGKTR 6 MJ TRANSITION GSKT	022425	5 10	EA		10	3.06	EA	30.60

Thank You!

A SERVICE CHARGE OF UP TO 1.5% (18% ANNUAL) IS MADE ON PAST DUE ACCOUNTS.

SUBTOTAL									
							OTHER		
							TAX		
SHIPPED VIA			SHIPPED FROM			DUE DATE		INVOICE TOTAL	

CONTINUED

Please note our remittance address is for PAYMENTS ONLY. All other correspondence should be sent to your local DSG branch.
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 Please contact us if you are interested!

INVOICE DATE	INVOICE NO.
09/21/17	D329542

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DAKOTA SUPPLY GROUP
 SDS 12-2439
 PO BOX 86
 MINNEAPOLIS, MN. 55486-2439
 701-237-9440



Type: 77

Page 03

DATE ORDERED	DATE SHIPPED	PICK TICKET NO.	WRITTEN BY	CUSTOMER PURCHASE ORDER NO.	JOB NUMBER JOB NAME
09/18/17	09/21/17	D329542	KLL	171297	

SOLD TO: MEYER CONTRACTING INC
 032243 11000 93RD AVE NORTH
 MAPLE GROVE, MN 55369

SHIP TO: MEYER CONTRACTING INC
 OXBOW COUNTRY CLUB
 BRIAN 763-203-4485
 HICKSON, ND 58047

	DESCRIPTION		QUANTITY ORDERED	UNIT MSR	QUANTITY B/O	QUANTITY SHIPPED	UNIT PRICE	PER	AMOUNT
016	TYLER UNION 34312MJSSBT 3/4" X 3-1/2" MJ STN-STL T-BLT MIDWEST SUPPLY OF MINNESOTA	117393	162	EA		162	3.15	EA	510.30
017	34SSNTHV 3/4" SS HEAVY HEX NUT COATED MIDWEST SUPPLY OF MINNESOTA	142598	162	EA		162	0.79	EA	127.98
018	6MJ45L 6 X 45 MJ DI BEND L/ACC TYLER UNION	022463	1 2	EA		2	42.84	EA	85.68
019	HYMAX6 6 HYMAX CPLG 642-768 KRAUSZ USA, INC.	070532	1 2	EA		2	265.09	EA	530.18
020	6MJ11L 6 X 11 MJ DI BEND L/ACC TYLER UNION	022484	1	EA		1	40.65	EA	40.65
021	6MJ22L 6 X 22 MJ DI BEND L/ACC TYLER UNION	022473	1	EA		1	39.34	EA	39.34

YOUR BUSINESS IS APPRECIATED.
 PLEASE CALL IF WE CAN BE OF
 ASSISTANCE. THANK YOU.

Thank You!

A SERVICE CHARGE OF UP TO 1.5% (18% ANNUAL) IS MADE ON PAST DUE ACCOUNTS.

SUBTOTAL							9702.75						
DLV	25.00	LBR	.00	RESTOCK	.00	MSC	.00	FRT	.00	OTHER	25.00		
										5.500	TAX	00	498.89

SHIPPED VIA	SHIPPED FROM	DUE DATE	INVOICE TOTAL
DT	WAREHOUSE-FARGO WATER EQ	10/25/17	10226.64

Please note our remittance address is for PAYMENTS ONLY. All other correspondence should be sent to your local DSG branch.
 Save time and money: Dakota Supply Group Inc. offers ACH payments and electronic invoicing by fax or email
 Please contact us if you are interested!

Item #	QTY Used	Unit Price	Per	Amount
1	200	\$ 6.21	FT	\$ 1,242.00
3	1	\$ 52.89	EA	\$ 52.89
6	1	\$ 39.34	EA	\$ 39.34
7	10	\$ 25.95	EA	\$ 259.50
8	1	\$ 734.76	EA	\$ 734.76
11	1	\$ 10.77	EA	\$ 10.77
12	1	\$ 35.65	EA	\$ 35.65
14	8	\$ 2.19	EA	\$ 17.52
15	5	\$ 3.06	EA	\$ 15.30
16	162	\$ 3.15	EA	\$ 510.30
17	162	\$ 0.08	EA	\$ 12.80
18	1	\$ 42.84	EA	\$ 42.84
19	1	\$ 265.09	EA	\$ 265.09
SUBTOTAL				\$ 3,238.76
TAX				5.5%
TOTAL				\$ 3,416.89



October 20, 2017

Mr. Christopher M Gross, Project Manager
Moore Engineering, Inc.
925 10th Ave E
West Fargo, ND 58078

Subject: Oxbox – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Change Order Request – Redirect 3” Watermain into 6” Watermain Under Levee

Dear Mr. Gross,

We have been required to protect the 6” watermain through the levee due to the new 8” line not being installed yet. We had to redirect the 3” watermain into the 6” so the 3” could be removed and the Sprint conduit could be installed. This work is not included in our Contract. As a result of doing this additional work, we have incurred additional costs and a delay to our schedule.

Please understand that delays such as this one have and will continue to cause a substantial negative impact on our schedule and our costs. We have invested substantial equipment and manpower in this project; we estimate our daily cost to be approximately \$75,000 per day. Anything that can be done to mitigate additional delays is appreciated and is necessary to reduce and eliminate any additional costs related to standby and decreased productivity.

Based on the aforementioned information and calculation of cost impact we hereby request additional compensation in the amount of \$5,644.72. Additionally, we believe this had a schedule impact of one calendar day and we request that the contract time be adjusted as such.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a light blue horizontal line.

Jeremy Gibbs
Meyer Contracting, Inc.

Work Change Directive Summary of Costs

Meyer Project Number: 171297
Owner Contract Number: WP-43CD
Owner Contract Name: Oxbow-Hickson-Bakke Ring Levee - Phases C & D
Change Order Request Number: 9000018
Change Order Request Name/Desc.: Redirect 3in Watermain to 6in Watermain

LABOR ONLY

TOTAL: \$1,483.39

SUBSTANCE

	Unit	Quantity	Unit Cost		
(Use \$75 for MN & \$120 for ND)	10.83-HR Day/Person	2.45	\$120.00		TOTAL: \$293.63

EQUIPMENT w/OPERATOR

TOTAL: \$3,252.00

MATERIALS & RENTAL EQUIPMENT

Description	Unit	Quantity	Unit Cost	Tax (%)	Total Cost
DSG Invoice	LS	1.00	\$559.73		\$559.73
					\$0.00
					\$0.00
					\$0.00
					\$0.00
Management & Overhead (10%)					\$55.97
TOTAL:					\$615.70

SUBCONTRACTORS

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
				\$0.00
				\$0.00
				\$0.00
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

MOBILIZATION

Description	Unit	Quantity	Unit Cost	Total Cost
				\$0.00
Management & Overhead (10%)				\$0.00
TOTAL:				\$0.00

TOTAL: \$5,644.72



4557 15th Ave North
PO Box 128
Fargo, ND 58102
Ph# 701-237-0222

**** CASH INVOICE ****
REF. NO.: D349112

9/26/17 13:49:30

SOLD TO MEYER CONTRACTING INC 11000 93RD AVE NORTH MAPLE GROVE, MN PH# 763 391-5959 55369	SHIP TO MEYER CONTRACTING INC oxbow country club brian 763-203-4485 hickson, ND 58047	SPECIAL INSTRUCTIONS
---	---	-----------------------------

WRITTEN BY	DATE ORDERED	ACCOUNT NO.	JOB NAME	PURCHASE ORDER NO.	SLMN.	SHIPPED FROM	PAGE NO.
MTW	9:42:12 9/26/17	032243		171297		GAT WAREHOUSE-FARGO WATER EQUI	

LINE NO.	DESCRIPTION	LOCATION	QTY. ORDERED	U/M	QTY. BACKORDERED	QTY. SHIPPED	UNIT PRICE	PER	AMOUNT
----- PAYMENT BY CREDIT CARD -----									
	VISA	559.73 *****1388			APPROVAL 006398				
001	3P2GJ 3 CL200 PVC PIPE GF 20' SDR21	021506 P ROW 15	40	FT		40	1.200	FT	48.00
002	6MJRDJ 6 X 3 MJ DI RDCR L/ACC	135732 Y4 ROW 2	1	EA		1	34.320	EA	34.32
003	6MJ90L 6" X 90 MJ DI BEND L/ACC	022453 Y4 ROW 2	1	EA		1	52.890	EA	52.89
004	3MJ90L 3 X 90 MJ DI BEND L/ACC	036959 Y4 ROW 1	1	EA		1	29.730	EA	29.73
005	3MJCAL 3" MJ DI CAP L/ACC	135649 Y4 ROW 1	1	EA		1	10.750	EA	10.75
006	6MJCAL 6" MJ DI CAP L/ACC	022614 Y4 ROW 1	1	EA		1	20.980	EA	20.98
007	CMKNT96 6 MJ PVC STARGRIP RESTRAINT 4000	135686 Y5 FEN CE	4	EA		4	25.950	EA	103.80
008	CMKNT93 3 MJ PVC STARGRIP REST. 4000	135866 Y5 FEN CE	4	EA		4	19.870	EA	79.48

DELIVERY METHOD	PAY & ADD
PICKED UP DIRECT SHIPPED	OUR TRUCK <input checked="" type="checkbox"/>
SHIPPED VIA CITY TRUCK	BILL OF LADING NO.

A SERVICE CHARGE OF UP TO 1% PER MONTH (18% ANNUALLY) WILL BE MADE ON PAST ACCOUNTS. MATERIAL MAY NOT BE RETURNED WITHOUT PRIOR AUTHORIZATION. ALL MATERIAL ACCEPTED FOR RETURN IS SUBJECT TO A RESTOCKING CHARGE. SEE STANDARD TERMS AND CONDITIONS.

MATERIAL RECEIVED IN GOOD CONDITION BY (Signature)	ORDERED BY: BRIAN
<input checked="" type="checkbox"/> ALL LEADED BRASS PURCHASED IS ASSUMED FOR NON POTABLE USE	DATE SHIPPED
PROMISE DATE- 9/26/17	
ORDER PICKED BY	DATE
ORDER PACKED BY	DATE

CONTINUED :



4557 15th Ave North
 PO Box 128
 Fargo, ND 58102
 Ph# 701 237-0222

** CASH INVOICE **

REF. NO.: D349112

9/26/17 13:49:30

SOLD TO MEYER CONTRACTING INC 11000 93RD AVE NORTH MAPLE GROVE, MN 55369 PH# 763 391-5959	SHIP TO MEYER CONTRACTING INC oxbow country club brian 763-203-4485 hickson, ND 58047	SPECIAL INSTRUCTIONS
--	--	-----------------------------

WRITTEN BY	DATE ORDERED	ACCOUNT NO.	JOB NAME	PURCHASE ORDER NO.	SLMN.	SHIPPED FROM	PAGE NO.
MTW	9/26/17	032243		171297		GAT WAREHOUSE-FARGO WATER EQU	

LINE NO.	DESCRIPTION	QTY. ORDERED	U/M	QTY. BACKORDERED	QTY. SHIPPED	UNIT PRICE	PER	AMOUNT
009	6MJGKTR 6 MJ TRANSITION GSKT	022425	WH1 1	09	4	EA		12.24
010	3MJGKTR 3 MJ TRANSITION GSKT	022423	WH1 1	09	4	EA		9.76
011	34312MJSSBT 3/4" X 3-1/2" MJ STN-STL T-BLT	117393	WH1 14	A9	24	EA		75.60
012	345SNTHV 3/4" SS HEAVY HEX NUT COATED	142598	WH1 14	A7	24	EA		18.96
013	583SSBT 5/8" X 3" STN-STL HEX BLT	042315	WH1 15	A2	16	EA		24.48
014	58SSNT 5/8" STN-STL HEX NUT #304	042316	WH1 15	B1	16	EA		10.56
						Subtotal		530.55
						Cash Disc		.00
						Tax %		5.500
						Tax Amt		29.18
						Freight		.00
						Delivery		.00
						Labor		.00
						Restocking		.00
						Misc		.00
						Total		559.73

DELIVERY METHOD		PAY & ADD	
PICKED UP	DIRECT	SHIPPED	OUR TRUCK <input checked="" type="checkbox"/>
SHIPPED VIA		BILL OF LADING NO.	
CITY TRUCK			

A SERVICE CHARGE OF UP TO 1% PER MONTH (18% ANNUALLY) WILL BE MADE ON PAST ACCOUNTS.
 MATERIAL MAY NOT BE RETURNED WITHOUT PRIOR AUTHORIZATION. ALL MATERIAL ACCEPTED FOR RETURN IS SUBJECT TO A RESTOCKING CHARGE. SEE STANDARD TERMS AND CONDITIONS.

MATERIAL RECEIVED IN GOOD CONDITION BY (Signature)		ORDERED BY:	
<input checked="" type="checkbox"/> ALL LEADED BRASS PURCHASED IS ASSUMED FOR NON POTABLE USE ONLY.		BRIAN	
		DATE SHIPPED	
PROMISE DATE- 9/26/17			
ORDER PICKED BY	DATE	ORDER PACKED BY	DATE

END OF ORDER



October 18, 2017

Christopher M Gross, PE, CFM
moore engineering, inc.
925 10th Avenue East
West Fargo, ND 58078

Subject: Oxbow-Hickson-Bakke Ring Levee-Phases C and D; Work Package 43CD
Hauling of Additional Borrow Pit Stripping Stockpile

Dear Mr. Gross,

Based on our agreed survey, there was 14,875 CY of borrow pit excavation & stockpiling of unsuitable material from the North Pond. Per our discussion today, we propose to load and haul this material to levee station C15+00 to C30+00 for a price of \$4.75 per cubic yard.

Additionally, the previously sent time & materials cost summarization for the initial stockpiling of the additional borrow pit stripping will be re-submitted for your review & approval.

Lastly, please note that we will be requesting additional days of contract time for this once the time impact can be determined.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a white background.

Jeremy Gibbs
Meyer Contracting, Inc.



November 6, 2017

Christopher M Gross, PE, CFM
Moore Engineering, Inc.
925 10th Avenue East
West Fargo, ND 58078

Subject: Oxbow – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Change Order Request – Additional Air Release Valves

Dear Mr. Gross,

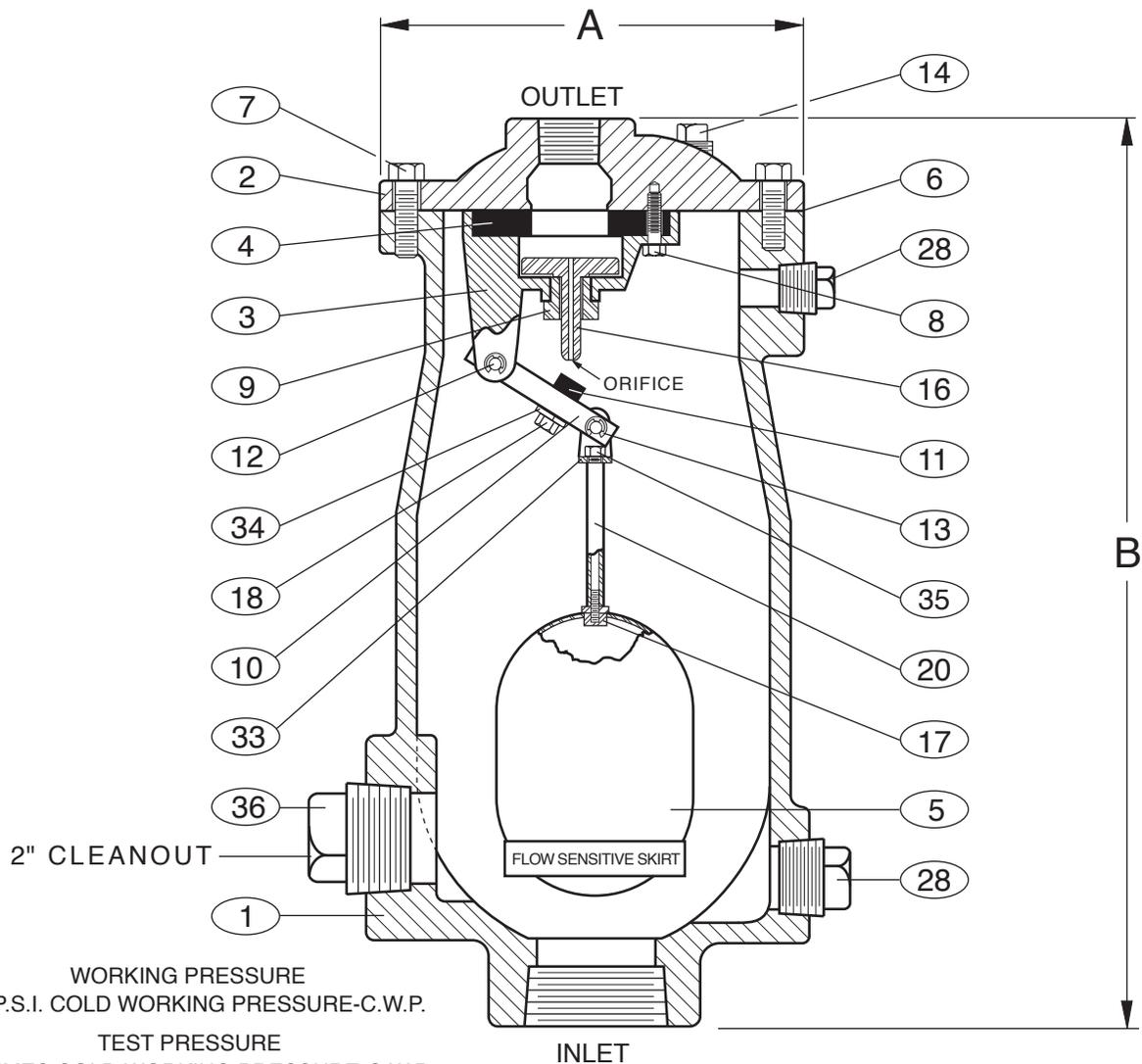
Meyer has been asked to furnish and install two additional air release valve assemblies on the 6” & 8” dual sanitary forcemain lines. We hereby requests additional compensation in the amount of \$7,189.16.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a white background.

Jeremy Gibbs
Meyer Contracting, Inc.



WORKING PRESSURE
150 P.S.I. COLD WORKING PRESSURE-C.W.P.
TEST PRESSURE
1.5 TIMES COLD WORKING PRESSURE-C.W.P.

VALVE SIZE	MODEL NO.	A	B	ORIFICE SIZE	INLET	OUTLET
1	801AS	7.00	14.75	1/8"	2"	1"
2	802AS	9.50	17.88	9/64"	2"	2"
3	803AS	11.00	19.25	11/64"	3"	3"
4	804AS	11.00	23.25	11/64"	4"	4"

(2) SS Wastewater
Combination Air Valve

- | | | |
|-------------------|-------------------------|-------------------------|
| 1 BODY | 9 BUSHING (2", 3" & 4") | 18 LOCK NUT |
| 2 COVER | 10 FLOAT ARM | 20 GUIDE SHAFT |
| 3 BAFFLE | 11 ORIFICE BUTTON | 28 PIPE PLUG |
| 4 SEAT | 12 PIVOT PIN | 33 CLEVIS |
| 5 FLOAT | 13 RETAINING RING | 34 LOCK WASHER |
| 6 GASKET | 14 PIPE PLUG | 35 GUIDE SHAFT RETAINER |
| 7 COVER BOLT | 16 PLUG | 36 PIPE PLUG |
| 8 RETAINING SCREW | 17 FLOAT RETAINER | |

SEE DRAWING NO. VM-801AS-M FOR STANDARD MATERIALS OF CONSTRUCTION.

Revised 9-5-12

STAINLESS STEEL WASTEWATER COMBINATION AIR VALVE

DATE 11-5-09



VALVE AND MANUFACTURING CORP.

DRWG. NO.

VM-801AS

STAINLESS STEEL WASTEWATER COMBINATION AIR VALVE

SERIES NO. 801AS

STANDARD MATERIALS OF CONSTRUCTION

<u>PART NO.</u>	<u>PART NAME</u>	<u>MATERIAL</u>
1	BODY	STAINLESS STEEL ASTM A351, GRADE CF8M
2	COVER	STAINLESS STEEL ASTM A351, GRADE CF8M
3	BAFFLE	STAINLESS STEEL ASTM A351, GRADE CF8M
4	SEAT	BUNA-N
5	FLOAT	STAINLESS STEEL T316, ASTM A240
6	GASKET	COMPRESSED NON-ASBESTOS FIBER
7	COVER BOLT	STAINLESS STEEL T316, ASTM F593
8	RETAINING SCREW	STAINLESS STEEL T316, ASTM F593
9	GUIDE BUSHING (2", 3" & 4")	STAINLESS STEEL T316, ASTM A582
10	FLOAT ARM	STAINLESS STEEL T316, ASTM A582
11	ORIFICE BUTTON	STAINLESS STEEL & BUNA-N
12	PIVOT PIN	STAINLESS STEEL T316, ASTM A276
13	RETAINING RING	STAINLESS STEEL PH 15-7 MO
14	PIPE PLUG	STAINLESS STEEL T316
16	PLUG	STAINLESS STEEL T316, ASTM A276
17	FLOAT RETAINER	STAINLESS STEEL T316, ASTM F880
18	LOCK NUT	STAINLESS STEEL T316, ASTM A594
20	GUIDE SHAFT (1", 2" & 4")	STAINLESS STEEL T316, ASTM A582
28	PIPE PLUG	STAINLESS STEEL T316
33	CLEVIS	STAINLESS STEEL T316, ASTM A240
34	LOCK WASHER	STAINLESS STEEL T316, ASTM A240
35	GUIDE SHAFT RETAINER	STAINLESS STEEL T316, ASTM A593
36	PIPE PLUG	STAINLESS STEEL T316

NOTE: ALL SPECIFICATIONS AS
LAST REVISED.

Revised 10-3-12

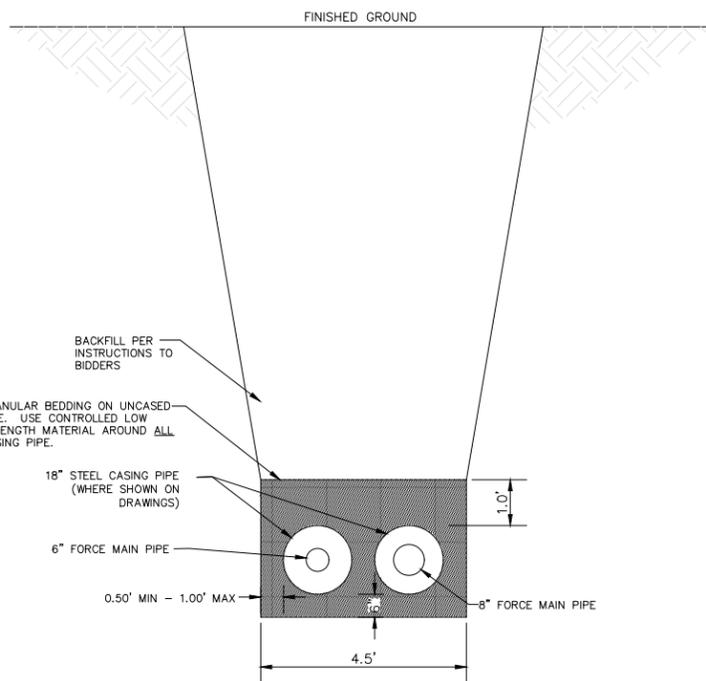
MATERIALS OF CONSTRUCTION

DATE 11/5/09

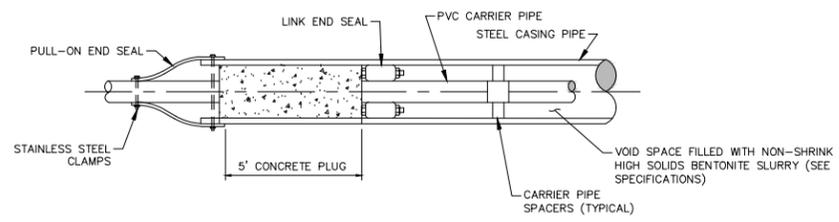
VAL-MATIC[®] VALVE AND MANUFACTURING CORP.

DRWG. NO.

VM-801AS-M

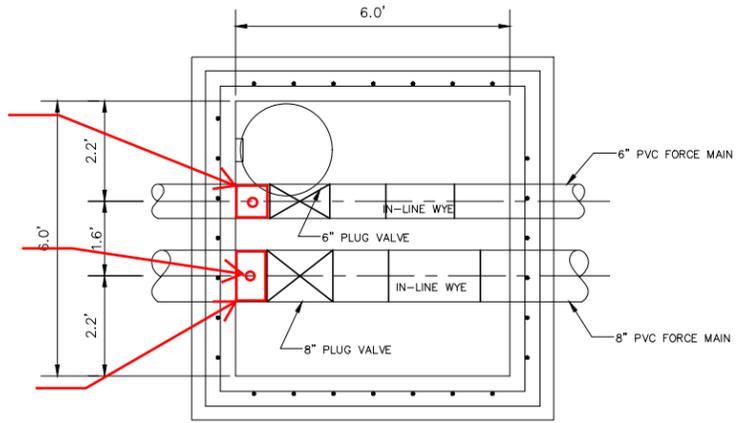


FORCE MAIN TRENCH
NO SCALE



CARRIER PIPE - CASING PIPE ENTRANCE DETAIL
NO SCALE
NOTE: SEE SPECIAL INSTRUCTIONS TO BIDDERS.

6"x2" SS Saddle
1" Combination ARV
8"x2" SS Saddle



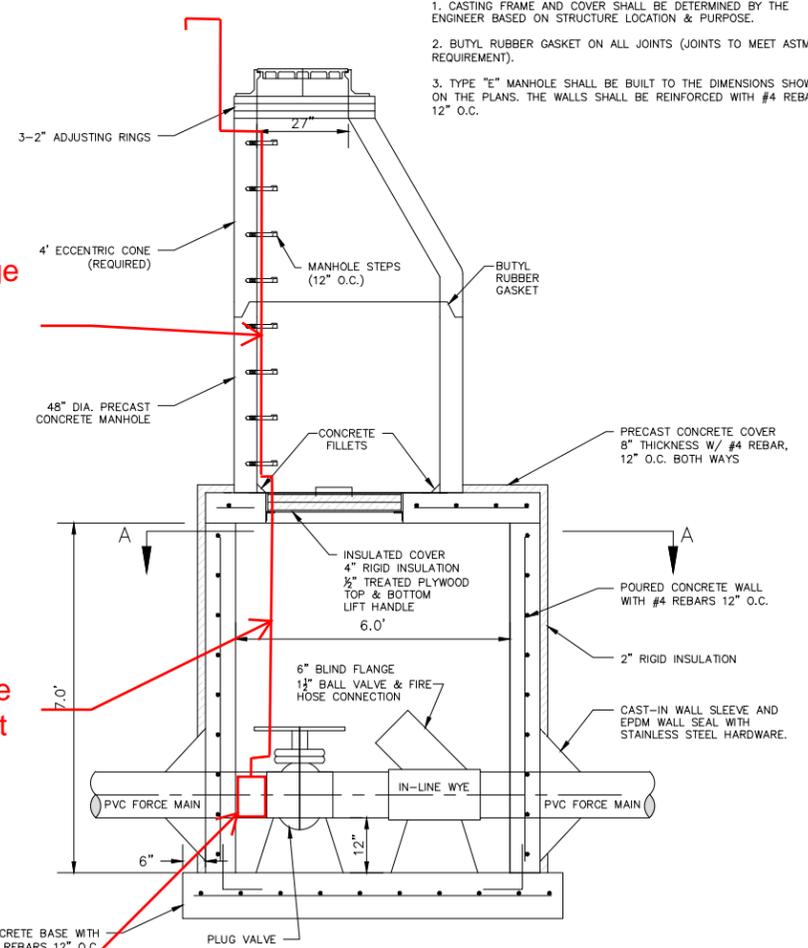
SECTION A-A

NOTES:
1. CASTING FRAME AND COVER SHALL BE DETERMINED BY THE ENGINEER BASED ON STRUCTURE LOCATION & PURPOSE.
2. BUTYL RUBBER GASKET ON ALL JOINTS (JOINTS TO MEET ASTM 433 REQUIREMENT).
3. TYPE "E" MANHOLE SHALL BE BUILT TO THE DIMENSIONS SHOWN ON THE PLANS. THE WALLS SHALL BE REINFORCED WITH #4 REBAR 12" O.C.

2" SCH 80 Discharge Piping-Supported inside the Steps via Pipe Clamps

Connect Discharge from 6" Line to make single Discharge out of Manhole

8"x2" & 6"x2" SS Saddle
(2) 2" SS Ball Valves
(2) 1" Combination ARV-NST
Discharge from ARV's Shall be SCH 80 Piping



FLUSHING MANHOLE - TYPE "E"
NO SCALE

NOTES:
1. UPSTREAM ORIENTATION SHOWN. REVERSE VALVE AND FLUSHING WYE ORIENTATION ON DOWNSTREAM MH.

COORDINATE SYSTEM (HORIZONTAL CONTROL) NAD 83 (2007) NADSPCS, SOUTH ZONE-US SURVEY FEET COMBINED SCALE FACTOR (CSF): 0.999900290
ELEVATION DATUM (VERTICAL CONTROL) NAVD 88 GEOID09



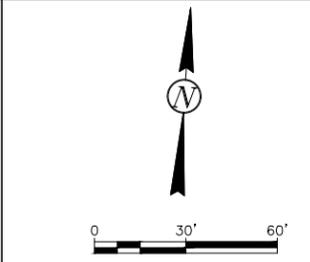
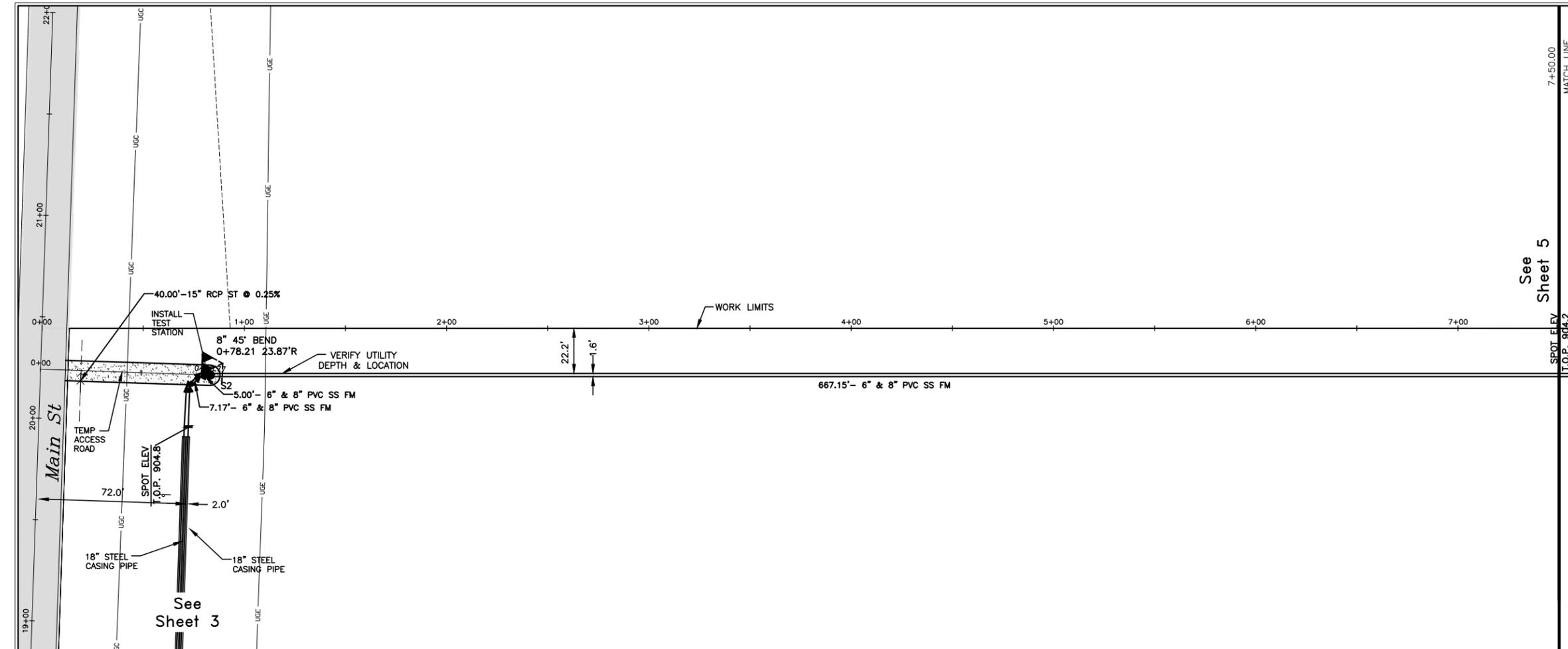
REVISIONS		
③	②	①

SEAL

FOR CONSTRUCTION

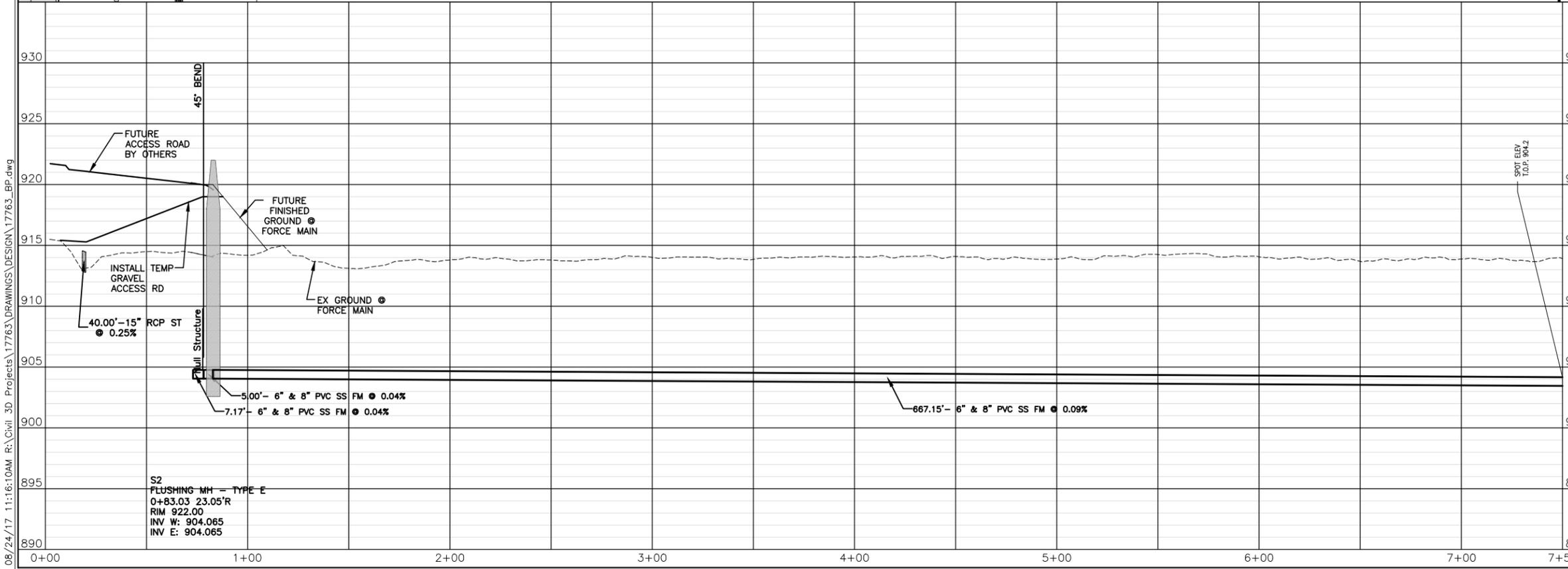
General Details		
FORCE MAIN RELOCATION FOR OHB LEVEE AT OXBOW		
PROJECT # FM-15-H2		
DESIGN BY: LMA	CHECKED BY: ADA	
DRAWN BY: LSM	ORIG DATE: 06/02/2017	
	SECTION NO.	SHEET NO.
	020	1

07/12/17 11:17:26AM R:\Civil_3D\Projects\17763\DRAWINGS\DESIGN\17763 - Details.dwg



COORDINATE SYSTEM (HORIZONTAL CONTROL)
 NAD 83 (2007)
 NADSPCS, SOUTH ZONE-US SURVEY FEET
 COMBINED SCALE FACTOR (CSF): 0.999900290

ELEVATION DATUM (VERTICAL CONTROL)
 NAVD 88
 GEOID09



REVISIONS	
③	① AJB

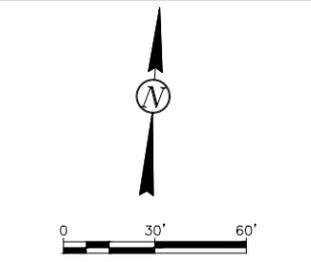
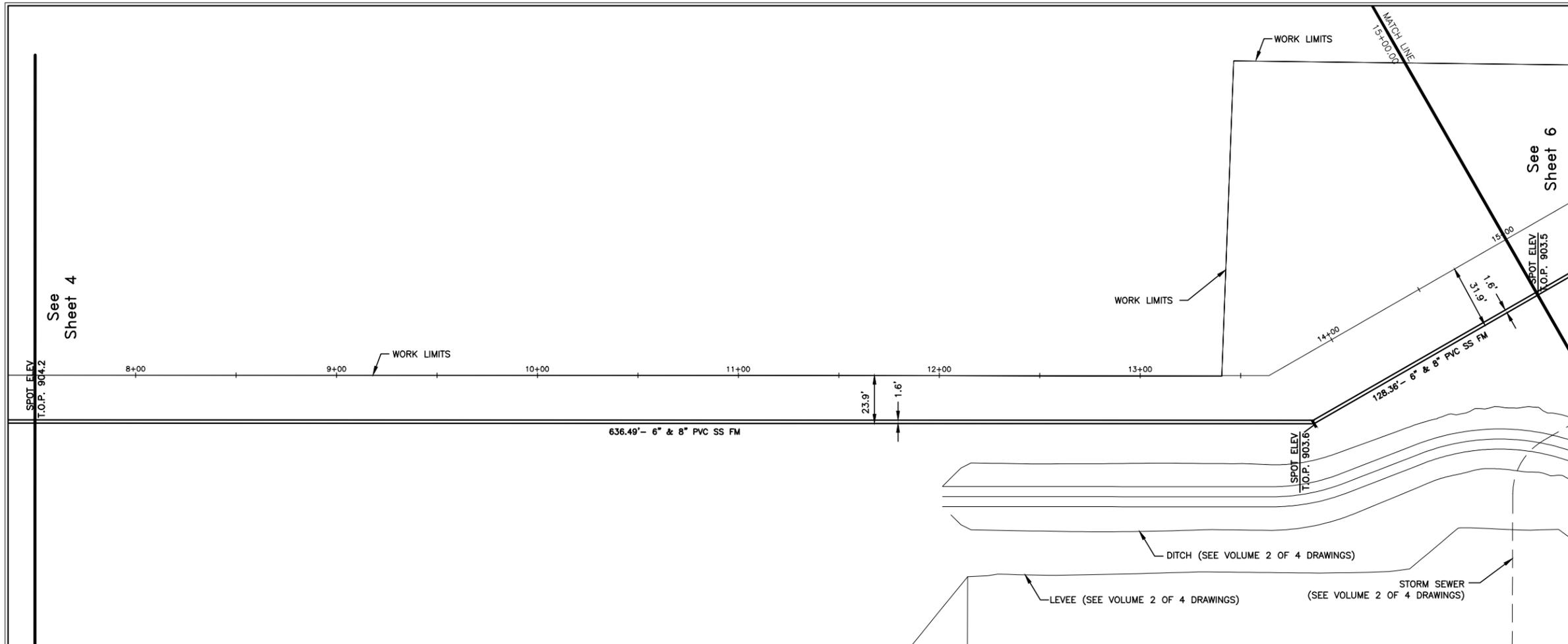
SEAL

FOR CONSTRUCTION

North Easement Force Main	
FORCE MAIN RELOCATION FOR OHB LEVEE AT OXBOW	
PROJECT # FM-15-H2	
DESIGN BY: LMA	CHECKED BY: ADA
DRAWN BY: LSM	ORIG DATE: 06/02/2017
Fargo	SECTION NO. 055
	SHEET NO. 4

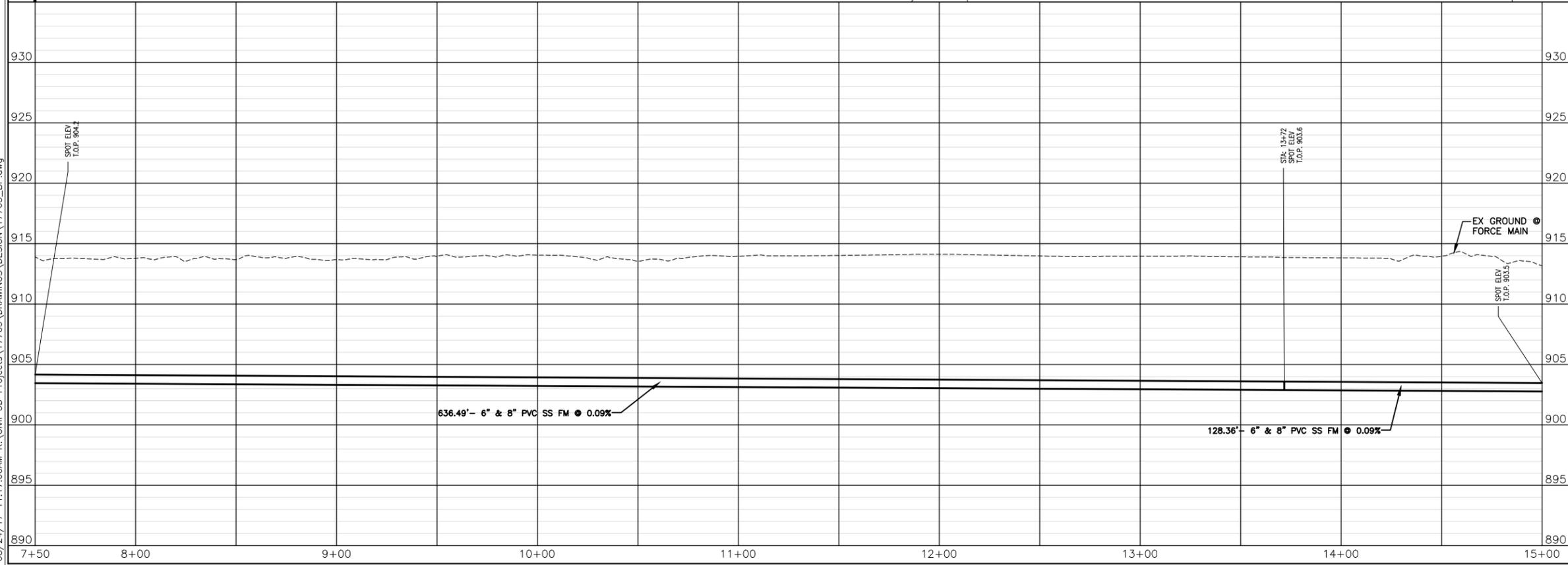
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COORDINATE SYSTEM (HORIZONTAL CONTROL)
 NAD 83 (2007)
 NADSPCS, SOUTH ZONE-US SURVEY FEET
 COMBINED SCALE FACTOR (CSF): 0.999900290

ELEVATION DATUM (VERTICAL CONTROL)
 NAVD 88
 GEOID09



REVISIONS			
③	②	①	AJB

SEAL

FOR CONSTRUCTION

North Easement Force Main

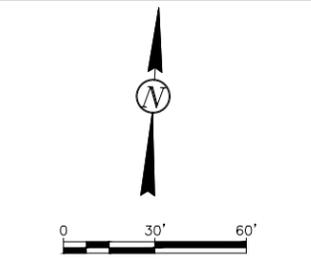
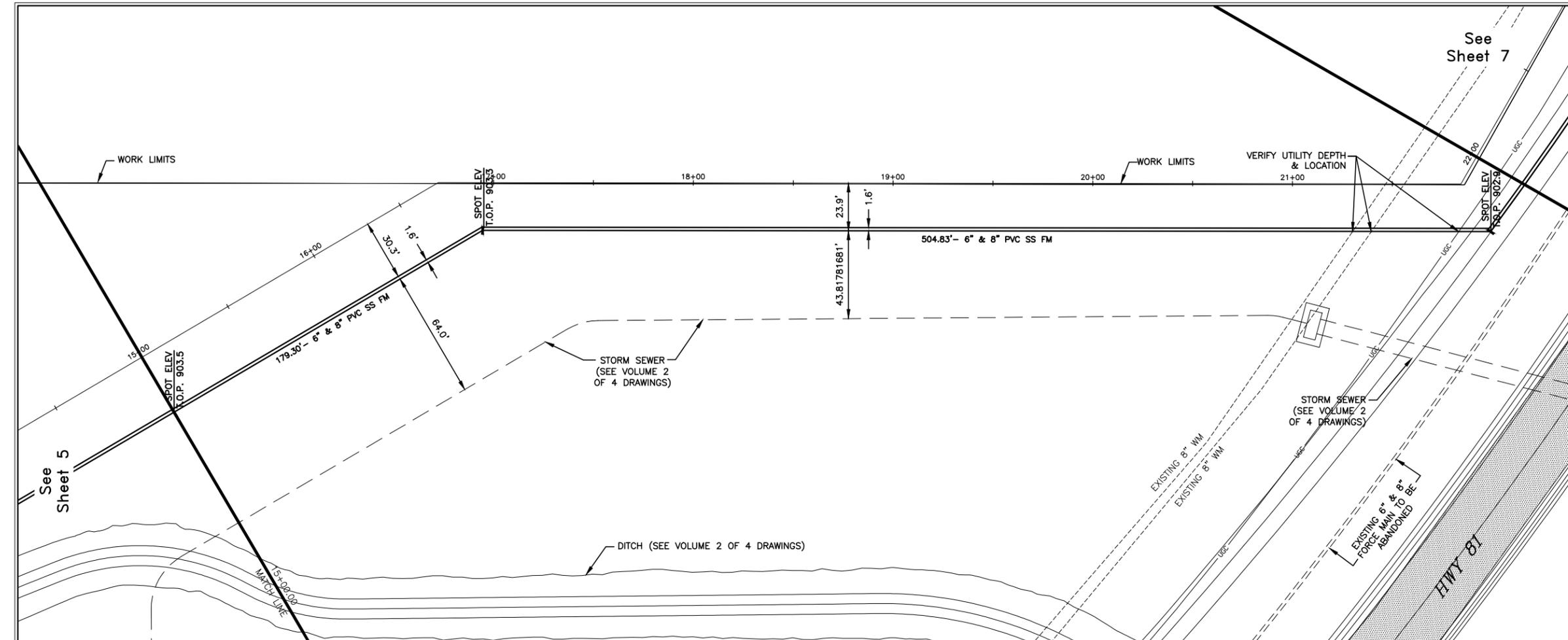
FORCE MAIN RELOCATION FOR OHB LEVEE AT OXBOW

PROJECT # FM-15-H2

DESIGN BY: LMA	CHECKED BY: ADA
DRAWN BY: LSM	ORIG DATE: 06/02/2017

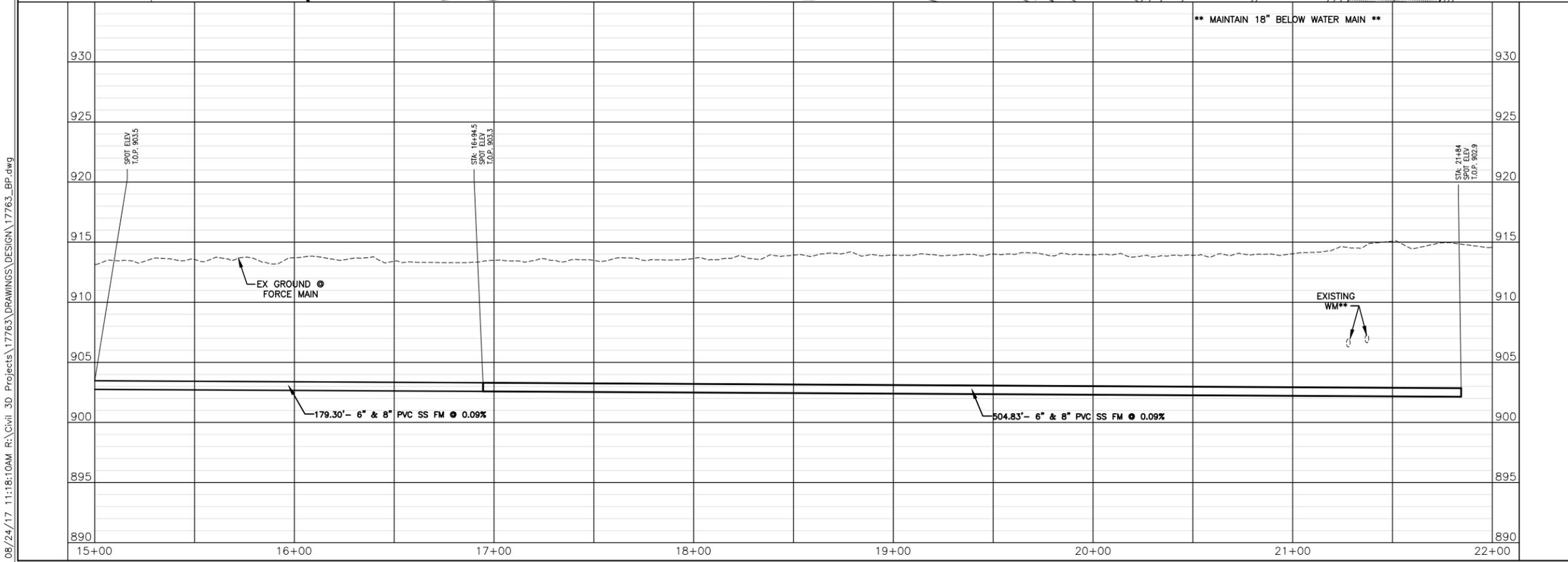
CITY OF Fargo

SECTION NO.	SHEET NO.
055	5



COORDINATE SYSTEM (HORIZONTAL CONTROL)
 NAD 83 (2007)
 NADSPCS, SOUTH ZONE-US SURVEY FEET
 COMBINED SCALE FACTOR (CSF): 0.999900290

ELEVATION DATUM (VERTICAL CONTROL)
 NAVD 88
 GEOID09



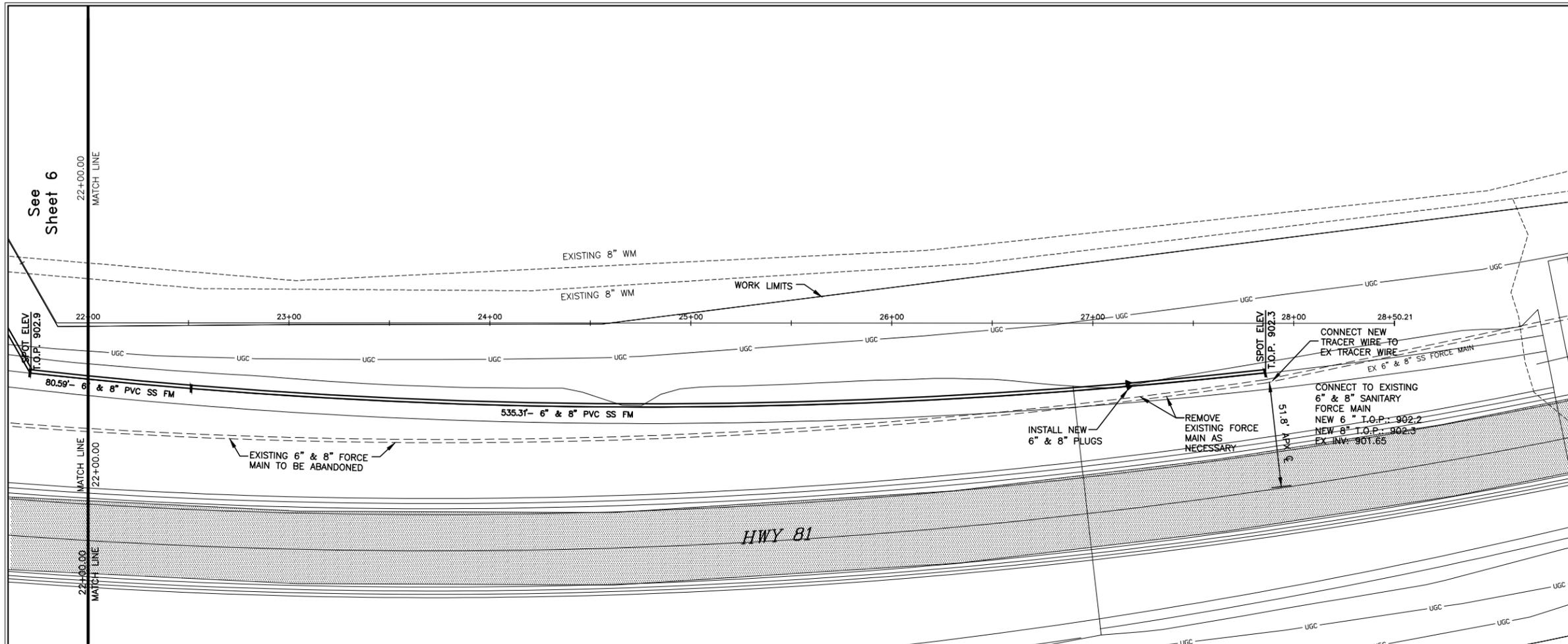
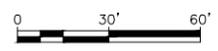
REVISIONS		
③	②	① AJB

SEAL

FOR CONSTRUCTION

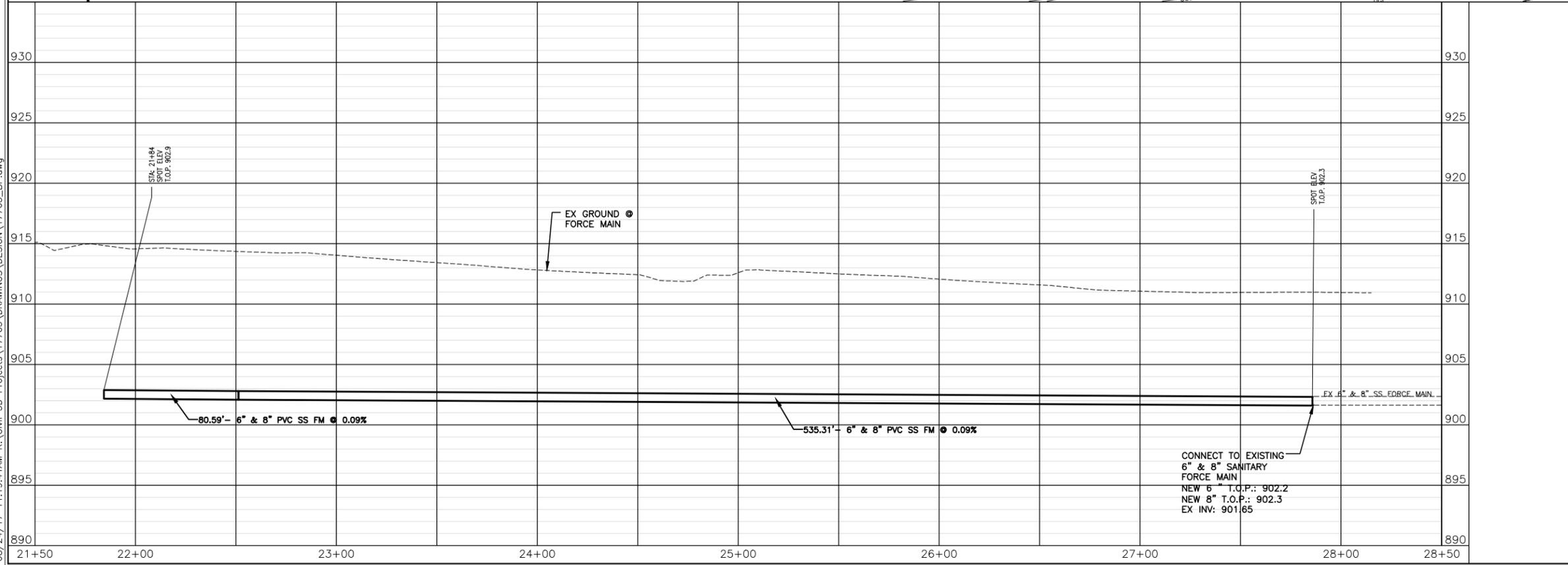
North Easement Force Main	
FORCE MAIN RELOCATION FOR OHB LEVEE AT OXBOW	
PROJECT # FM-15-H2	
DESIGN BY: LMA	CHECKED BY: ADA
DRAWN BY: LSM	ORIG DATE: 06/02/2017
CITY OF Fargo	SECTION NO. 055
	SHEET NO. 6

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COORDINATE SYSTEM (HORIZONTAL CONTROL)
 NAD 83 (2007)
 NADSPCS, SOUTH ZONE-US SURVEY FEET
 COMBINED SCALE FACTOR (CSF): 0.999900290

ELEVATION DATUM (VERTICAL CONTROL)
 NAVD 88
 GEOID09



REVISIONS	
③	① AJB

SEAL

FOR CONSTRUCTION

North Easement Force Main	
FORCE MAIN RELOCATION FOR OHB LEVEE AT OXBOW	
PROJECT # FM-15-H2	
DESIGN BY: LMA	CHECKED BY: ADA
DRAWN BY: LSM	ORIG DATE: 06/02/2017
CITY OF Fargo	SECTION NO. 055
	SHEET NO. 7

08/24/17 11:19:41AM R:\Civil_3D\Projects\17763\DRAWINGS\DESIGN\17763_BP.dwg



November 6, 2017

Christopher M Gross, PE, CFM
Moore Engineering, Inc.
925 10th Avenue East
West Fargo, ND 58078

Subject: Oxbow – Hickson – Bakke Ring Levee – Phases C and D; Work Package 43CD
Temporary Access Road South of Riverbend Road

Dear Mr. Gross,

Meyer was asked to construct a temporary access road south of Riverbend Road. Based on calculation of cost impact we hereby request additional compensation in the amount of \$37,000.00.

Thank you.

Respectfully,

A handwritten signature in blue ink, appearing to read 'Jeremy Gibbs', is written over a light blue horizontal line.

Jeremy Gibbs
Meyer Contracting, Inc.

Patrick Baldy

From: Jeremy Gibbs
Sent: Tuesday, October 10, 2017 5:41 PM
To: Chris Gross; Verlyn Schoep
Cc: Todd Frerk; Jake Schroeder; Patrick Baldy; Brenden Davis; Kevin Douglas; Mark Conte
Subject: RE: 171297 OHB Access to Levee South of Riverbend

Hello Chris,

I just spoke with Jake Schroeder and he will be able to meet at 7AM.

Respectfully,

Jeremy Gibbs

Project Manager/Estimator



Meyer Contracting, Inc.

Direct: (763) 391-5980

Cell: (612) 562-5988

Website: www.meyerinci.com

CERT (MBE/SBE)



Maple Grove, MN: 11000 93rd Ave. N, Maple Grove, MN 55369 (763) 391-5959 (Main) (763) 391-5960 (Fax)

Dickinson, ND: 3214 111H Ave. SW, Dickinson, ND 58601 (701) 225-6511 (Main)

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From: Chris Gross [mailto:CGross@mooreengineeringinc.com]

Sent: Tuesday, October 10, 2017 3:29 PM

To: Verlyn Schoep <vschoep@meyerinci.com>

Cc: Jeremy Gibbs <jgibbs@meyerinci.com>; Todd Frerk <tfrerk@meyerinci.com>; Jake Schroeder <jschroeder@meyerinci.com>; Patrick Baldy <pbaldy@meyerinci.com>; Brenden Davis <bdavis@meyerinci.com>; Kevin Douglas <kdouglas@meyerinci.com>; Mark Conte <mconte@meyerinci.com>

Subject: RE: 171297 OHB Access to Levee South of Riverbend

Verlyn,

This work can commence as soon as possible. As you know, Riverbend Road cannot be removed until the aggregate roadway is placed. We will work on the WCD/CO to authorize this work.

We need to have an on-site discussion with all those involved to make sure everyone understands what is to be done and by whom prior to beginning this work. If this is something Meyer wants to do right away tomorrow, I would propose a 7am meeting tomorrow morning at the location of this proposed work.

Let me know if there are any questions or if an alternative time to meet is necessary.

Thanks

Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.

Phone 701.282.4692 | Fax 701.282.4530
Direct 701.499.5857 | Cell 701.866.6343
925 10th Ave E, West Fargo, ND 58078
cgross@mooreengineeringinc.com | www.mooreengineeringinc.com

From: Verlyn Schoep [<mailto:vschoep@meyerci.com>]
Sent: Tuesday, October 10, 2017 6:19 AM
To: Chris Gross
Cc: Jeremy Gibbs; Todd Frerk; Jake Schroeder; Patrick Baldy; Brenden Davis; Kevin Douglas; Mark Conte
Subject: Re: 171297 OHB Access to Levee South of Riverbend

I am in agreement with Chris

Sent from my iPhone

On Oct 10, 2017, at 6:18 AM, Chris Gross <CGross@mooreengineeringinc.com> wrote:

Jeremy,

On Friday, Verlyn and I came to a price of \$37;000. I have run this up the ladder and am waiting for concurrence to give Meyer a green light. I will follow up on the status of Owner's review of proposal.

Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.

Phone [701.282.4692](tel:701.282.4692) | Fax [701.282.4530](tel:701.282.4530)
Direct [701.499.5857](tel:701.499.5857) | Cell [701.866.6343](tel:701.866.6343)
[925 10th Ave E, West Fargo, ND 58078](http://www.mooreengineeringinc.com)
cgross@mooreengineeringinc.com www.mooreengineeringinc.com

On Oct 10, 2017, at 6:01 AM, Jeremy Gibbs <jgibbs@meyerci.com> wrote:

Good day Chris,

I am just following up on this to confirm that we are in agreement for this work. Please let us know if you concur with our understanding.

OHB Access to Levee South of Riverbend	\$28,533.37	\$28,000.00
<u>Additional Costs for Haul Road Construction/Restoration on Levee</u>	<u>\$11,000.00</u>	
Total		
	<u>\$39,000.00</u>	

Respectfully,

Jeremy Gibbs

Project Manager/Estimator

<image001.jpg>

Meyer Contracting, Inc.

Direct: (763) 391-5980

Cell: (612) 562-5988

Website: www.meyerci.com

CERT (MBE/SBE)

<image002.png> <image003.png> <image004.jpg>

Maple Grove, MN: 11000 93rd Ave. N, Maple Grove, MN 55369 (763) 391-5959 (Main) (763) 391-5960 (Fax)

Dickinson, ND: 3214 111H Ave. SW, Dickinson, ND 58601 (701) 225-6511 (Main)

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From: Verlyn Schoep

Sent: Friday, October 6, 2017 10:22 AM

To: Chris Gross <CGross@mooreengineeringinc.com>; Jeremy Gibbs

<jgibbs@meyerci.com>

Cc: Todd Frerk <tferek@meyerci.com>; Jake Schroeder <jschroeder@meyerci.com>;

Patrick Baldy <pbaldy@meyerci.com>; Brenden Davis <bdavis@meyerci.com>; Kevin

Douglas <kdouglas@meyerci.com>; Mark Conte <mconte@meyerci.com>

Subject: RE: 171297 OHB Access to Levee South of Riverbend

Chris,

I will contact you and discuss this matter later today. One of the areas of concern that we would like to discuss is the delay in getting access to the South end of the levee. By the time we are able to get the stripping, inspection trench and removals done we will have our levee built between the borrow pit and station 42+00. This would reduce our haul road access to a single lane; thus increasing our costs. I have a creative method of offsetting this situation; however it does have a cost that I would like to discuss.

I look forward to resolving this issue.

Thank you,

Verlyn Schoep

President/COO

<image001.jpg>

Meyer Contracting, Inc.

Direct: (763) 391-5932

Cell: (612) 735-5855

Website: www.meyerci.com

Certified MBE/TGB/CERT contractor

<image003.png> <image002.png> <image004.jpg>

Maple Grove, MN: 11000 93rd Ave. N, Maple Grove, MN 55369 (763) 391-5959 (Main) (763) 391-5960 (Fax)

Dickinson, ND: 3214 111H Ave. SW, Dickinson, ND 58601 (701) 225-6511 (Main)

From: Chris Gross [<mailto:CGross@mooreengineeringinc.com>]
Sent: Friday, October 06, 2017 10:17 AM
To: Jeremy Gibbs <jgibbs@meyerici.com>
Cc: Todd Frerk <tfrek@meyerici.com>; Verlyn Schoep <vschoep@meyerici.com>; Jake Schroeder <jschroeder@meyerici.com>; Patrick Baldy <pbaldy@meyerici.com>; Brenden Davis <bdavis@meyerici.com>; Kevin Douglas <kdouglas@meyerici.com>; Mark Conte <mconte@meyerici.com>
Subject: RE: 171297 OHB Access to Levee South of Riverbend

Jeremy,

Would it be possible to get an answer today on the date that Meyer would remove Riverbend Road so that we can attempt to move forward with an agreement of all parties?

Thanks

Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.

Phone 701.282.4692 | Fax 701.282.4530
Direct 701.499.5857 | Cell 701.866.6343
925 10th Ave E, West Fargo, ND 58078
cgross@mooreengineeringinc.com | www.mooreengineeringinc.com

From: Chris Gross
Sent: Wednesday, October 04, 2017 6:27 PM
To: Jeremy Gibbs
Cc: Todd Frerk; Verlyn Schoep; Jake Schroeder; Patrick Baldy; Brenden Davis; Kevin Douglas; Mark Conte
Subject: Re: 171297 OHB Access to Levee South of Riverbend

To clarify, the question only relates to the 1,540 feet. The short section would still come out asap.

Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.

Phone [701.282.4692](tel:701.282.4692) | Fax [701.282.4530](tel:701.282.4530)
Direct [701.499.5857](tel:701.499.5857) | Cell [701.866.6343](tel:701.866.6343)
[925 10th Ave E, West Fargo, ND 58078](http://www.mooreengineeringinc.com)
cgross@mooreengineeringinc.com www.mooreengineeringinc.com

On Oct 4, 2017, at 6:15 PM, Jeremy Gibbs <jgibbs@meyerici.com> wrote:

Hello Chris,

Please see our attached proposal.

One thing we cannot agree to at this time is the 1540' segment road removal from our Contract. We are still not certain what we will need for SBC to complete the job and we may need to use this material for the Main Avenue work.

I will be travelling tomorrow and unable to discuss this until Friday but please feel free to call Verlyn at (612) 735-5855 to finalize this agreement.

Respectfully,

Jeremy Gibbs

Project Manager/Estimator

<image001.jpg>

Meyer Contracting, Inc.

Direct: (763) 391-5980

Cell: (612) 562-5988

Website: www.meyerci.com

CERT (MBE/SBE)

<image002.png> <image003.png> <image004.jpg>

Maple Grove, MN: 11000 93rd Ave. N, Maple Grove, MN 55369 (763) 391-5959 (Main) (763) 391-5960 (Fax)

Dickinson, ND: 3214 111H Ave. SW, Dickinson, ND 58601 (701) 225-6511 (Main)

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----- Original message -----

From: Chris Gross <CGross@mooreengineeringinc.com>

Date: 10/4/17 11:52 AM (GMT-06:00)

To: Todd Frerk <tfrerk@meyerci.com>

Cc: Jake Schroeder <jschroeder@meyerci.com>

Subject: RE: 171297 OHB Access to Levee South of Riverbend

Todd,

Here is an updated sketch of the proposed plan. As we discussed on the phone, the roadway would be constructed on the yellow highlighted area. Roadway would be 20 feet wide and 8 inches in depth. Once placed to the satisfaction of the Engineer, the roadway would become the responsibility of Landwehr to maintain. As soon as roadway is in place, Riverbend Road would be allowed to be removed from the road intersection west of the levee to the north side of driveway of the 816 residence (or approximately 360 LF). The remaining portion of Riverbend Road to the north (approximately 1,540 LF) would remain in place until at least November 1st to allow the moving of all homes left on Riverbend Road. The removal of this 1,540 LF segment would be removed from Meyer's Contract and placed in Landwehr's Contract. All

other required demolition along the roadway would still be Meyer's responsibility. The November 1st date appears to work good for Meyer (and Schmidt and Sons) to get 827 moved out, however, this date could be negotiated with Landwehr if needed.

The goal is to come to agreement with all parties as soon as possible on this issue. If Meyer could please review the proposed plan and provide a cost to install the roadway as shown (approximately 750 ton) by the end of today, that would be appreciated so we can keep this thing moving. We would hope to have an agreement in place no later than Monday, October 9th so that Meyer can have access to finish the remaining 200 LF of southern levee and to construct the EMP of clay required for future levee construction.

Thanks

Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.

Phone 701.282.4692 | Fax 701.282.4530
Direct 701.499.5857 | Cell 701.866.6343
925 10th Ave E, West Fargo, ND 58078
cgross@mooreengineeringinc.com | www.mooreengineeringinc.com

From: Todd Frerk [<mailto:tfrek@meyerci.com>]
Sent: Wednesday, October 04, 2017 9:46 AM
To: Chris Gross
Cc: Jake Schroeder
Subject: RE: 171297 OHB Access to Levee South of Riverbend

Chris

Please review and confirm the location of the road. I placed a centerline and 10'-0" offset either side for reference in placing the road. Is this your intended location? Also is the east/west highlighted area the location of the existing cart path for OCC? Not sure what that represents.

Regards
Todd Frerk
CQC Manager



Meyer Contracting, Inc.
Direct: (763) 391-5997
Cell: (612) 254-5095
Website: www.meyerci.com

From: Chris Gross [<mailto:CGross@mooreengineeringinc.com>]
Sent: Wednesday, October 04, 2017 8:55 AM
To: Todd Frerk <tfrek@meyerci.com>
Cc: Jake Schroeder <jschroeder@meyerci.com>
Subject: RE: 171297 OHB Access to Levee South of Riverbend

Todd,

Here is the draft version. As discussed, the road surface would only be 20 feet wide in all yellow areas even if the access width is wider (ie. – 60 feet). The length of road is approximately 825 LF and the total tonnage needed is approximately 765 Ton.

Call or email with any questions.

Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.

Phone 701.282.4692 | Fax 701.282.4530
Direct 701.499.5857 | Cell 701.866.6343
925 10th Ave E, West Fargo, ND 58078
cgross@mooreengineeringinc.com | www.mooreengineeringinc.com

From: Todd Frerk [<mailto:tfrek@meyerci.com>]
Sent: Wednesday, October 04, 2017 8:51 AM
To: Chris Gross
Cc: Jake Schroeder
Subject: 171297 OHB Access to Levee South of Riverbend

Chris

Please send over a design drawing of the intended location of the road discussed previously this morning. Meyer Contracting, Inc. would like to ensure that the location of the road providing access for the moving of the houses, allows adequate room for stock piling of material, excavation of inspection trench, and ultimately construction of the levee.

Once I receive this drawing Meyer Contracting, Inc. will respond accordingly.

Regards
Todd Frerk
CQC Manager



Meyer Contracting, Inc.
Direct: (763) 391-5997
Cell: (612) 254-5095
Website: www.meyerci.com

<0884_001.pdf>

<Proposal.pdf>

<0884_001.pdf>

<Proposal.pdf>

Bid Proposal



Meyer Contracting, Inc

11000 93rd Ave North

Minneapolis, MN 55369

Contact: Verlyn Schoep

Phone: 612.735.5855

Fax: 763.391.5960

Quote To: Christopher M Gross, PE, CFM
Project Manager
moore engineering, inc.
Phone: 701.499.5857

Job Name: Water Main Relocation
OHB Levee at Oxbow

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT
10	16" STEEL CASING PIPE W/CLSM	300.00	LF	579.69	173,907.00
20	CATHODIC PROTECTION	1.00	LS	30,693.89	30,693.89
25	FURNISH 8" FUSIBLE PIPE, UNLOADING, & FUSION	1.00	LS	13,796.77	13,796.77
30	INSTALL 8" FUSIBLE PVC WATERLINE	400.00	LF	28.05	11,220.00
40	TEMP. CONNECT TO EXISTING 6" WATERLINE	2.00	EA	4,355.21	8,710.42
50	WELDING MOBILIZATION	1.00	LS	4,580.00	4,580.00
GRAND TOTAL					\$242,908.08



December 6, 2017

Verlyn Schoep
Meyer Contracting, Inc.
11000 93rd Ave. North
Minneapolis, MN 55369

Subject: Oxbow-Hickson-Bakke Ring Levee Phases C and D, Work Package 43CD (WP-43CD)
Non-Conformance Notification No. 3 (NCN #3) – impact echo testing cost set-off

Dear Mr. Schoep,

Per NCN #3, a discontinuity in the WP-43CD pump station slab was observed and the Metro Flood Diversion Authority (MFDA) incurred \$11,671 in consulting and non-destructive concrete impact echo testing costs to determine the extent of the damage.

Per the General Conditions of the agreement, Section 14.03F, Defective Work, Costs and Damages, the MFDA is off-setting these testing costs.

This cost set-off will be accounted for in future Change Order No. 2 as a line item deduction on the unit price schedule.

If you have any questions, please let us know.

Sincerely,

John W. Glatzmaier

John Glatzmaier
Project Manager
D 1 651 365 8526
M 1 651 253 5910

CH2M
www.ch2m.com

c: Nathan Boerboom/City of Fargo
Jeff Ebsch/Cass County
Robert Cowen/CH2M
Chris Gross/HMG

encl. NCN #3 dated November 20, 2017
Braun Intertec invoice # 111670



NON-CONFORMANCE NOTIFICATION NO. 003 - ISSUED: Nov. 20, 2017

TO: Meyer Contracting Inc. PROJECT NO.: WP-43CD
PROJECT: Oxbow-Hickson-Bakke Ring Levee Work Package 43CD
OWNER: FM Metro Flood Diversion Authority
ENGINEER: Houston-Moore Group
OWNER'S REPRESENTATIVE: CH2M HILL

DESCRIPTION OF NON-CONFORMING WORK:

- 1. Reason for NCN (see attached Memo)
- 2. Non-conforming work detected by: Test Inspection Observation
- 3. Estimated value of non-conforming work: N/A

Pursuant to the General Conditions of the Contract, you are to comply with the directions specified in this Non-Conformance Notification. Non-conforming work shall be corrected and all costs related to mitigating the work shall be borne by the Contractor. Contractor shall notify the Owner's Representative and Engineer of Record when the non-conforming work has been mitigated.

Non-Conformance Notification Received by: (Name, Signature and Date Required)

Contractor's Representative

Engineer of Record's Inspection and Acceptance of Corrective Work: (Name, Signature and Date Required)

Adèle L Braun, November 14, 2017

Engineer of Record

Owner's Representative's Inspection and Acceptance of Corrective Work: (Name, Signature and Date Required)

Owner's Representative

Memorandum

To: Metro Flood Diversion Authority
From: Adèle Braun P.E., Barr Engineering Co.
Subject: Pump Station Base Slab Non-Conformance
Date: November 14, 2017
Project: Oxbow-Hickson-Bakke Work Plan 43Cd
c: Chris Gross, Matt Metzger, File

Background

On October 11, a discontinuity was visually observed in the northeast corner of the pump station base slab. The discontinuity is on the east side of the slab starting 102 inches south of the northeast corner and extending 87 inches south. A sketch is provided in Figure 1 and photographs are provided in Figure 2 – Figure 4.

The concern with a discontinuity on the surface of the pour is that if the discontinuity extends through the concrete it could be an unplanned cold joint, and a cold joint creates an unintended area of weakness in the slab. A cold joint in the slab could open up due to the tension loads in the slab, which could impact the structural integrity of the slab or create a location for a seepage path through the slab. At this specific location, if there is a cold joint extending the entire width of the slab at relatively the same distance from the northern face of the slab, dowels between the intimidate wall and slab will intersect the joint providing some resistance to these loads.

Based on observations of the discontinuity and concerns associated with an unplanned cold joint in the base slab, we recommended that the contractor perform forensic analysis to determine if the discontinuity was a cold joint through the base slab. Forensic analysis would consist of coring holes horizontally through the base slab centered on the discontinuity.

Concrete Coring

On October 13, 2017, the contractor drilled two cores near the discontinuity on the east slab face. Core hold locations are shown in Figure 5.

Core #1 was extracted from Core Hole #1. This core broke apart during drilling operations and was extracted in two pieces. The first segment removed appeared to show a joint extending through the core and extending into a large void near a piece of cut reinforcement (Figure 6). In the second half of the core, a joint appears to continue past the large void represented by smaller voids extending from the large void

(Figure 7). The core also included a void through the core (Figure 8). The large void near the reinforcement is clearly shown in the extracted core in Figure 9 and in Core Hole #1 in Figure 10.

Core #2 was extracted from Core Hole #2. There were multiple voids throughout the core and inside the core hole (Figure 11 and Figure 12). Near the top of the core, there appears to be small voids linearly aligned, which could represent a joint.

Results from the concrete coring investigation could not conclusively determine the presence of a cold joint. The cores did not provide a clear indication that a cold joint was formed nor did the cores clearly show that a cold joint was not formed. As a result, we requested a split cylinder test to evaluate the tensile capacity of the concrete along the potential cold joint. However, tests could not be performed on either of the samples due to the number of voids in the samples.

Impact Echo Testing

The number of voids observed in the concrete core samples amplified consolidation concerns associated with the base slab. While this concern was originally related to the presence of a cold joint (both could be caused by improper vibrating), it was unknown if voids would be present throughout the slab or if they were isolated to the northeast corner. We recommended impact echo testing to determine if the number of voids observed in the cores were isolated to the northeast corner, isolated to the edge of the base slab, or extended throughout the slab. The impact echo could also be used to provide more information on the possible cold joint.

Braun Intertec performed impact echo testing of the pump station base slab. Mythology and final results will be provide in a report submitted by Braun Intertec (Attachment 2). This memorandum includes general understanding of the methods used to collect the data, summary results, and recommendations.

Impact echo testing of the base slab was divided into two portions—the exterior and interior slabs. Braun refers to these portions as the exterior vertical faces and interior top surface, respectively. The exterior slab includes the one-foot slab extension outside of the walls. Testing the exterior slab section was performed on the three-foot vertical slab faces equating to approximately 405 SF of concrete. The depth of testing was limited to 10-12 inches to minimize edge effect. The interior slab area includes the surface inside of the pump station walls, which has an approximate area of 663 SF less the intermediate wall section. For the interior slab, tests were performed on the horizontal surface inside. The portion of the pump station slab below the pump station walls could not be tested because the walls had already been place prior to testing. This results in a three foot-wide band between the exterior and interior slab that could not be testing and represents nearly 40% of the total horizontal surface area of the base slab.

Braun Intertec reported that approximately 400 points were collected on the exterior portion of the slab and 350 point were collected on the interior slab. Of the 400 points collected on the exterior portion, 27 points were questionable. These questionable points were sporadically located. Of the 350 points collected on the interior portion, 2 points were identified as being questionable. Braun Intertec was asked if there was any indication that a cold joint penetrated into the interior slab section of the pump station slab, and they reported that they did not find the presence of a cold joint on the interior section.

Conclusions and Recommendations

Based on the presence of the discontinuity in the northeast corner and the voids observed during coring, epoxy injection grouting of the discontinuity was recommended. To verify the epoxy injection grouting was successful, we recommended impact testing after grouting to ensure all of the defects in this area were addressed. Injection grouting and follow-up impact echo testing was completed on November 1, 2017.

The impact echo testing indicated that while some defects may be present in the exterior portion of the slab near where the forms were placed it is unlikely that those defects continue on the interior portion of the slab. Therefore, it is unlikely that the durability of the concrete which will be subjected to flowing water through the pump station will be impacted. As a result, no additional mitigation measures were required.

With the completion of the injection grouting and follow-up impact echo testing, it is our opinion that the contractor has sufficiently addressed this non-conformance.

Attachment 1 – Figures

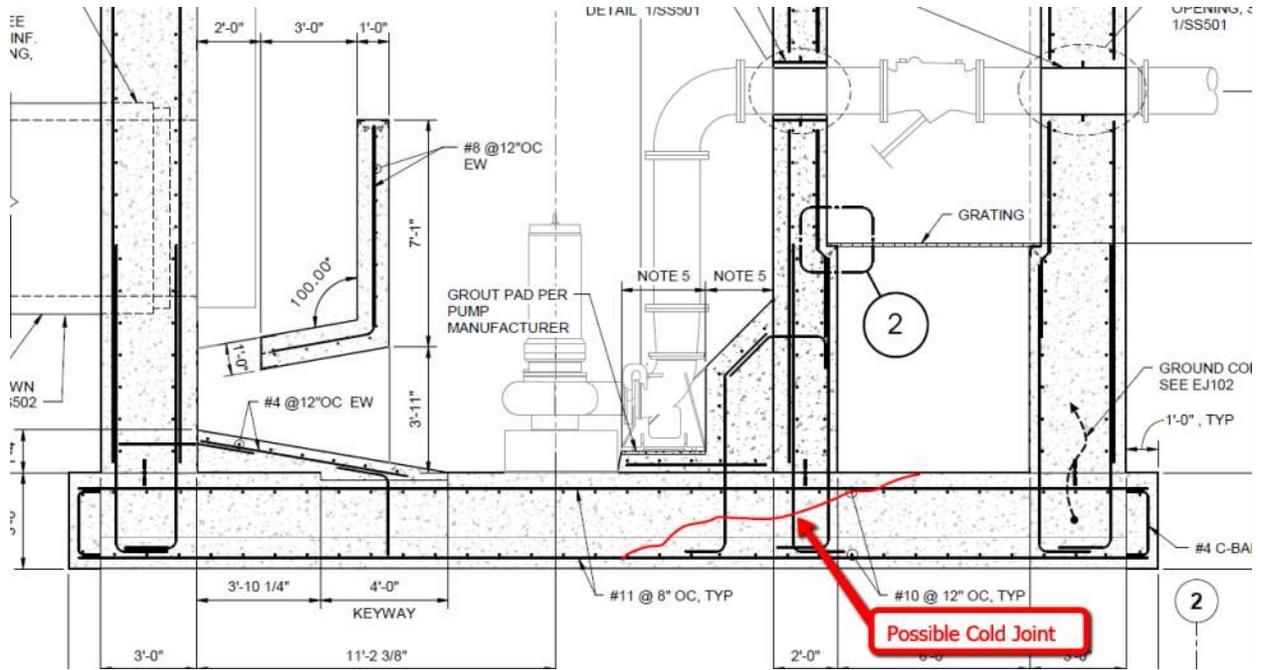


Figure 1: General Location of Possible Cold Joint



Figure 2: Possible Cold Joint (looking south)



Figure 3: Possible Cold Joint (looking north)



Figure 4: Possible Cold Joint (near bottom)



Figure 5: Core Locations



Figure 6: Core #1 (First Half)



Figure 7: Core #1 (Second Half)



Figure 8: Void in Core #1



Figure 9: Core #1



Figure 10: Void in Core Hole #1



Figure 11: Core #2



Figure 12: Voids in Core Hole #2

Attachment 2 – Impact Echo



Braun Intertec Corporation
11001 Hampshire Avenue S
Minneapolis, MN 55438

Phone: 952.995.2000
Fax: 952.995.2020
Web: braunintertec.com

November 9, 2017

Project B1707919

Metro Flood Diversion Authority
c/o Chris Gross, PE, CFM
Houston-Moore Group
925 10th Avenue East
West Fargo, ND 58078

Re: Impact Echo Testing
OHB Pump Station Mat Foundation
Oxbow, North Dakota

Dear Mr. Gross:

Braun Intertec Corporation is pleased to provide this letter to report the findings of the Impact Echo testing at the OHB Pump Station.

Background

It is our understanding that the mat foundation for the pump station was placed on September 29, 2017. The mat foundation is approximately 3 feet thick. Following placement of the foundation, a surface abnormality was observed. Two core samples were obtained by others and sent to the Braun Intertec lab for testing. Braun Intertec was not able to test the core samples due to voids/poor consolidation within the samples. Braun Intertec then performed impact echo testing on the slab to evaluate the potential for additional voids in the mat foundation.

Data Collection and Test Grid Setup

Impact Echo data was collected from the top side of the mat foundation as well as the north, south, east, and west exterior vertical faces of the mat foundation. Data collection grids are described below.

Data from the top side was collected on a 1 foot by 1 foot grid. The grid began 1 foot south and 1 foot east of the inside formwork for the 3 foot thick walls. There were several locations with intrusions or very uneven surfaces where testing could not be completed. A total of 353 individual locations were tested. A visual description of locations where testing was completed can be found in the attachment "Impact Echo Data Collection Grid – Interior Top Surface". Location A-1 refers to the northwest corner of the structure. The numerical grid increases from west to east while the letter grid increases from north to south.

Data from the exterior vertical faces of the mat foundation was collected on a 1 foot, longitudinal by 9 inch vertical grid. For example, on the east face points were collected at 1 foot intervals along the length of the face beginning on the left hand (south) side of the structure. Vertically, points were collected at quarter points. The vertical grid was measured at 9 inches, 18 inches, and 27 inches from the top. 99 locations were tested on each vertical face for a total of 396 individual locations on the vertical exterior faces. A visual description of locations where testing was completed can be found in the attachment "Impact Echo Data Collection Grid – Exterior Vertical Surfaces".

Methodology

Impact Echo (IE) was selected to evaluate the mat foundation for its ability to detect flaws in the concrete when only one side is accessible. The IE method produces a stress wave in the concrete by impacting the surface with a mechanical impactor, then measuring the time and amplitude of the returning wave(s). An Olson Instruments IE system with supporting WinIE Software was utilized to record and analyze the data. IE data is observed in time domain as well as the frequency domain for evaluation. In general, the time domain signal will display a decaying sinusoidal wave of the vibration of the member from the impact. The frequency spectrum will display a localized maximum (peak) of dominating frequencies that is proportional to the presence/position/type of response. Excerpts from data collected from the site are provided below with additional description and comments for the specific application. For this project, a concrete velocity calibration was not performed as the effort was focused more on the presence of abnormalities within the data rather than the thickness of the members. An assumed concrete velocity of 12,000 feet/second was held constant during our evaluation.

Mat Foundation Top

IE data was collected from the top of the mat foundation from a grid as described earlier in this report. Collection from the top of the structure allowed for analysis as a “thin plate” member. This designation is such that the horizontal dimensions (length and width) are significantly larger than the thickness. With thin plate structures, the impact should create a dominant frequency (a localized peak) in the distribution. Internal defects, voids, delamination, etc. would create broken wave decay in the time domain and/or abnormal frequency distribution. Figures 1 and 2 below are examples of the data collected from the top of the mat foundation.

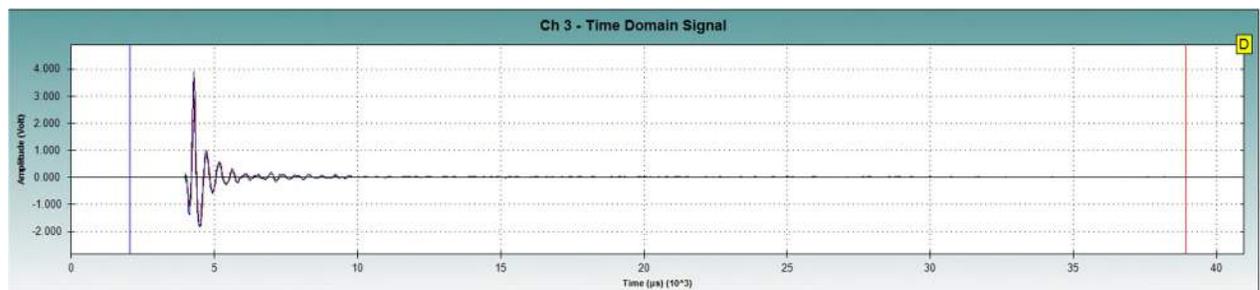


Figure 1, Time domain signal from the top of the mat foundation showing a decaying sinusoidal response.

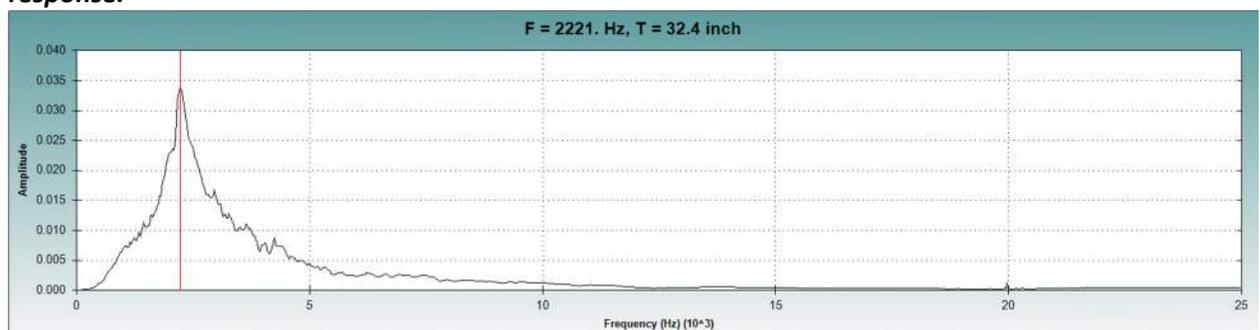


Figure 2, Frequency spectrum of from the top of the mat foundation showing a clear peak at a frequency of 2221 Hz.

Mat Foundation Sides

Additional IE data was collected from the sides of the foundation as described earlier in this report. Unlike the top of the structure, collection from the sides does not allow for “thin plate” evaluation based on the geometry of the member. If defects were present near the surface of the structure however, the thin plate response would potentially appear. Preliminary data was collected from sides of the structure to evaluate parameters for data collection.

For collection from the sides of the foundation, the IE equipment was configured (with impact force, duration, and time collection settings) to specifically evaluate the outer most 8-12 inches of the structure. Data collection points were established to take into account geometric effects from edges for direct comparison, as well as time collection and frequency filters.

In general, data from the side of the structure depicted a short/fast decay in the time domain and a large frequency distribution (no distinct peaks). Figure 3 below illustrates a typical response from the side of the mat foundation.

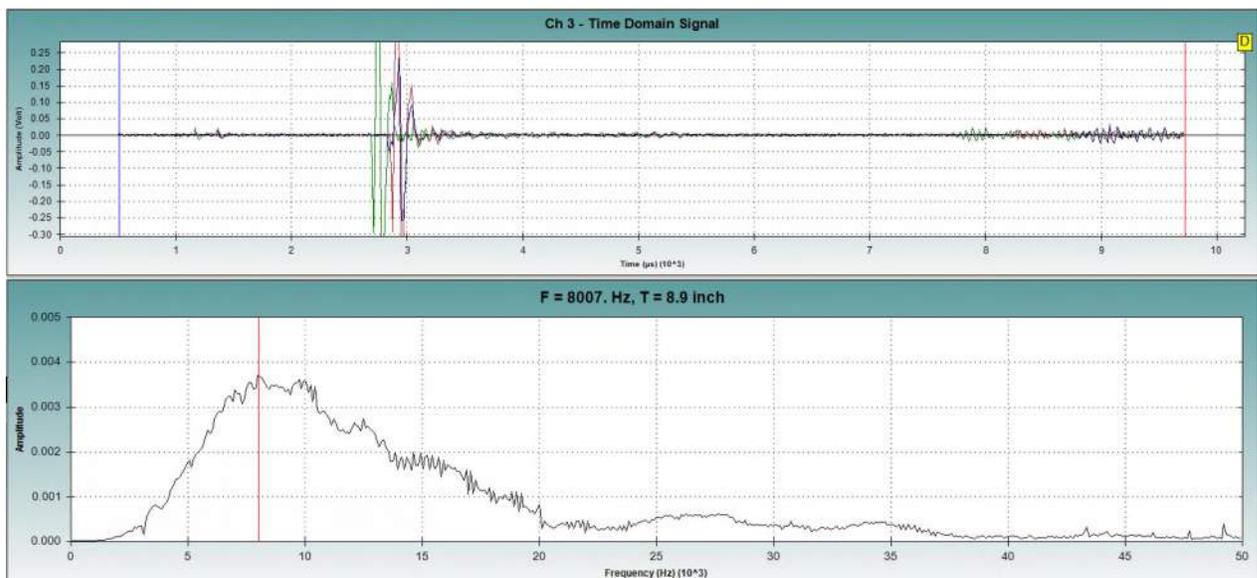


Figure 3, Time and Frequency domain response from a typical side location

At several locations from the side of the structure, data was observed and classified as an anomaly that may indicate a defect in the outermost portion of the foundation. Figure 4 depicts data response that was classified as anomaly. Note the higher amplitude and longer decay of the response in the time domain and multiple peaks in the frequency domain ranging from 6000 Hz to 16000 Hz.

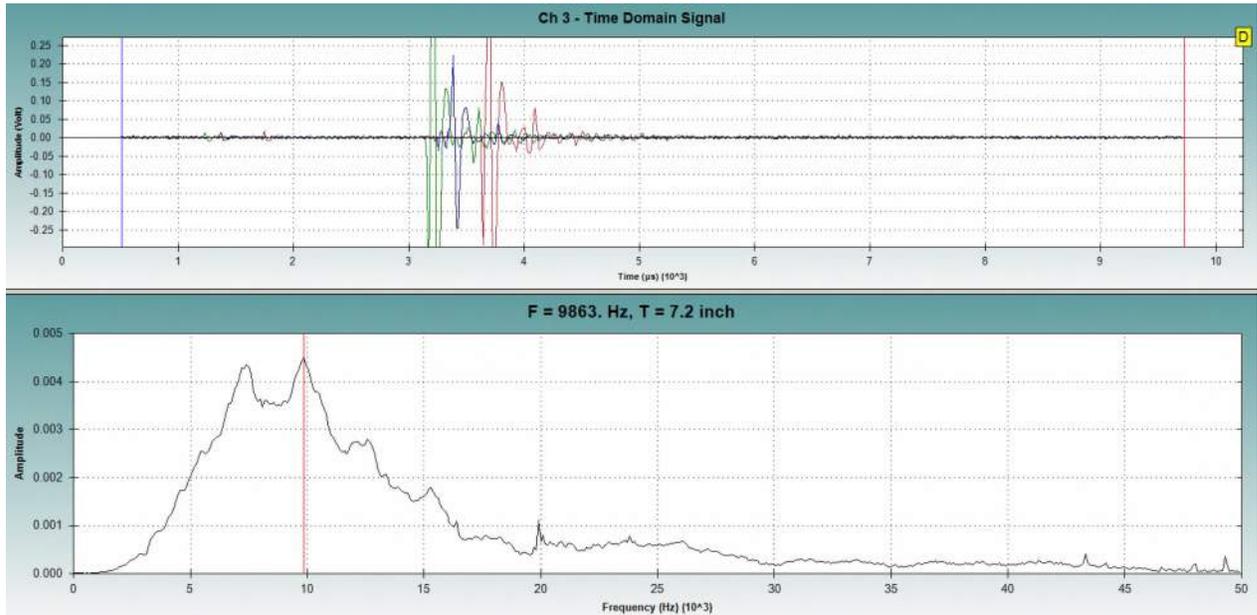


Figure 4, Time and Frequency domain response from side location classified as an anomaly.

Testing Results and Summary

Mat Foundation Top

As described in the data collection section, a total of 353 individual points were collected on the top side of the mat foundation. There were no anomalies observed in the majority of the data collected indicating little to no defects in the concrete. Throughout the entire data set, there were two points with anomalies observed in the return waves or frequency spectrum. These locations are highlighted in red in the attachment “Impact Echo Data Collection Grid – Interior Top Surface”. It should be noted that the anomalies observed are not consistent with data that would indicate a large void, defect, etc.

Mat Foundation Sides

As described in the data collection section, 99 locations were tested on each face. Data from grids 1, 2, 3, 31, 32, and 33 were not included in our analysis as edge effects were amplified due to edge effects from additional surfaces. Therefore 81 data points were analyzed on each face for a total of 324 individual data points analyzed on the vertical faces. Of the points analyzed, 27 points were observed to have anomalies in the return waves or frequency spectrum. These locations are highlighted in red in the attachment “Impact Echo Data Collection Grid – Exterior Vertical Surface”. The east face had the most anomalies while the north face had the least. It should be noted that these points represent some level of anomaly in the data set, but do not necessarily represent an anomaly in the slab. Since known edge and geometric effects were present in the entire data set, additional exploration would be required to fully characterize the presence and extent of defects at these locations. The core sample labeled (1) sent to Braun Intertec was observed to have voids present near reinforcing steel and was obtained from the east face of the slab. The core was obtained from our test gridline A and between gridlines 23 and 24. Two of the data points collected using impact echo with observed anomalies were within 1 foot of this core location.

On October 31, 2017 the east face of the mat foundation was injected with epoxy to patch the core holes. On November 1, 2017 Braun Intertec retested the east face with impact echo using the same test grid as was established before. Figures 6 and 7 show the reflected waves and frequency spectrum at location B23 on the east face before and after the epoxy injection. The frequency spectrum after epoxy injection has fewer peaks and a smaller frequency distribution than before epoxy injection. This data suggests that defects observed from the core sample less than one foot away had been filled with the repair material.

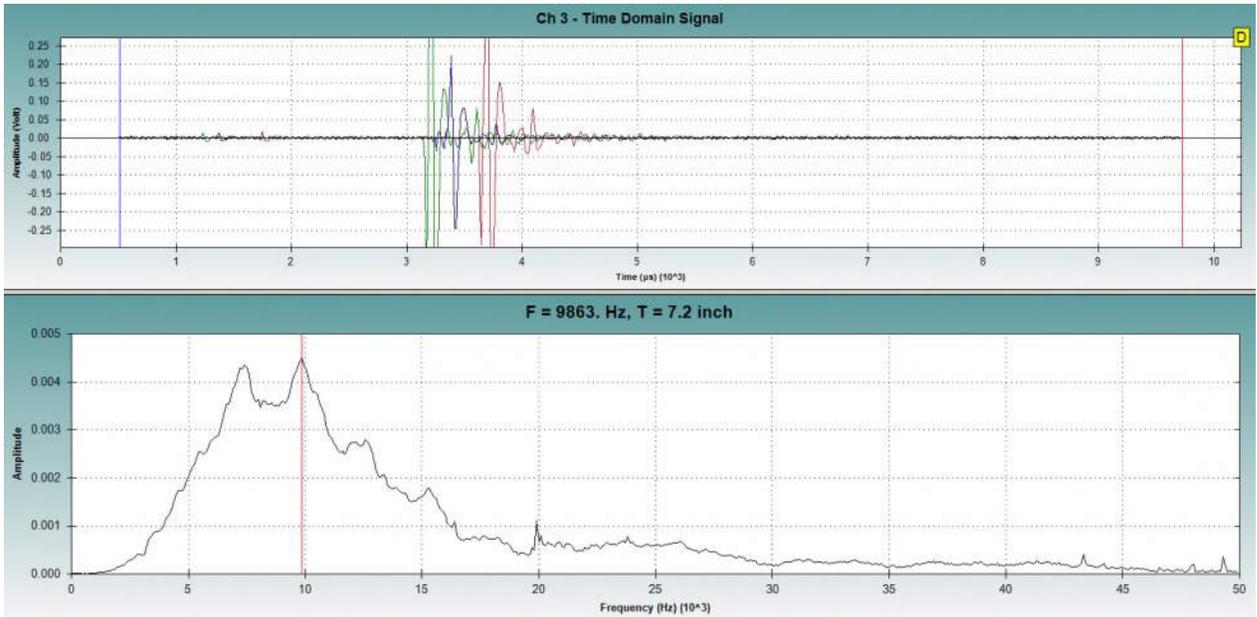


Figure 5, Time and Frequency domain signal near the core location (East Face – B23) before epoxy injection

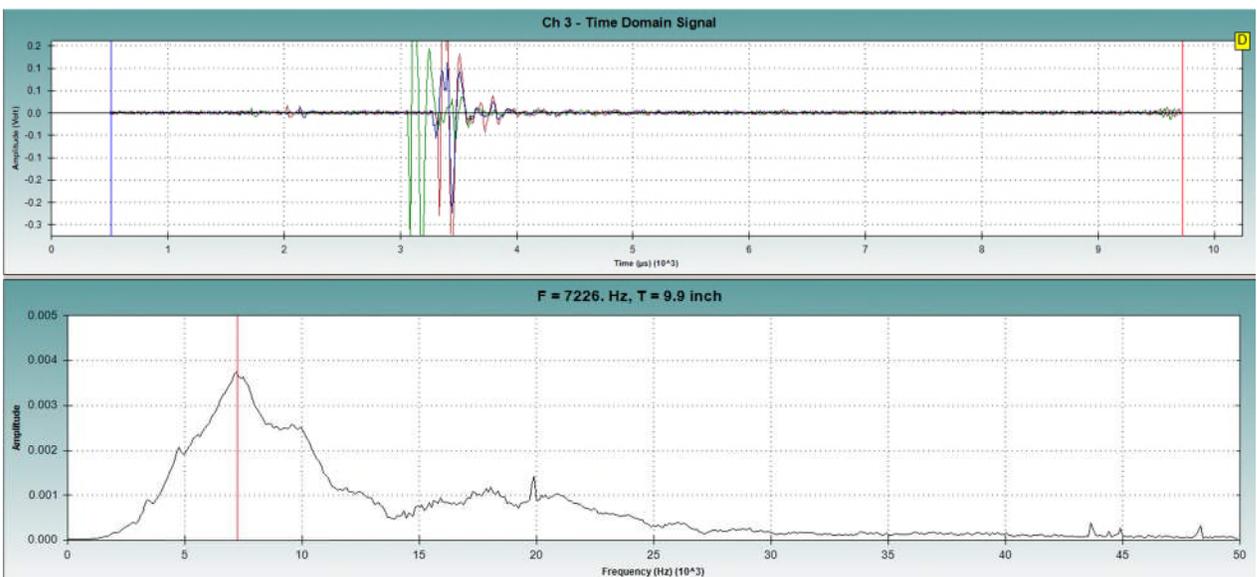


Figure 6, Time and Frequency domain signal near the core location (East Face – B23) after repairs. Note specifically the change in frequency distribution (elimination of the peaks).

General

Methods and data collected for our evaluation were non-destructive and carry assumptions of typical construction practice. In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

If you have any questions, please contact Nick Hansen 612.369.7656 or nhansen@braunintertec.com.

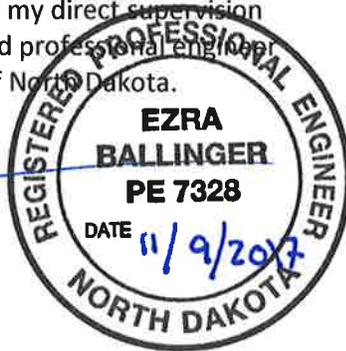
Sincerely,

BRAUN INTERTEC CORPORATION

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly registered professional engineer under the laws of the State of North Dakota.



Ezra Ballinger, PE
Principal/Senior Engineer
Registration No. PE-7328
November 9, 2017



Nicholas P. Hansen
Associate Principal/Senior Scientist



Andrew Aarons, EIT
Structures Evaluation

Attachments:

Impact Echo Data Collection Grid – Interior Top Surface
Impact Echo Data Collection Grid – Exterior Vertical Faces
Photo Exhibit

c: Adele Braun, Barr Engineering Company



IMPACT ECHO DATA COLLECTION GRID
INTERIOR TOP SURFACE

		NORTH																											
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23					
WEST	A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0		
	C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	0	0	0	0	0		
	D	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0	0	0	0	0		
	E	-	-	-	-	-	-	-	-	-	-	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	F	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	G	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	J	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	0		
	O	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	P	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	Q	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	R	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	0	-	-	-	-	-	-	-		
	S	-	-	-	-	0	-	-	-	-	-	-	0	-	-	-	-	-	0	0	-	-	-	-	-	-	-		
	T	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-		
	U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-		
	V	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	0	-	0	-	-	-	-	-	-		
	W	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	-	-	0	-	0	-	-	-	-	-	-		
X	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	-	-	0	-	0	0	-	-	-	-	-			
		SOUTH																											



Photograph #: 1

This photograph shows the approximate location of the test grid established on the top side of the mat foundation.

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Photograph #: 2

This photograph shows a portion of the test grid from the east face. Gridlines are outlined in yellow and core locations are labeled in red. Impact Echo test points were recorded on the intersections of gridlines.

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Photograph #: 3
This photograph shows the core obtained from location 1.

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Photograph #: 4
This photograph shows the core obtained from location 2.

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INVOICE



The Science You Build On.

PLEASE REMIT TO

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NW 7644 PO Box 1450
Minneapolis, MN 55485

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Tax I.D. 41-1684205

Metro Flood Diversion Authority
CO CH2M
John Glatzmaier
64 4th Street North, Suite 300
Fargo, ND 58103

Date 11/14/2017
Invoice number B111670
Project ID B1707919
Customer account [20835](#)
Customer PO

OHB Improvements, WP43CD, Task Order 1,
Amendment 0

Construciton Materials Testing
OHB - Ring Levee Phase D, Gatewell and Lift Station
Construction
Oxbow, ND

For Professional Services rendered through 11/10/2017

ANALYSIS OF FEES

Consulting Services Detail	\$58,830.75
Non-Salary Detail	\$33,004.25

Total Fees \$91,835.00

Amount Previously Invoiced: \$92,034.25
Amount Invoiced to Date: \$183,869.25

Employee	Date	Qty/Hours	Rate	Amount
1 - Construction and Materials Testing				
1.1 - Soil Observations and Testing				
Consulting Services Detail				
Compaction Testing - Non- Nuclear				
Dan Gerving				
	10/13/2017	1.00	78.00	78.00
	10/18/2017	1.00	78.00	78.00
	10/20/2017	1.00	78.00	78.00
	10/22/2017	1.00	78.00	78.00
	10/24/2017	1.00	78.00	78.00
	10/25/2017	1.00	78.00	78.00
	10/26/2017	2.00	78.00	156.00
Total Dan Gerving				\$624.00
Jeffrey Foucault				
	10/9/2017	1.50	78.00	117.00
	10/11/2017	1.50	78.00	117.00
	10/12/2017	2.00	78.00	156.00
	10/13/2017	3.00	78.00	234.00
	10/18/2017	1.50	78.00	117.00
	11/6/2017	1.50	78.00	117.00
	11/7/2017	1.50	78.00	117.00
	11/8/2017	1.50	78.00	117.00
Total Jeffrey Foucault				\$1,092.00
Total Compaction Testing - Non- Nuclear				\$1,716.00
Compaction Testing - Nuclear				
Andrew Cassady				
	10/18/2017	5.50	78.00	429.00
	10/30/2017	8.00	78.00	624.00
	10/31/2017	7.50	78.00	585.00
	11/1/2017	11.50	78.00	897.00
	11/2/2017	9.25	78.00	721.50
	11/3/2017	5.00	78.00	390.00
Total Andrew Cassady				\$3,646.50
Dan Gerving				
	10/12/2017	12.00	78.00	936.00
	10/19/2017	12.00	78.00	936.00
	10/21/2017	12.00	78.00	936.00
	10/22/2017	10.50	78.00	819.00
	10/24/2017	11.25	78.00	877.50
	10/25/2017	11.25	78.00	877.50
	10/26/2017	9.00	78.00	702.00
	10/27/2017	5.00	78.00	390.00
	11/3/2017	6.00	78.00	468.00
Total Dan Gerving				\$6,942.00
Daniel Robideau				
	10/20/2017	12.00	78.00	936.00
	11/9/2017	12.25	78.00	955.50
	11/10/2017	9.00	78.00	702.00
Total Daniel Robideau				\$2,593.50
Eric M Johnson				
	10/7/2017	13.00	78.00	1,014.00
	10/8/2017	10.00	78.00	780.00
	10/14/2017	4.00	78.00	312.00
	10/15/2017	1.75	78.00	136.50
	10/28/2017	12.00	78.00	936.00

Employee	Date	Qty/Hours	Rate	Amount
	11/3/2017	5.25	78.00	409.50
	11/4/2017	8.25	78.00	643.50
Total Eric M Johnson				\$4,231.50
Jeffrey Foucault				
	10/9/2017	11.00	78.00	858.00
	10/10/2017	12.50	78.00	975.00
	10/11/2017	8.00	78.00	624.00
	10/12/2017	11.50	78.00	897.00
	10/13/2017	12.50	78.00	975.00
	10/14/2017	4.00	78.00	312.00
	10/16/2017	9.00	78.00	702.00
	10/17/2017	9.00	78.00	702.00
	10/18/2017	12.00	78.00	936.00
	10/23/2017	10.00	78.00	780.00
	11/6/2017	9.50	78.00	741.00
	11/7/2017	10.50	78.00	819.00
	11/8/2017	11.00	78.00	858.00
Total Jeffrey Foucault				\$10,179.00
Total Compaction Testing - Nuclear				\$27,592.50
Sample pick-up				
Jeffrey Foucault				
	10/9/2017	1.00	78.00	78.00
	10/16/2017	0.50	78.00	39.00
	10/17/2017	0.50	78.00	39.00
	10/23/2017	1.50	78.00	117.00
	11/6/2017	1.00	78.00	78.00
Total Jeffrey Foucault				\$351.00
Total Sample pick-up				\$351.00
Non-Salary Detail				
Asphalt Content (ASTM D 2172/6307), per sample				
Lab Activity				
	10/31/2017	3.00	155.00	465.00
Atterberg Limits: LL and PL (ASTM D 4318), per sample				
Andrew Lage				
	10/18/2017	1.00	107.00	107.00
	10/19/2017	3.00	107.00	321.00
	11/3/2017	4.00	107.00	428.00
	11/8/2017	2.00	107.00	214.00
	11/9/2017	1.00	107.00	107.00
	11/10/2017	1.00	107.00	107.00
Total Andrew Lage				\$1,284.00
Total Atterberg Limits: LL and PL (ASTM D 4318), per sample				\$1,284.00
CMT Trip Charge				
Andrew Cassidy				
	10/18/2017	1.00	35.00	35.00
	10/30/2017	0.50	35.00	17.50
	10/31/2017	0.50	35.00	17.50
	11/1/2017	1.00	35.00	35.00
	11/2/2017	1.00	35.00	35.00
	11/3/2017	1.00	35.00	35.00
Total Andrew Cassidy				\$175.00
Dan Gerving				
	10/12/2017	1.00	35.00	35.00
	10/13/2017	1.00	35.00	35.00
	10/18/2017	1.00	35.00	35.00
	10/19/2017	1.00	35.00	35.00

Employee	Date	Qty/Hours	Rate	Amount
	10/21/2017	1.00	35.00	35.00
	10/22/2017	1.00	35.00	35.00
	10/24/2017	1.00	35.00	35.00
	10/25/2017	1.00	35.00	35.00
	10/26/2017	1.00	35.00	35.00
	10/27/2017	0.50	35.00	17.50
	11/3/2017	1.00	35.00	35.00
Total Dan Gerving				\$367.50
Daniel Robideau				
	10/20/2017	1.00	35.00	35.00
	11/9/2017	1.00	35.00	35.00
	11/10/2017	1.00	35.00	35.00
Total Daniel Robideau				\$105.00
Eric M Johnson				
	10/7/2017	1.00	35.00	35.00
	10/8/2017	1.00	35.00	35.00
	10/14/2017	1.00	35.00	35.00
	10/15/2017	1.00	35.00	35.00
	10/28/2017	1.00	35.00	35.00
	11/3/2017	1.00	35.00	35.00
	11/4/2017	1.00	35.00	35.00
Total Eric M Johnson				\$245.00
Jeffrey Foucault				
	10/9/2017	1.00	35.00	35.00
	10/10/2017	1.00	35.00	35.00
	10/11/2017	1.00	35.00	35.00
	10/12/2017	1.00	35.00	35.00
	10/13/2017	1.00	35.00	35.00
	10/14/2017	0.50	35.00	17.50
	10/16/2017	0.75	35.00	26.25
	10/17/2017	0.75	35.00	26.25
	10/18/2017	1.00	35.00	35.00
	10/23/2017	1.00	35.00	35.00
	11/6/2017	1.00	35.00	35.00
	11/7/2017	1.00	35.00	35.00
	11/8/2017	1.00	35.00	35.00
Total Jeffrey Foucault				\$420.00
Total CMT Trip Charge				\$1,312.50
Extracted aggregate gradation (ASTM D 5444), per sample				
Lab Activity				
	10/31/2017	3.00	105.00	315.00
Los Angeles Abrasion (ASTM C 131, C 535), per sample				
Lab Activity				
	10/30/2017	1.00	132.00	132.00
Lottman stripping (AASHTO T283), per sample				
Lab Activity				
	10/31/2017	3.00	352.00	1,056.00
Marshall density testing, triple specimen (AASHTO T245), per set of 3 specimens				
Lab Activity				
	10/31/2017	3.00	125.00	375.00
Marshall stability and flow (set of 3) (ASTM D 1559), per set of 3 specimens				
Lab Activity				
	10/31/2017	3.00	65.00	195.00
Mechanical (sieve)-hydrometer analysis (ASTM D 422), per sample				

Employee	Date	Qty/Hours	Rate	Amount
Andrew Lage				
	10/19/2017	3.00	174.00	522.00
	10/27/2017	4.00	174.00	696.00
	11/9/2017	6.00	174.00	1,044.00
	11/10/2017	3.00	174.00	522.00
Total Andrew Lage				\$2,784.00
Total Mechanical (sieve)-hydrometer analysis (ASTM D 422), per sample				\$2,784.00
Nuclear moisture-density meter charge, per hour				
Andrew Cassady				
	10/18/2017	5.50	23.00	126.50
	10/30/2017	8.00	23.00	184.00
	10/31/2017	7.50	23.00	172.50
	11/1/2017	11.50	23.00	264.50
	11/2/2017	9.25	23.00	212.75
	11/3/2017	5.00	23.00	115.00
Total Andrew Cassady				\$1,075.25
Dan Gerving				
	10/12/2017	12.00	23.00	276.00
	10/19/2017	12.00	23.00	276.00
	10/21/2017	12.00	23.00	276.00
	10/22/2017	10.50	23.00	241.50
	10/24/2017	11.25	23.00	258.75
	10/25/2017	11.25	23.00	258.75
	10/26/2017	9.00	23.00	207.00
	10/27/2017	5.00	23.00	115.00
	11/3/2017	6.00	23.00	138.00
Total Dan Gerving				\$2,047.00
Daniel Robideau				
	10/20/2017	12.00	23.00	276.00
	11/9/2017	12.25	23.00	281.75
	11/10/2017	9.00	23.00	207.00
Total Daniel Robideau				\$764.75
Eric M Johnson				
	10/7/2017	13.00	23.00	299.00
	10/8/2017	10.00	23.00	230.00
	10/14/2017	4.00	23.00	92.00
	10/15/2017	1.75	23.00	40.25
	10/28/2017	12.00	23.00	276.00
	11/3/2017	5.25	23.00	120.75
	11/4/2017	8.25	23.00	189.75
Total Eric M Johnson				\$1,247.75
Jeffrey Foucault				
	10/9/2017	11.00	23.00	253.00
	10/10/2017	12.50	23.00	287.50
	10/11/2017	8.00	23.00	184.00
	10/12/2017	11.50	23.00	264.50
	10/13/2017	12.50	23.00	287.50
	10/14/2017	4.00	23.00	92.00
	10/16/2017	9.00	23.00	207.00
	10/17/2017	9.00	23.00	207.00
	10/18/2017	12.00	23.00	276.00
	10/23/2017	10.00	23.00	230.00
	11/6/2017	9.50	23.00	218.50
	11/7/2017	10.50	23.00	241.50

Employee	Date	Qty/Hours	Rate	Amount
	11/8/2017	11.00	23.00	253.00
Total Jeffrey Foucault				\$3,001.50
Total Nuclear moisture-density meter charge, per hour				\$8,136.25
Rice specific gravity (ASTM D 2041), per sample				
Lab Activity				
	10/31/2017	3.00	82.00	246.00
Sieve analysis with 200 wash (ASTM C 136 and C 117), per sample				
Dan Gerving				
	10/13/2017	1.00	132.00	132.00
Lab Activity				
	10/9/2017	3.00	132.00	396.00
	10/10/2017	1.00	132.00	132.00
	10/16/2017	1.00	132.00	132.00
	10/18/2017	1.00	132.00	132.00
	10/19/2017	1.00	132.00	132.00
	10/19/2017	1.00	132.00	132.00
	10/26/2017	3.00	132.00	396.00
	10/30/2017	1.00	132.00	132.00
	10/30/2017	1.00	132.00	132.00
	10/30/2017	2.00	132.00	264.00
	11/2/2017	1.00	132.00	132.00
	11/8/2017	1.00	132.00	132.00
Total Lab Activity				\$2,244.00
Total Sieve analysis with 200 wash (ASTM C 136 and C 117), per sample				\$2,376.00
Standard Proctor Test(ASTM D 698)				
Dan Gerving				
	10/13/2017	1.00	185.00	185.00
Lab Activity				
	10/18/2017	1.00	185.00	185.00
Total Standard Proctor Test(ASTM D 698)				\$370.00
Total 1.1 - Soil Observations and Testing: Consulting Services Detail				\$29,659.50
Total 1.1 - Soil Observations and Testing: Non-Salary Detail				\$19,046.75
Total 1.1 - Soil Observations and Testing				\$48,706.25
1.2 - Concrete and Masonry Observations and Testing				
Consulting Services Detail				
Concrete and Masonry Testing				
Andrew Cassady				
	10/31/2017	1.50	78.00	117.00
Andrew Popescu				
	10/20/2017	10.50	78.00	819.00
Colby Farver				
	11/10/2017	10.50	78.00	819.00
Dan Gerving				
	10/10/2017	6.50	78.00	507.00
	10/20/2017	11.50	78.00	897.00
	11/10/2017	10.00	78.00	780.00
Total Dan Gerving				\$2,184.00
Daniel Robideau				
	10/20/2017	1.50	78.00	117.00
Deven Schultz				
	10/20/2017	7.50	78.00	585.00

Rate not on original proposal

Employee	Date	Qty/Hours	Rate	Amount
	10/27/2017	6.00	78.00	468.00
Total Deven Schultz				\$1,053.00
Eric M Johnson	11/10/2017	8.50	78.00	663.00
Jeffrey Foucault	10/11/2017	3.00	78.00	234.00
	10/16/2017	1.50	78.00	117.00
Total Jeffrey Foucault				\$351.00
Joel Derrick	11/10/2017	11.50	78.00	897.00
Roberto Piemontese	10/20/2017	10.50	78.00	819.00
Sean McManus	10/10/2017	5.00	78.00	390.00
	10/19/2017	5.00	78.00	390.00
	10/20/2017	9.25	78.00	721.50
	10/27/2017	3.75	78.00	292.50
	11/10/2017	8.50	78.00	663.00
Total Sean McManus				\$2,457.00
Zachary Lively	10/26/2017	3.00	78.00	234.00
Total Concrete and Masonry Testing				\$10,530.00
Concrete and Masonry Pick up				
Dan Gerving	10/27/2017	1.00	78.00	78.00
Jeffrey Foucault	10/17/2017	0.50	78.00	39.00
Total Concrete and Masonry Pick up				\$117.00
Non-Salary Detail				
CMT Trip Charge				
Andrew Cassady	10/31/2017	0.50	35.00	17.50
Andrew Popescu	10/20/2017	0.50	35.00	17.50
Dan Gerving	10/10/2017	1.00	35.00	35.00
	10/20/2017	1.00	35.00	35.00
	11/10/2017	1.00	35.00	35.00
Total Dan Gerving				\$105.00
Deven Schultz	10/20/2017	1.00	35.00	35.00
	10/27/2017	1.00	35.00	35.00
Total Deven Schultz				\$70.00
Eric M Johnson	11/10/2017	1.00	35.00	35.00
Joel Derrick	11/10/2017	1.00	35.00	35.00
Roberto Piemontese	10/20/2017	0.50	35.00	17.50
Sean McManus	10/10/2017	1.00	35.00	35.00
	10/19/2017	1.00	35.00	35.00
	10/20/2017	1.00	35.00	35.00
	10/27/2017	1.00	35.00	35.00

Employee	Date	Qty/Hours	Rate	Amount
	11/10/2017	1.00	35.00	35.00
Total Sean McManus				\$175.00
Zachary Lively				
	10/26/2017	1.00	35.00	35.00
Total CMT Trip Charge				\$507.50
Compressive strength of concrete cylinders (ASTM C 39), per specimen				
Lab Activity				
	10/10/2017	12.00	30.00	360.00
	10/11/2017	8.00	30.00	240.00
	10/16/2017	4.00	30.00	120.00
	10/19/2017	5.00	30.00	150.00
	10/20/2017	33.00	30.00	990.00
	10/26/2017	5.00	30.00	150.00
	10/27/2017	9.00	30.00	270.00
	10/31/2017	8.00	30.00	240.00
	11/10/2017	24.00	30.00	720.00
Total Lab Activity				\$3,240.00
Total Compressive strength of concrete cylinders (ASTM C 39), per specimen				\$3,240.00
Total 1.2 - Concrete and Masonry Observations and Testing: Consulting Services Detail				\$10,647.00
Total 1.2 - Concrete and Masonry Observations and Testing: Non-Salary Detail				\$3,747.50
Total 1.2 - Concrete and Masonry Observations and Testing				\$14,394.50
1.4 - Project Management				
Consulting Services Detail				
Project Assistant				
Jessica Anderson				
	10/9/2017	0.25	94.00	23.50
	10/10/2017	0.25	94.00	23.50
	10/11/2017	0.25	94.00	23.50
	10/12/2017	0.25	94.00	23.50
	10/16/2017	0.25	94.00	23.50
	10/17/2017	0.25	94.00	23.50
	10/18/2017	0.25	94.00	23.50
	10/20/2017	0.25	94.00	23.50
	10/23/2017	0.25	94.00	23.50
	10/24/2017	0.25	94.00	23.50
	10/25/2017	0.25	94.00	23.50
	10/26/2017	0.25	94.00	23.50
	10/27/2017	0.25	94.00	23.50
	10/30/2017	0.25	94.00	23.50
	10/31/2017	0.25	94.00	23.50
	11/1/2017	0.25	94.00	23.50
	11/2/2017	0.25	94.00	23.50
	11/3/2017	0.25	94.00	23.50
	11/6/2017	0.25	94.00	23.50
	11/7/2017	0.25	94.00	23.50
	11/8/2017	0.25	94.00	23.50
	11/9/2017	0.25	94.00	23.50
	11/10/2017	0.25	94.00	23.50
Total Jessica Anderson				\$540.50
Vicki Peterson				
	11/2/2017	0.50	94.00	47.00
Total Project Assistant				\$587.50
Project Manager				

Employee	Date	Qty/Hours	Rate	Amount
Brenda Hoff				
	10/11/2017	0.75	167.00	125.25
	10/30/2017	0.25	167.00	41.75
Total Brenda Hoff				\$167.00
Ezra Ballinger				
	10/7/2017	1.00	167.00	167.00
	10/9/2017	4.50	167.00	751.50
	10/10/2017	3.75	167.00	626.25
	10/11/2017	1.25	167.00	208.75
	10/12/2017	0.25	167.00	41.75
	10/13/2017	0.50	167.00	83.50
	10/16/2017	1.00	167.00	167.00
	10/17/2017	0.25	167.00	41.75
	10/18/2017	1.00	167.00	167.00
	10/19/2017	2.50	167.00	417.50
	10/20/2017	5.25	167.00	876.75
	10/23/2017	2.75	167.00	459.25
	10/24/2017	1.25	167.00	208.75
	10/25/2017	0.25	167.00	41.75
	10/26/2017	0.50	167.00	83.50
	10/27/2017	2.50	167.00	417.50
	10/30/2017	0.50	167.00	83.50
	11/1/2017	2.00	167.00	334.00
	11/2/2017	0.50	167.00	83.50
	11/6/2017	0.25	167.00	41.75
	11/8/2017	0.25	167.00	41.75
	11/9/2017	1.00	167.00	167.00
	11/10/2017	0.50	167.00	83.50
Total Ezra Ballinger				\$5,594.50
Matthew Haugstad				
	10/9/2017	2.00	167.00	334.00
	10/10/2017	2.50	167.00	417.50
	10/11/2017	2.50	167.00	417.50
	10/12/2017	1.50	167.00	250.50
	10/13/2017	1.00	167.00	167.00
	10/16/2017	3.75	167.00	626.25
	10/17/2017	1.00	167.00	167.00
	10/18/2017	3.00	167.00	501.00
	10/19/2017	2.00	167.00	334.00
	10/20/2017	1.00	167.00	167.00
	10/23/2017	4.00	167.00	668.00
	10/24/2017	1.50	167.00	250.50
	10/25/2017	0.75	167.00	125.25
	10/26/2017	1.00	167.00	167.00
	10/27/2017	0.50	167.00	83.50
	10/30/2017	1.75	167.00	292.25
	10/31/2017	0.75	167.00	125.25
	11/1/2017	0.50	167.00	83.50
	11/2/2017	0.25	167.00	41.75
	11/3/2017	2.75	167.00	459.25
	11/6/2017	0.75	167.00	125.25
	11/7/2017	0.75	167.00	125.25
	11/8/2017	0.75	167.00	125.25
	11/9/2017	0.75	167.00	125.25

Employee	Date	Qty/Hours	Rate	Amount
	11/10/2017	1.00	167.00	167.00
Total Matthew Haugstad				\$6,346.00
Total Project Manager				\$12,107.50
Senior Engineer				
Ezra Ballinger				
	10/30/2017	3.00	187.00	561.00
	10/31/2017	2.00	187.00	374.00
	11/6/2017	1.75	187.00	327.25
	11/9/2017	1.00	187.00	187.00
	11/10/2017	1.00	187.00	187.00
Total Ezra Ballinger				\$1,636.25
Total Senior Engineer				\$1,636.25
Total 1.4 - Project Management: Consulting Services Detail				\$14,331.25
Total 1.4 - Project Management				\$14,331.25
1.5 - Pavements				
Consulting Services Detail				
Bituminous Observations & Testing				
Dan Gerving				
	10/23/2017	1.50	104.00	156.00
Daniel Robideau				
	10/24/2017	1.50	104.00	156.00
	10/30/2017	9.00	104.00	936.00
	10/31/2017	7.00	104.00	728.00
	11/1/2017	3.50	104.00	364.00
Total Daniel Robideau				\$2,184.00
Jeffrey Foucault				
	10/23/2017	1.00	104.00	104.00
Sean McManus				
	10/25/2017	0.75	104.00	78.00
Total Bituminous Observations & Testing				\$2,522.00
Non-Salary Detail				
CMT Trip Charge				
Dan Gerving				
	10/23/2017	1.00	35.00	35.00
Daniel Robideau				
	10/24/2017	1.00	35.00	35.00
	10/30/2017	2.00	35.00	70.00
	10/31/2017	1.00	35.00	35.00
	11/1/2017	1.00	35.00	35.00
Total Daniel Robideau				\$175.00
Total CMT Trip Charge				\$210.00
Total 1.5 - Pavements: Consulting Services Detail				\$2,522.00
Total 1.5 - Pavements: Non-Salary Detail				\$210.00
Total 1.5 - Pavements				\$2,732.00
1.6 - Concrete Consulting				
Consulting Services Detail				
Principal Engineer				
Nicholas Hansen				
	10/31/2017	2.00	251.00	502.00
Senior Scientist				
Nicholas Hansen				
	11/9/2017	3.00	187.00	561.00

Employee	Date	Qty/Hours	Rate	Amount
Staff Engineer				
Andrew Aarons				
	11/7/2017	2.00	152.00	304.00
	11/8/2017	2.00	152.00	304.00
Total Andrew Aarons				\$608.00
Total Staff Engineer				\$608.00
Non-Salary Detail				
Mobilization, per trip				
Andrew Aarons				
	10/30/2017	1.00	2,000.00	2,000.00
Non-Destructive Testing, per day				
Andrew Aarons				
	10/30/2017	1.00	4,000.00	4,000.00
	10/31/2017	1.00	4,000.00	4,000.00
Total Andrew Aarons				\$8,000.00
Total Non-Destructive Testing, per day				\$8,000.00
Total 1.6 - Concrete Consulting: Consulting Services Detail				\$1,671.00
Total 1.6 - Concrete Consulting: Non-Salary Detail				\$10,000.00
Total 1.6 - Concrete Consulting				\$11,671.00
Total 1 - Construction and Materials Testing: Consulting Services Detail				\$58,830.75
Total 1 - Construction and Materials Testing: Non-Salary Detail				\$33,004.25
Total 1 - Construction and Materials Testing				\$91,835.00
Total Project				\$91,835.00