Item 6a.

Recommended Contracting Actions Summary

Date: November 10, 2016

Description	Company	Budget Estimate ($)
Task Order Amendments		
6.a.1 **Task Order 07, Amendment 06** **Recreation and Use Master Plan and Design** • Adds design services for the Oxbow Park Relocation detailed design • Adds services for preparation of National Park Service's Section 6(f) conversion submittal • Extends Period of Performance for Subtask C to March 31, 2017	HMG	128,703
6.a.2 **Task Order 09, Amendment 16** **Hydrology and Hydraulic Modeling** • Adds scope and budget for additional subtask K Phase 8 Model Update	HMG	119,426
6.a.3 **Task Order 13, Amendment 14** **Levee Design and Design Support** • Closeout budget adjustment for In Town Levees, Phase 2 design	HMG	60,000
6.a.4 **Task Order 16, Amendment 05** **Permit Submittal Preparation** • Adds scope and budget to prepare the 2nd St. FEMA CLOMR Submittal and additional support for the overall FM Diversion Project CLOMR and staging area Mitigation Plan. • Extends Period of Performance to December 31, 2017	HMG	116,000
6.a.5 **Task Order 19, Amendment 02** **P3 Document Preparation Support** • Adds scope and budget for additional P3 RFP technical support services and reviews.	HMG	125,000
Total Task Order Amendments		**549,129**

Description	Company	Budget Estimate ($)
Construction Change Orders		
6.a.6 **WP-42A.2, 2nd Street North Pump Station Change Order 11** • Final Project Cost Adjustment • Decorative Fence De-Scope	Industrial Builders, Inc.	-36,492.02
6.a.7 **WP-42H.2, El Zagal Area Flood Risk Mgmt-Phase 2 Change Order 04** • Additional Stop Sign • Milestone Adjustment for Final Seeding	Reiner Contracting, Inc.	420.50
6.a.8 **WP-42I.1, Mickelson Levee Extension Change Order 03** • Final Cost Adjustment • Asphalt Millings • Final Completion Seeding Adjustment	Industrial Builders, Inc.	7,891.50
6.a.9 **WP-42F.1S Flood Control – 2nd St. N. (South of Pump Station) - Change Order 14** • Streetlight Modifications • City of Fargo Library Landscaping • Epoxy Paint for streets • Differing Site Conditions material disposal • 3rd Street Lighting Modifications • 1st Ave Plaza Bench Modifications • Topsoil Import • Temporary Straw Mulch	Industrial Builders, Inc.	81,816.44
6.a.10 **WP-42F.1N Flood Control - 2nd St. N. (North of Pump Station) – Change Order 04** • 8” Plaza Concrete • Pull Boxes • Temporary Straw Mulch • Milestone Changes	Industrial Builders, Inc.	9,158.00
Total Construction Change Orders		**62,794.42**

Technical Advisory Group Recommendation

Meeting Date: 10/19/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative prepared the following Contract Action(s) for the Technical Staff team:

List description of Contract Action(s):

Houston-Moore Group, LLC

Task Order 7, Amendment 6 – Recreation and Use Master Plan and Design $128,703

- **Add design services for the Oxbow Park Relocation detailed design**
- **Add services for preparation of National Park Service's Section 6(f) conversion submittal**
- **Extend POP for subtask C to March 31, 2017**

Background:

Under Task Order 7, Houston-Moore Group, LLC (HMG) is responsible for continuing development of the Recreation and Use Master Plan for the Diversion Project, including preliminary and final design development for right and left band Excavated Material Berm (EMB) grading, along with WP-42 and WP-43 recreational features design support services. HMG has provided these professional services from June 14, 2012, to the present time. See the table below for a summary of the amendments to the Task Order.

This amendment adds additional detailed design services for the Oxbow Park Relocation bid documents, and extends the Period of Performance (POP) for subtask C to March 31, 2017.

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Budget ($) Change	Original Project Cost	Revised Project Cost	Project Start	Project Completion	Comments
Task Order 7 Amendment 0	$ -	$240,000	$ -	14-Jun-12	30-Apr-15	Initial authorization of subtasks A and B.
Task Order 7 Amendment 1	$0	-	$240,000	14-Jun-12	30-Sep-14	Added subtask C. Design Support, and extended the POP for several Work Package designs.
Task Order 7 Amendment 2	$16,000	-	$256,000	14-Jun-12	30-Sep-15	Extended the POP for several Work Package designs, and added funding for subtask B.
Task Order 7 Amendment 3	$90,000	-	$346,000	14-Jun-12	30-Sep-15	Added Work Packages, 25, 26, and 28, and funding for them.
Task Order 7 Amendment 4	$0	-	$346,000	14-Jun-12	31-Mar-16	Extended the POP to 31-Mar-16.
Task Order 7 Amendment 5	$0	-	$346,000	14-Jun-12	31-Dec-16	Adds requirements for monthly invoicing and status reporting. Extends the POP for subtasks B. (WP-25, WP-26, and WP-28) and C. to 31-Dec-16.

Original Agreement or Amendment	Budget ($) Change	Original Project Cost	Revised Project Cost	Project Start	Project Completion	Comments
Task Order 7 Amendment 6	$128,703	-	$474,703	14-Jun-12	31-Mar-17	Adds additional detailed design for Oxbow park relocation and NPS Section 6(f) submittal. Extends the POP for subtasks C. to 31-Mar-17.

Discussion:

Amendment 1 added Subtask C, Design Support services for both WP-42 (In Town Levees) and WP-43 (OHB Ring Levee) that included consulting services to assist with the incorporation of aesthetic and recreational features into the project designs, coordination with local stakeholders, and development of recreational concept plans. For WP-43, the scope included preparation of bidding documents but did not include specific design reviews or design discipline requirements in the design task because a final concept had not been selected.

This Amendment 6 to Task Order 7 adds detailed design 60% and 90% submittal reviews along with design scope for architectural, structural, mechanical, and electrical design services. In addition, the Oxbow Park received Land and Water Conservation Funds (LWCF) for the original park construction, and a National Park Service (NPS) Section 6(f) conservation submittal is required prior to park relocation work. HMG provided a detailed estimate of costs for these changes, attached and summarized below. The total estimated change of $128,703 includes a 5% mark-up by HMG for subcontractor (SRF and KLJ) performed work.

a. SRF – design services that have started: $ 28,718
   i. Detailed design services for 60% and 90% submittal review,
   ii. coordination with ND Parks regarding NPS Section 6(f) requirements,
   iii. and other design support tasks
b. SRF – proposed additional design services: $ 20,632
   i. Detailed design services for 90% submittal and 100% bid documents
c. SRF – proposed additional services, NPS Section 6(f) submittal preparation: $ 18,900
d. KLJ – proposed additional design services: $ 60,453
   i. detailed design services for 60%, 90%, and 100% bid documents
   ii. includes architectural, structural, mechanical, and electrical design services

Total for Amendment 6: $ 128,703

This amendment also extends the Period of Performance (POP) for subtask C to March 31, 2017. This extension allows additional time for completion and submittal of NPS Section 6(f) documents and final design services.

TO07 Recreation and Use Master Plan and Design Budgets by Subtask:

Subtask	Activity ID	Current Budget ($)	Amendment 6 ($)	Total ($)
A. Recreation and Use Master Plan – Revised Draft	SW-1080	25,000	0	25,000
B. Undulation Design – Outlet to I-94	SW-1080	212,000	0	212,000
C. Design Support	SW-1080	109,000	128,703	237,703
TOTAL		**346,000**	**128,703**	**474,703**

The PMC reviewed HMG's cost proposal and found it to be acceptable.

This change amount of $128,703 is included in the FY-2016 FMDA budget.

ATTACHMENT(S):

1. Draft Task Order 7, Amendment 6
2. HMG Cost Proposal

Presented by:

John Glatzmaier, P.E.
CH2M
Project Manager
Metro Flood Diversion Project

October 19, 2016
Date

Keith Berndt, Cass County Administrator
Concur: _____ *Non-Concur:* _____

April Walker, Fargo City Engineer
Concur: 20-Oct-16 *Non-Concur* _____

Mark Bittner, Fargo Director of Engineering
Concur: 20-Oct-16 *Non-Concur:* _____

Jason Benson, Cass County Engineer
Concur: 19-Oct-16 *Non-Concur* _____

David Overbo, Clay County Engineer
Concur: 19-Oct-16 *Non-Concur:* _____

Robert Zimmerman, Moorhead City Engineer
Concur: 20-Oct-16 *Non-Concur* _____

Nathan Boerboom, Diversion Authority Project Manager
Concur: 20-Oct-16 *Non-Concur:* _____

This is Task Order No. 7, Amendment 6~~5~~, consisting of 6~~5~~5 pages.

Houston-Moore Group, LLC

Task Order No. 7, Amendment 6~~5~~

MFDA Purchase Order No. 152022

Recreation and Use Master Plan and Design

In accordance with Paragraph 1.01 of the Agreement between Fargo-Moorhead Flood Diversion Authority ("Owner") and Houston-Moore Group, LLC (HMG) ("Engineer") for Professional Services – Task Order Edition, dated March 8, 2012 ("Agreement"), Owner and Engineer agree as follows:

The parties agree that in the event of a conflict between prior versions of this Task Order No. 7 and this Amendment, the terms and conditions in this Amendment shall prevail, provided however, nothing herein shall preclude ENGINEER from invoicing for work authorized under prior versions of this Task Order and performed prior to effective date of this Amendment, even to the extent such prior work was revised by this Amendment. All other terms and conditions shall remain the same and are hereby ratified and affirmed by the parties.

1. Specific Project Data

    A. Title: RECREATION AND USE MASTER PLAN AND DESIGN

    B. Description: A draft Recreation and Use Master Plan has been developed. It includes overall concepts for the diversion corridor and specific recommendations for the northern portion (I-94 to the Outlet). Continue development of the Recreation and Use Master Plan for the Diversion Project, including preliminary and final design development for right and left bank Excavated Material Berm (EMB) grading.

    C. Background: The Diversion Project will be a major feature in the Fargo-Moorhead area. Although it will be a critical component for reducing the risk of catastrophic flood impacts in the area, it will actually be used only a small percent of the time. The beneficial use of the project features, when not actively used for flood mitigation, need to be determined.

2. Services of Engineer

    A. RECREATION AND USE MASTER PLAN – Revised Draft. Revise select components of the master plan document to reflect the most recent diversion design. Modification consist of the elimination of row crop agriculture on the left EMB, the narrowing of the EMB widths, the realignment of the diversion near I-94, and the consolidated CR 31/4 bridge. Master Plan revisions will include:

        I. Executive Summary, insert revised graphics and text from Section 6 and insert revised preliminary construction Cost Estimate from Section 7.

        II. Section 4 Diversion Channel Analysis, new graphic that depicts the most recent diversion design and associated text that explains the diversion modifications.

        III. Section 5 North Section Alternatives Considered. Change existing draft preferred alternative to preliminary preferred alternative and move to section 5.

        IV. Section 6 Preferred Alternative, Figures 6.2 – 6.6 and associated text.

        V. Section 7 Implementation, Table 7.3 (Preliminary Construction Cost Estimate).

        VI. Appendix A.14 Preliminary Cost Estimate Details.

    Revised Master Plan graphics for the preferred alternative will be provided to the Diversion Authority's Program Management Consultant for review.

A draft final Recreation and Use Master Plan will be developed that incorporates the revised graphics and text associated with the most recent diversion design and public input. The draft final Master Plan will be submitted to the Diversion Authority's Program Management Consultant for a final review.

B. UNDULATION DESIGN – Outlet to Maple River. Develop a design for an undulating surface, consistent with concepts in the draft Recreation and Use Plan, which can be incorporated into design documents. For each work package, at 35% design submittals, design teams will provide a digital terrain model (DTM) in a LandXML format showing a "base right bank EMB" based on geotechnical stability requirements, excavation volumes, and an approximate 50-50 split for placing excavated material on each side of the channel. The base EMB will include a top graded at a 2% slope to shed drainage away from the diversion channel. The design team will also provide a "maximum berm height" that the undulations may not exceed. Design the undulations based on the information provided, balancing overall earth work quantities. Develop a draft Microstation DGN file and Inroads DTM file in a LandXML format for the right bank EMB undulation design and submit for review. Include additional design information such as input to Specifications, construction notes, seeding options, and additional details and notes to convey the design intent.

   If requested by design team, modify DTM and provide Final DTM in a LandXML format. Review design team-developed drawings and provide comments. Provide guidance to the design teams at bridge locations for bench layout or at-grade trail crossing to be compatible with future trail systems.

   Deliverables:

   I. Draft DGNs, DTMs and design specifications and drawing notes for Diversion Channel Reaches: 1, 2, 3, 4, 5, 6, 17, and 18.

   II. Final DGNs, and DTMs and design specifications and drawing notes for Diversion Channel Reaches: 1, 2, 3, 4, 5, 6, 17, and 18.

      1. Due to EMB design modifications, provide updated undulating berm designs for impacted channel reaches.

   III. Draft DGNs, DTMs and design specifications and drawing notes for Bridge Reaches: CR31/CR4 Bridge, I-29 and CR81 Bridges, BNSF Hillsboro RR Bridge, CR32 and CR22 Bridges, BNSF Prosper RR Bridge, CR20 Bridge, and CR17 Bridge.

   IV. Final DGNs and DTMs and design specifications and drawing notes for Bridge Reaches: CR31/CR4 Bridge, I-29 and CR81 Bridges, BNSF Hillsboro RR Bridge, CR32 and CR22 Bridges, BNSF Prosper RR Bridge, CR20 Bridge, and CR17 Bridge.

C. DESIGN SUPPORT for WP-42 (RED RIVER LEVEES) and WP-43 (O/H/B RING LEVEE) –WP-42 and WP-43 could provide benefits by incorporating improved aesthetics and recreational features, including plantings and trials.

   I. WP-42 - Provide consulting services to assist with the incorporation of aesthetic and recreational features into the project design. Coordinate with the adjacent City of Fargo projects.

   II. WP-43 - Provide design and consulting services to assist with the incorporation of aesthetic and recreational features into the project design. For WP – 43A and WP – 43C, coordinate with the City of Oxbow and the Oxbow Golf and Country Club projects. Work with community representatives and project stakeholders to develop relocated Oxbow Park concept. Prepare relocated Oxbow Park bidding documents.

      1. Provide Architectural, Structural, Mechanical, and Electrical design services for the Oxbow Park warming house.

2. Provide 60%, 90%, and 100% design submittals for review. Review and incorporate submittal comments.

~~II.~~3. Prepare National Park Service (NPS) Section 6(f) conservation submittal application.

III. Deliverables:

1. Concept drawings, specifications.

2. Design review services.

~~2.~~a. 60% and 90% submittal documents

3. Final Oxbow Park Relocation bidding documents

~~3.~~4. National Park Service Section 6(f) conservation submittal

3. Owner's Responsibilities

Owner shall have those responsibilities set forth in Article 2 and in Exhibit B.

4. Times for Rendering Services

Subtask	**Start Time**	**Completion Time**
A. Recreation and Use Master Plan Volume One – Revised Draft	June 14, 2012	September 30, 2012
B. Undulation Design – Outlet to I-94:		

Submit the draft undulation design 45 days prior to the FTR-DQC (for USACE Work Packages) or 45 days prior to the 30 percent submittal (for LERRDS Work Packages). Revise and resubmit final undulation design within 20 days of receipt of review comments.

Initial dates for each work package are as follows:

WP-01 – Reach 1 Draft and Final Submittals	June 14, 2012	October 4, 2012
WP-02 – CR31/CR4 Bridge Draft and Final Submittals	June 14, 2012	October 29, 2012
WP-03 – Reach 2 Draft and Final Submittals	June 14, 2012	March 22, 2013
WP-04 – (Reach 3) I-29 and CR81 Bridges Draft and Final Submittals	June 14, 2012	October 29, 2012
WP-05 – (Reach 3) BNSF Hillsboro RR Bridge Draft and Final Submittals	June 14, 2012	September 30, 2014
WP-06 – Reach 4 Draft and Final Submittals	June 14, 2012	March 31, 2016
WP-07 – CR32 and CR22 Bridges Draft and Final Submittals	June 14, 2012	March 31, 2016
WP-08 – Reach 5 Draft and Final Submittals	June 14, 2012	March 31, 2016
WP-09 – BNSF Prosper RR Bridge Draft and Final Design Submittals	June 14, 2012	March 31, 2016
WP-10A – Reach 6 Draft and Final Submittals	June 14, 2012	March 31, 2016
WP-11 – CR20 Bridge Draft and Final Submittals	June 14, 2012	March 31, 2016

Subtask	Start Time	Completion Time
WP-25 – Reach 17 Draft and Final Submittals	April 9, 2015	December 31, 2016
WP-26 – Reach 18 (Inlet Structure) Draft and Final Submittals	April 9, 2015	December 31, 2016
WP-28 – CR17 Bridge Draft and Final Submittals	April 9, 2015	December 31, 2016
C. Design Support	September 12, 2013	March 31, 2017~~December 31, 2016~~

5. Payments to Engineer

A. Owner shall pay Engineer for services rendered as follows:

I. Compensation for services identified shall be in accordance with the Standard Hourly Rates shown in Appendix 2 of Exhibit C of the Agreement. The total compensation for services identified under the Task Order is not-to-exceed amount as defined in the table below.

Subtask	Activity ID	Current Budget ($)	Change ($)	Revised Budget ($)
A. Recreation and Use Master Plan – Revised Draft	SW-1080	25,000	0	25,000
B. Undulation Design – Outlet to I-94	SW-1080	212,000	0	212,000
C. Design Support	SW-1080	109,000	~~0~~128,703	237,703~~109,000~~
TOTAL		**346,000**	**128,703**	**474,703~~346,000~~**

B. The terms of payment are set forth in Article 4 of the Agreement and in Exhibit C.

C. When invoicing work, Engineer shall note the Activity ID (shown in table above) associated with each invoiced activity.

D. Provide monthly invoice and status report

I. Status report will accompany invoice, and detail work completed during the invoice period.

II. Status report will be organized by subtask, and provide narrative of work completed on each subtask.

III. Status of work completed will include:

a. Outstanding issues to resolve, expected steps to progress work, outstanding items required from Owner, Owner's Representative, or others to progress work, anticipated completion date of subtasks.

b. Dates of on-call services provided, and description of the activities performed by Engineer, including any deliverables produced.

c. Dates of deliverables otherwise required under the Project Management task.

6. Consultants:

A. Barr Engineering Company

B. SRF Consulting Group, Inc.

~~B.~~C. KLJ

7. Other Modifications to Agreement: None
8. Attachments: None
9. Documents Incorporated By Reference: None
10. Terms and Conditions: Execution of this Task Order by Owner and Engineer shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order is June 14, 2012.

ENGINEER:

Houston-Moore Group, LLC

Signature Date

Jeffry J. Volk
Name

President
Title

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

C. Gregg Thielman
Name

Sr. Project Manager
Title

925 10th Avenue East
West Fargo, ND 58078
Address

cgthielman@houstoneng.com
E-Mail Address

(701) 237-5065
Phone

Fax

OWNER:

Fargo-Moorhead Metro Diversion Authority

Signature Date

Darrell Vanyo
Name

Chairman, Flood Diversion Board of Authority
Title

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

Keith Berndt
Name

Cass County Administrator
Title

211 9th Street South
PO Box 2806
Fargo, ND 58108-2806
Address

berndtk@casscountynd.gov
E-Mail Address

(701) 241-5720
Phone

(701) 297-6020
Fax

FM Metro Flood Risk Management Project

Task Order No. 7 - Amendment No. 6

Task	Activity Description	Cost Per Task
Additional Engineering Services		
Subtask C - Design Support	Additional sub-consultant design services to complete Oxbow Park Relocation Construction Documents that cover the demolition of the existing park and construction of a new park. Prepare 90% and 100% construction bid documents for WP-43E3. Section 6(f) conversion of the existing park to the new park site. Requirements are due to the use of Land and Water Conservation Funds (LWCF) for original construction. $65,000 plus 5% markup. Sub-consultants: SRF Consulting Group	$ 68,250
Subtask C - Design Support	Additional sub-consultant design services for addition of Oxbow Warming House. Includes coordination meetings, schematic design and construction documents for architectural, structural, mechanical and electrical design for 60%, 90% and final plans and specifications. $57,574.50 plus 5% markup. Sub-consultants: KLJ	$ 60,453
	Total	$ 128,703
	Grand Totals	$ 128,703

SRF Consulting Group, Inc. | Engineers Planners Designers

SRF No. 7715.02

October 12, 2016

Mr. Lee Beauvais, P.E.
Houston-Moore Group
925 10th Avenue East
West Fargo, ND 58078

Subject: Budget Amendment Request – Oxbow Park Relocation

Dear Mr. Beauvais:

SRF Consulting Group, Inc. (SRF) is requesting a budget amendment to complete two tasks that are needed to relocate the existing Oxbow Community Park, which is required due to planned construction of a ring levee around the community. The first task relates to the completion of construction documents that cover the demolition of the existing park and construction of a new park within the new ring levee. The second task covers the preparation of Section 6(f) conversion documentation needed to meet the requirement of the Land and Water Conservation Funds (LWCF) used to construct the existing park. Details about each of these work tasks are described below.

Oxbow Park Relocation – Preparation of Construction Documents (WP-43E3)

The table below summarizes work performed to date and estimated fees to complete this task.

Tasks Performed to Date (Current Budget: $105,000)	**Hours Expended (9/30/16)**	**Fee**	**Expenses**	**Total**
• Perform site visits, meet with Oxbow Park Department representative, review background information and levee design information • Develop and refine recreation concepts for the Oxbow-Hickson-Bakke project area; develop and refine associated opinion of estimated construction costs for each concept • Develop and refine concepts for the relocation of Oxbow Park; develop and refine associated opinion of estimated construction costs for the park concepts • Participate in the Oxbow-Hickson-Bakke Value Engineering Design Charrette • Coordinate with North Dakota Parks to determine requirements for a 6(f) conversion of Oxbow Park	1,015	$130,600	$1,750	$132,350

Tasks Performed to Date (continued)				
• Participate in community open house for Oxbow-Hickson-Bakke • Work with Community representatives and PMC to develop a refined park concept and estimated cost • Coordinate with KLJ on the design of a new warming house for Oxbow Park • Prepare 60 percent construction plans for review by community representatives and PMC • Prepare responses to 60 percent review comments received from the PMC • Substantially prepare 90 percent construction plans, specifications, measurement and payment items, and engineers estimate for review by community representatives and PMC • Prepare utility design locate request • Include the demolition and restoration of the existing park site in the 90 percent construction documents				
Tasks to be Performed	**Estimated Hours**	**Estimated Fee**	**Expenses**	**Total**
• Complete Oxbow Park Relocation Construction Documents o Complete preparation and submission of 90 percent submittal o Prepare responses to 90 percent submittal review comments received o Prepare 100 percent construction bid documents (plans, specifications, measure and payment items, engineers estimate) o Answer questions during bidding process	150	$19,650	0	$19,650
Totals	1,165	$150,250	$1,750	$152,000

Prepare Land and Water Conservation Funds Section 6(f) Conversion Documents

The Oxbow Community Park received Land and Water Conservation Funds (LWCF) in 2004 for the construction of the park. Stipulations of the LWCF grant dollars prohibit the conversion of the outdoor recreation use to another use, without an approved replacement of the recreational use. With the proposed park relocation associated with the construction of the Oxbow-Hickson-Bakke levee, a conversion of the park's location needs to be approved through the National Park Service's (NPS) Section 6(f) (LWCF) process.

SRF prepared a summary of work tasks to prepare the Section 6(f) conversion documents (see attached) and subsequently received a request from the PMC for a estimated fee to perform the work. The following table outlines the work tasks required and assumptions on which the estimated fees are based on.

Tasks to be Performed	Estimated Hours	Estimated Fee	Expenses	Total
1. Review FEIS to determine level of coverage for the environmental review 2. Complete a PD/ESF for the existing park site, including a conversion proposal, summary of previous environmental review, and environmental screening form 3. Complete a PD/ESF for the proposed replacement park site, including a conversion proposal, summary of previous environmental review, and environmental screening form 4. Review the 2013-2017 North Dakota Comprehensive Outdoor Recreation Plan (SCORP) to determine that the conversion is in accordance 5. Develop a revised Section 6(f)(3) boundary map for the replacement site 6. Coordinate with the ND SHPO for opinion on the current and replacement property	**130**	**$18,000**	**$0**	**$18,000**

Assumption:

- The current FEIS will be used as the environmental document covering the impacts to the existing and replacement property. Task 1 will determine if a cultural resource study is needed, and if required, a subconsultant will be needed.
- Appraisals of the existing park and replacement park provided by AE2S will meet the requirements for appraisals.

The following tables summarize budget amendment request 3 and the total revised project budget for the Task Order 7.

Tasks performed-to-date above current budget ($132,350 - $105,000)	$27,350
Estimated fee to complete construction document preparation	$19,650
Estimated fee to prepare LWCF Section 6(f) conversion documents	$18,000
TO 7 Amend 3 Budget Request	**$65,000**

Subtask	Current Budget ($)	Change ($)	Revised Budget ($)
A. Recreation and Use Master Plan – Revised Draft	25,000	0	25,000
B. Undulation Design – Outlet through Reach 7	200,000	0	200,000
C. Design Support (Oxbow Park Relocation)	105,000	65,000	170,000
TOTAL	**330,000**	**65,000**	**395,000**

We appreciate your consideration of this request. Please contact us if you have any questions regarding this budget amendment request.

Sincerely,

SRF CONSULTING GROUP, INC.

Joni L. Giese, PLA (MN), ASLA, AICP
Principal

JG/if

Attachment

cc: Rick Lane, SRF Consulting Group

H:\Temp\joni\Task Order No 7 amendment 3 161011.docx

EXHIBIT A

Professional Building Design Services
City of Oxbow Warming House
Oxbow, North Dakota

Professional Building Design Services

KLJ will provide schematic design, construction documents, ~~bidding assistance, and construction administration services~~ for a single-story, wood framed building multi-purpose pavilion/warming house for the city of Oxbow, North Dakota. The services included in this Exhibit are based on the approved Schematic Design Concept C – Option #3 dated April 8, 2016. It is our understanding the building services will include plumbing, lighting, power, and ceiling hung electric heaters. These services will tie into the existing water and sewer stubs located near the building.

1. **Schematic Design:**
    a. Architectural Services:
        i. Architectural code review of the proposed building for compliance with the 2012 International Building Code along with the North Dakota State amendments and the current North Dakota State Accessibility Codes.
        ii. Attendance at bi-weekly coordination meetings via conference calls over the course of 12 months.
        iii. Provide (4) schematic design options to meet current code requirements for Owner Review Provide an opinion of cost to rebuild the existing warming house as closely as possible to the current construction.
        iv. Compile programming requirements for project scope.
        v. Provide preliminary estimates for each of the (4) schematic design options using RSMeans construction data.
        vi. Participate in (2) conference calls with the Oxbow City Park Board to discuss schematic design options.
        vii. Revise the chosen schematic option to incorporate changes or options requested by the Oxbow City Park Board.
        viii. Provide an updated preliminary cost estimate for the revised schematic option using RSmeans construction data.
        ix. Value engineer alternates to potentially be removed from the design in order to potentially reduce costs.
        x. Revise project scope to accommodate the chosen building options and alternates.

2. **Construction Documents:**
    a. Services will include architectural, structural, electrical and mechanical engineering. All services, excluding mechanical, will be provided by KLJ. Mechanical engineering services will be provided by Trogstad Engineering, PC as a subconsultant to KLJ.
    b. Code review of the proposed building for compliance with the 2012 International Building Code along with the North Dakota State amendments and the current North Dakota State Accessibility Codes.
    c. Attendance at three (3) coordination meetings via conference call.
    d. Plans will be prepared using AutoCAD drafting software.

e. Material specifications will be prepared using SpecLink software.
f. Provide 60% and 90% complete set of preliminary drawings and outline specifications for review and comments. Submittals will include a professional opinion of cost based on the 2016 RSMeans Building Cost Data.
g. Coordination of design, specifications, and drawings with all disciplines.
h. Provide one stamped, signed copy of completed plans and material specifications to be used for bidding and construction purposes.

~~**3. Bidding Assistance:**~~

~~a. Provide assistance during the bidding phase including answering contractor's questions and preparation of addenda.~~

~~**4. Construction Administration:**~~

~~a. Shop drawing review as it relates to the architectural, mechanical, structural and electrical engineering design, drawings and specifications.~~
~~b. Assistance with answering contractor's RFI's during construction~~
~~c. One site visit during construction to prepare punch list~~
~~d. Preparation of punch list for substantial completion~~

5. Our services will not include:

a. Survey or other engineering services not included above.
b. Revisions to approved Schematic Design Concept C – Option #3.
c. Attendance at Owner/Agency meetings.
d. All or any required geotechnical services such as but not limited to; soil borings or soil percolation tests. Owner will be required to secure geotechnical services to assist with the design of the building.
e. Specification of furniture such as picnic tables, benches, or other removable equipment.
f. As-Built/Record drawings.
g. Permitting.

FEE SUMMARY
DESIGN ENGINEERING & CONSTRUCTION SERVICES
Oxbow Warming House
Oxbow, ND

KL&J Project: 14612100.1, Task 505.1

STAFF TYPE		Engineer IV	Engineer III	Engineer II	Engineer I	Eng Tech I (Intern)	CADD Technician II	CADD Technician I	Architect II	Administrative Assistant II	Per Diem	DIRECT	PER DIEM[1]	DIRECT[2]	TASK
Hourly Rate		$ 193.00	$ 154.25	$ 128.50	$ 116.25	$ 98.50	$ 103.75	$ 89.25	$ 112.25	$ 71.25	(person/days)	LABOR	$250.00	EXPENSES	COST
Task	Project Assignment														
	TASK														
1	**Schematic Design**														
	SD	4		4					100			$ 12,511.00	$ -		$ 12,511.00
	CD Proposal	8		8					8			$ 3,470.00	$ -		$ 3,470.00
	Subtotal	**12**	**0**	**12**	**0**	**0**	**0**	**0**	**108**	**0**	**0**	**$ 15,981.00**	**$ -**	**$ -**	**$ 15,981.00**
2	**Construction Documents**														
	Architectural Design						40		100			$ 15,375.00	$ -		$ 15,375.00
	Structural Design	24		40			40					$ 13,922.00	$ -		$ 13,922.00
	Electrical Design	8		40			30					$ 9,796.50	$ -		$ 9,796.50
	Mechanical Design											$ -	$ -	$ 2,500.00	$ 2,500.00
												$ -	$ -		$ -
	Subtotal	**32**	**0**	**80**	**0**	**0**	**110**	**0**	**100**	**0**	**0**	**$ 39,093.50**	**$ -**	**$ 2,500.00**	**$ 41,593.50**
Total Hours		**44**	**0**	**92**	**0**	**0**	**110**	**0**	**208**	**0**		$ 55,074.50	$ -	$ 2,500.00	
LABOR		**$ 8,492.00**	**$ -**	**$ 11,822.00**	**$ -**	**$ -**	**$ 11,412.50**	**$ -**	**$ 23,348.00**	**$ -**		**$ 55,074.50**			

SUBCONSULTANTS

FIRM NAME	ACTIVITY	FEE
	TOTAL SUBCONSULTANTS:	

Summary of Costs:

Total Labor	$ 55,074.50
Direct Expenses	$ 2,500.00
Subcontractors	$ -
Per Diem	$ -
	$ 57,574.50

[1] To be billed at actual with an $250 maximum (Meals $50 - Lodging $200)

Technical Advisory Group Recommendation

Meeting Date: 11/01/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative prepared the following Contract Action(s) for the Technical Advisory Group

List description of Contract Action(s):

HMG

MFDA – Task Order 9, Amendment 16 – Hydrology and Hydraulic Modeling $119,426

Add scope and budget for additional subtask K Phase 8 Model Update

BACKGROUND:

Houston-Moore Group, LLC (HMG) is the Engineer of Record for the hydrology and hydraulic modeling used to support the design of the proposed flood control improvements. HMG has provided these engineering services under Task Order 9 from June 14, 2012, to the present time. See the table below for a summary of the amendments to the Task Order.

The existing scope and budget for Subtask K, Phase 8 Model Update, estimated the level of effort required to complete the Phase 8 modeling but was less than the actual level of effort required for model geometry and hydrograph updates, updates of the historical, tributary, Red River, and extreme event models after recalibration, floodplain mapping of revised model events, updates to the Phase 8 model report, and QA/QC review of the work.

This amendment adds scope and budget to subtask K for the actual level of effort required to update the Phase 8 hydrologic models, floodplain maps, and report incorporating the most recent data.

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Budget ($) Change	Original Project Cost	Revised Project Cost	Project Start	Project Completion	Comments
Task Order 9 Amendment 0	$ -	$194,341	$ -	8-Mar-12	30-Sep-12	Initial authorization of subtasks A-F.
Task Order 9 Amendment 1	$0	-	$194,341	13-Sep-12	30-Nov-12	Added F.I Extreme Rainfall Events, and F.II Extreme Event Evaluations.
Task Order 9 Amendment 2	$95,000	-	$289,341	14-Sep-12	30-Sep-13	Added F.III Tributary Peak Model Runs to Support the Maple R. Aqueduct Physical Model; F. IV Additional Assistance for the Maple R. Aqueduct Physical Model; and F.V Unsteady HEC-RAS Modeling of Existing PMF Inflows.

Task Order 9 Amendment 3	$55,000	-	$344,341	13-Dec-12	30-Sep-13	Added F.VI Update HEC-RAS Model, and G. Basin-Wide Retention Support.
Task Order 9 Amendment 4	$93,000	-	$437,341	18-Dec-12	30-Sep-13	Added F.V Phase 2 Numeric Modeling, and F.VII Connecting Channel and 20-Year Existing Conditions.
Task Order 9 Amendment 5	$100,000	-	$537,341	16-May-13	30-Sep-13	Added funds for F. On-Call Services.
Task Order 9 Amendment 6	$90,000	-	$627,341	14-Mar-13	30-Sep-13	Added F. VIII Maple R. Aqueduct Flow Analysis; F.IX Update HEC-RAS Models-Maple R. Aqueduct & Reach 6 Bridge; F.X Water Monitoring Gage Survey; and H. Phasing Plan Interim Modeling.
Task Order 9 Amendment 7	$210,000	-	$837,341	11-Jul-13	31-Dec-13	Added I. Phase 7.1 Model Update, and J. Update PMF Study with Revised Distribution of Snowmelt Runoff.
Task Order 9 Amendment 8	$310,000	-	$1,147,341	12-Sep-13	30-Sep-14	Added K. Phase 8 Model Update.
Task Order 9 Amendment 9	$166,000	-	$1,313,341	10-Oct-13	30-Sep-14	Added L. Update the Balanced Hydrographs at Hickson, ND.
Task Order 9 Amendment 10	$25,000	-	$1,338,341	11-Jul-13	30-Apr-14	Added funding for I. Phase 7.1 Model Update.
Task Order 9 Amendment 11	$373,000	-	$1,711,341	12-Sep-13	30-Sep-14	Added funding for C. Evaluation of Channel Size, and K. Phase 8 Model Update.
Task Order 9 Amendment 12	$193,000	-	$1,904,341	9-Oct-14	31-Mar-15	Added F.XI HEC-RAS Models-Maple R. Aqueduct; M. Eastern Staging Area Evaluation; and N. Staging Area Culvert and Bridge Survey.
Task Order 9 Amendment 13	$90,000	-	$1,994,341	12-Mar-15	30-Sep-15	Added O. NDSU Agricultural Impacts Study Support.
Task Order 9 Amendment 14	$330,000	-	$2,324,341	14-Aug-15	31-Mar-16	Added budget for subtasks C., K., M., and O.
Task Order 9 Amendment 15	$98,021	-	$2,422,362	13-Aug-15	31-Dec-16	Reallocated budget, and extended POP of selected subtasks to 31-Dec-16.
Task Order 9 Amendment 16	$119,426	-	$2,541,788	13-Aug-15	31-Dec-16	Add scope and budget for additional subtask K Phase 8 Model Update

DISCUSSION:

This additional scope and budget allocation accounts for the HMG actual level of effort required for model geometry and hydrograph updates, updates of the historical, tributary, Red River, and extreme event models after recalibration, floodplain mapping of revised model events, updates to the Phase 8 model report, and QA/QC review of the work. A more detailed scope of work is included in attached DRAFT Task Order 9 Amendment 16.

The HMG cost proposal for this work is attached. The proposal includes 904 hours of labor to complete the work, which is an average of approximately $130/hour for the proposed cost of $119,426. The Amendment 16 budget change to Subtask K is shown in the table below.

TO09 Hydrology and Hydraulic Modeling Budgets by Subtask:

Subtask	Activity ID	Current Budget ($)	Amendment 16 ($)	Total ($)
HMS Diversion Inlet Modeling	SW-1040	19,419	0	19,419
Updates to Rush/Lower Rush	SW-1050	15,415	0	15,415
Evaluation of Channel Size	SW-1040	68,183	0	68,183
Extend RAS Geometry of Rush/Lower Rush	SW-1040	6,532	0	6,532
Physical Modeling Assistance	SW-1040	10,228	0	10,228
ON-CALL SERVICES (ALLOWANCE)	SW-1040	44,900	0	44,900
F.I. Extreme Rainfall Events	SW-1270	7,760	0	7,760
F.II. Extreme Event Evaluations	SW-1270	26,418	0	26,418
F.III Tributary Peak Model Runs to Support the Maple River Aqueduct Physical Model	SW-6100	20,081	0	20,081
F.IV Additional Assistance for the Maple River Aqueduct Physical Model	SW-6110	172,184	0	172,184
F.V Unsteady HEC-RAS Modeling of Existing PMF Inflows	SW-1040	46,801	0	46,801
F.V Phase 2 Numeric Modeling	SW-1040	29,221	0	29,221
F.VI Update HEC-RAS Model	SW-1040	35,971	0	35,971
F.VII Connecting Channel and 20-year Existing Conditions	SW-1040	6,414	0	6,414
F.VIII Maple River Aqueduct Flow Analysis	SW-1040	15,052	0	15,052
F.IX Update HEC-RAS Models – Maple River Aqueduct & Reach 6 Bridge	SW-6110	35,090	0	35,090
F.X Water Monitoring Gage Survey	SW-6080	4,018	0	4,018
F.XI. HEC-RAS Models - Maple River Aqueduct	SW-6150	20,090	0	20,090
G. Basin-Wide Retention Support	SW-1040	55,000	0	55,000
H. Phasing Plan Interim Modeling	SW-6140	55,163	0	55,163
I. Phase 7.1 Model Update	SW-1040	164,540	0	164,540
J. Update PMF Study with Revised Distribution of Snowmelt Runoff	SW-6130	111,609	0	111,609
K. Phase 8 Model Update	SW-1040	1,082,493	119,426	1,201,919

L. Update the Balanced Hydrographs at Hickson, ND	SW-6090	121,518	0	121,518
M. Eastern Staging Area Evaluation	SW-6070	52,000	0	52,000
N. Staging Area Culvert and Bridge Survey	SW-6060	121,725	0	121,725
O. NDSU Ag Impacts Study Support	SW-1040	74,537	0	74,537
TOTAL		**2,422,362**	**119,426**	**2,541,788**

The PMC reviewed HMG's revised cost proposals and found it to be acceptable.

This change amount of $119,426 is included in the FY-2016 FMDA budget.

ATTACHMENT(S):

1. Draft Task Order 9, Amendment 16
2. HMG Cost Proposal for Subtask K -Phase 8 Model Update

Presented by:

John W. Glatzmaier, P.E.
CH2M
Project Manager
Metro Flood Diversion Project

November 1, 2016
Date

Keith Berndt, Cass County Administrator
Concur: 1-Nov-16 *Non-Concur:*

April Walker, Fargo City Engineer
Concur: 2-Nov-16 *Non-Concur*

Mark Bittner, Fargo Director of Engineering
Concur: 1-Nov-16 *Non-Concur:*

Jason Benson, Cass County Engineer
Concur: 1-Nov-16 *Non-Concur*

David Overbo, Clay County Engineer
Concur: 1-Nov-16 *Non-Concur:*

Robert Zimmerman, Moorhead City Engineer
Concur: 1-Nov-16 *Non-Concur*

Nathan Boerboom, Diversion Authority Project Manager
Concur: 1-Nov-16 *Non-Concur:*

This is Task Order No. 9, Amendment 16~~5~~, consisting of 23 pages.

Houston-Moore Group, LLC

Task Order No. 9, Amendment 16~~5~~

FMDA Purchase Order No. 152024

Hydrology And Hydraulic Modeling

In accordance with Paragraph 1.01 of the Agreement between Fargo-Moorhead Flood Diversion Authority ("Owner") and Houston-Moore Group, LLC (HMG) ("Engineer") for Professional Services – Task Order Edition, dated March 8, 2012 ("Agreement"), Owner and Engineer agree as follows:

The parties agree that in the event of a conflict between prior versions of this Task Order No. 9 and this Amendment, the terms and conditions in this Amendment shall prevail, provided however, nothing herein shall preclude ENGINEER from invoicing for work authorized under prior versions of this Task Order and performed prior to effective date of this Amendment, even to the extent such prior work was revised by this Amendment. All other terms and conditions shall remain the same and are hereby ratified and affirmed by the parties.

1. Specific Project Data

   A. Title: HYDROLOGY AND HYDRAULIC MODELING

   B. Description: Provide hydrology and hydraulic modeling services in order to advance design components of the Diversion Channel. Specific modeling subtasks include: modeling of Diversion inlets to determine design flows, modeling to evaluate hydraulic impacts of various Diversion Channel sizes, extending model geometry of the Rush and Lower Rush Rivers, providing technical assistance and support for the physical modeling of the Maple and Sheyenne River aqueduct structures, and on-call services as requested.

2. Services of Engineer

   A. HMS DIVERSION INLET MODELING:

   The objective of this subtask is to develop an HMS model for each Diversion inlet subbasin using synthetic rainfall events, and to obtain parameters for an estimate of discharge-frequency using a methodology coordinated with the U.S. Army Corps of Engineers.

   I. Discharge frequency curve at Amenia.

   II. Adopted discharge frequencies at the inlet location after the initial HMS simulations.

   Scope:

   I. Model Diversion inlet inflows for 1.3-, 1.5-, and 2-yr rain events. Inlets to be modeled are:

      1. Diversion Inlet
      2. Local Drain 1
      3. Drain 50
      4. Drain 21C
      5. Local Drain 2
      6. Local Drain 3
      7. Local Drain 4
      8. Drain 14 (new location)
      9. Original Drain 14
      10. Local Drain 5
      11. Maple River

12. Lower Rush River
13. Local Drain 6
14. Rush River
15. Drain 30
16. Drain 29
17. Drain 13

II. Calibrate model to match each subbasin's adopted discharge-frequency to obtain HMS hydrographs for each inlet to the Diversion.

III. Obtain the following parameters: Clark's Tc, R, R/(Tc+R), CN, slopes, and drainage area. Parameters to be used to estimate Diversion inlet discharge-frequency using the NRCS method for small subbasins, as per the ND Hydrology Guide.

Deliverables:

I. HMS hydrographs at each inlet to the Diversion in a separate DSSVue file.

II. List of parameters used or determined such as: precipitation, Clark's Tc, R, R/(Tc+R), CN, slopes, and drainage area.

III. Schematic showing drainage area for each inlet, with the Diversion alignment.

IV. Brief report describing method, assumptions, parameters used, maps, and results.

B. UPDATES TO THE RUSH/LOWER RUSH:

The objective of this subtask is to produce working HEC-RAS models using updated HEC-HMS hydrology for local peak flows in the Rush and Lower Rush areas for use in project design.

Scope:

I. Red River Peak Flood - Modified Rush River hydrographs from the existing conditions model will be input into the Phase 6 LPP model, which initially will be conducted for the 100-year flood event.

II. Rush River and Red River Peak Flood - The updated hydrographs from the HEC-HMS models developed for existing conditions will be run for the Red River Peak 10 and 100-year flood events in the Phase 6 LPP model.

III. RAS Mapper will be used to map the floodplain outside of the diversion channel for the peak tributary event on the Rush and Lower Rush Rivers.

Deliverables: Updated existing conditions and with-project HEC-RAS unsteady models.

C. EVALUATION OF CHANNEL SIZE:

The objective of this subtask is to evaluate various Diversion Channel width sizes to determine hydraulic impacts based on channel size.

Scope for Diversion Channel from the Outlet to the Maple River:

I. Evaluate alternatives using the criteria below to assess the size of the Diversion Channel and conduct a Screening Analysis using the HEC-RAS steady state software with the objective of determining the most favorable alternatives:

1. Bottom width of the main Diversion Channel.
2. Channel bottom elevation of the Diversion Channel.
3. Considerations of the water surface profile in the Diversion Channel with respect to existing ground elevations.
4. Modification of the Hydraulic Structure at the Maple River.

5. Other criteria can be applied at a later time if it is determined that optimizing the Diversion Channel is justified with this initial evaluation.
6. The 100 and 500-year events for the Red River peak flood event will be analyzed.
7. Peak discharge values from the current Phase 6 unsteady model will be used, which is also being applied to the bridge analysis (MFR-001) currently being updated by the USACE.

II. Conduct an Impact Analysis using the HEC-RAS unsteady state software for the most favorable alternatives identified in Task 1.

1. The 100 and 500-year events for the Red River peak flood event will be analyzed using the latest Phase 6 unsteady flow model.
2. River impacts will focus only on the Red River upstream, downstream, and throughout Fargo-Moorhead. Impacts will be compared to those determined in Phase 4 and Phase 5, which may require that the gate operations may be modified to obtain similar impacts.
3. Additional impacts can be further evaluated at a later time if it is determined that optimizing the Diversion Channel is justified with this initial evaluation.

III. Develop a preliminary cost estimate for the most favorable alternative identified for optimizing the Diversion Channel.

1. Quantify the cost savings based on unit-cost savings using the Feasibility Study unit prices, focusing primarily on costs associated with earth work and at the Maple River Hydraulic Structure.
2. Additional cost detail can be further evaluated at a later time if it is determined that optimizing the Diversion Channel is justified with this initial evaluation.

IV. Prepare a Technical Memorandum (TM) summarizing whether the size of the Diversion Channel warrants additional and more detailed study.

V. Evaluate the Diversion Channel upstream of the Maple River to determine the most cost effective channel size. Work includes:

1. Develop the existing ground profiles along the right and left banks of the Diversion Channel upstream of the Maple River aqueduct.
2. Update the 1% and 0.2% chance flood event profiles in the Diversion. Determine the minimum bottom width such that the 1% chance flood event is generally below existing ground. Conduct sensitivity analysis to evaluate water surface profiles and comparing to the original bridge MFR flows and Phase 7.1 flows.
3. Calculate flood inundation flow rates at the Red and Wild Rice River control structures to establish an extreme event flow rate in the Diversion Channel.
4. Evaluation project operations during extreme events, and determine how diversion channel size upstream of the Maple River aqueduct affects the Inflow Design Flood (IDF) event and the corresponding staging area.
5. Provide opinion of optimal channel width based on capital, operational, and maintenance costs along with project operation goals.

Deliverables:

I. Draft report.

II. Final report.

D. EXTEND RAS GEOMETRY OF THE RUSH/LOWER RUSH

The objective of this subtask is to account for break-out flows between the Rush and Lower Rush Rivers by extending the RAS model geometry of the Rush and Lower Rush Rivers upstream to the beach ridge of Glacial Lake Agassiz.

Scope:

I. Extend existing conditions Rush River HEC-RAS model approximately 10 miles upstream from Amenia and add model detail between the Rush and Lower Rush Rivers to incorporate breakout discharges.

Deliverables:

I. Updated existing conditions and with-project HEC-RAS unsteady models.

E. PHYSICAL MODELING ASSISTANCE:

Provide ongoing assistance to the Diversion Authority during the transition for Feasibility Study to Preliminary Engineering and Design (PED) in support of the Maple and Sheyenne River aqueduct structures.

Scope:

I. Participate in USACE design team meetings, Local Sponsor/Local Consultants Technical Team (LSLCTT) meetings, and workshops as requested.

II. Provide technical assistance for physical modeling of hydraulic structures.

III. Provide hydrology information, as requested, to USACE.

IV. Provide additional assistance as requested.

Deliverables: Meeting minutes.

F. ON-CALL SERVICES**:**

Respond to requests for services from PMC for tasks not identified to date. Requests will be provided by PMC in writing. Work will not be performed by Engineer without authorization by PMC or Owner.

Deliverables: On-call service deliverables as requested.

I. EXTREME RAINFALL EVENTS – Complete the work originally authorized in AWD-00016 and deliver the final report. The scope of work specified in AWD-00016 was:

1. Develop a Technical Memorandum (TM) that determines whether or not a meander belt width of 200 feet is sufficient to allow establish a low-flow channel that is in dynamic equilibrium, and if so, provide sufficient information and criteria for others to design the four (4) low-flow channel reaches:

a. Diversion Outlet to Lower Rush

b. Lower Rush to Drain 14

c. Drain 14 to Drain 21C

d. Drain 21C to Diversion Inlet

The focus of this meander belt width analysis is on the reach Diversion Outlet to Lower Rush. Meander belt width for other reaches will be confirmed in subsequent analyses.

The Final Feasibility Report includes a grade control feature across the entire width of the main section of the diversion channel every 5,000 feet along the length of the diversion. The use of grade control to set some constraints on the low-flow channel migration rates within the meander belt width should be considered as part of this study. The distance between grade control features can be modified if warranted. Discuss, and if appropriate, recommend other methods to limit meander belt width.

The following data will be provided by the Diversion Authority at the commencement of the work effort:

a. Soil test data to include Atterberg limits and gradations, boring log plates, boring location diagrams, and boring profile plates

b. Sediment grain size distribution and sediment transport (both as bedload and in suspension) data that has been collected recently by the US Geological Survey and West Consultants, including low and high flow events, for streams near the proposed diversion, including the Rush, Lower Rush, Maple and Sheyenne rivers

c. Current, and if available, also historical cross sections for streams near the proposed diversion, including the Rush, Lower Rush, Maple and Sheyenne rivers

d. Required diversion profile information along the centerline of the diversion

e. Typical cross-sections for the low-flow channel and main section of the diversion channel for the four reaches referred to above (i.e., 1) Mouth to Lower Rush, 2) Lower Rush to Drain 14, 3) Drain 14 to Drain 21C, and 4) Drain 21C to Diversion Inlet)

f. Current, and if available, also historical general slope and sinuosity information for streams near the proposed diversion, including the Rush, Lower Rush, Maple and Sheyenne rivers

g. Current, and if available, also historical digitized information (GIS format) on planform alignments for streams near the proposed diversion, including the Rush, Lower Rush, Maple and Sheyenne rivers

h. Stage (water depth)-discharge, flow velocity-discharge, discharge-duration and discharge-frequency information for the four reaches referred to above (i.e., 1) Mouth to Lower Rush, 2) Lower Rush to Drain 14, 3) Drain 14 to Drain 21C, and 4) Drain 21C to Diversion Inlet)

i. Typical flood hydrographs for the four reaches referred to above (i.e., 1) Mouth to Lower Rush, 2) Lower Rush to Drain 14, 3) Drain 14 to Drain 21C, and 4) Drain 21C to Diversion Inlet)

j. Compilation of frequency and duration of operation, typical cross sections, slopes, erosion protection measures, and sedimentation records for the two existing diversions on the Sheyenne River (Horace to West Fargo, and West Fargo)

Deliverables:

1. Prepare a first Draft Technical Memorandum to include:
    - Outline approach for meander belt width analysis
    - Brief literature review on constructed meandering channels
    - Preliminary summary of data available
    - Initial thoughts on feasibility of meander belt width concept
2. Prepare a second Draft Technical Memorandum to include:
    - Description of approach for meander belt width analysis
    - Processing of data for input in meander belt width analysis
    - Meander belt width analysis
    - Stabilization alternatives, including grade-control measures, non-structural measures (e.g., vegetation), widening of main diversion channel in certain reaches, among other considerations, to ensure low-flow channel migration occurs within prescribed meander belt width
    - Determination of need for rock toe protection along the entire length of the inner diversion toe to prevent erosion
    - Suggestions for future field investigations
    - Recommended design criteria for Final Design
3. Consult with Professor Gary Parker (University of Illinois at Urbana-Champaign) during development of the meander belt width analysis and recommendations.
4. Develop a brief, graphics-rich, PowerPoint presentation of the background and results. This presentation must be suitable for a non-technical audience.
5. Determine timing of tributary contributions to the low flow channel by reviewing and comparing the Phase 1 HEC-HMS model results for the Rush and Lower Rush Rivers, and Drains 14 and 21C for the 2-year and 5-year 24-hour rainfall events. Compare model results to low flow channel hydrology developed by USACE.
6. Prepare a Technical Memorandum presenting summarizing results.

II. EXTREME EVENT EVALUATIONS

1. Evaluate the following for extreme (103,000 cfs and Probable Maximum Flood [PMF]) events
    a. Adequacy of aqueduct openings
    b. Lowering the left EMB to reduce the amount of flow in the Diversion Channel
    c. Head differential across raised road in the staging area
    d. For VE-13 Option D, sloping the Diversion Channel from the Wild Rice River toward the Diversion Inlet

III. TRIBUTARY PEAK MODEL RUNS TO SUPPORT THE MAPLE RIVER AQUEDUCT PHYSICAL MODEL

Background: To provide 10-, 50-, 100-, and 500-year tributary peak hydrographs in the current version of the unsteady RAS model to obtain the best available tributary peak flow information for the Maple River physical modeling effort. These updated tributary peak model runs will aid in the effort of determining the flow combinations to be modeled during maple River physical modeling effort.

Scope: Perform model runs for the 10-, 50-, 100-, and 500-year tributary peak hydrographs to support the USACE's physical and numeric modeling of the Maple River Aqueduct Structure. Provide modeling results to USACE.

IV. ADDITIONAL ASSISTANCE FOR THE MAPLE RIVER AQUEDUCT PHYSICAL MODEL

Scope: Additional assistance includes participating in bi-weekly conference calls, providing additional technical information and support from Feasibility Study team to USACE's physical modeling team, and attending a four-day value-based design charrette.

V. UNSTEADY HEC-RAS MODELING OF EXISTING PMF INFLOWS

Background: The existing Probably Maximum Flood (PMF) was developed almost 30 years ago (1984) and is based on simple hydrologic routing that likely does not account for the full effects of floodplain storage and cross-basin flow that occurs upstream of Fargo-Moorhead. USACE has updated the unsteady HEC-RAS model upstream of the unsteady HEC-RAS model currently being used for the FMMFRM project so that it has the extents and connections necessary to model the PMF event. The portion of the FMMFRM unsteady HEC-RAS model from Abercrombie, ND (the upstream extents of the unsteady HEC-RAS model being used for the FMMFRM study) through Fargo-Moorhead has been added to the upstream model to create the unsteady HEC-RAS model required for this PMF analysis. To avoid confusion, the unsteady HEC-RAS model being used for the PMF analysis will be referred to as the "Upstream" model, while the unsteady HEC-RAS model generally being used for most of the FMMFRM study will be referred to as the "FMMFRM" model.

To get an idea of how much the PMF might change, the Corps and the Project Sponsor previously decided that it would be useful to investigate routing the existing PMF inflows using the Upstream model. The Corps has set up the Upstream model with the proper inflows.

Scope:

a) Perform a technical review of the model

b) Address the instability issues related to running the model with very large inflows

c) Produce final model runs using the 1984 hydrology that provide the PMF at the Fargo gage.

Deliverables:

a) Draft unsteady HEC-RAS models.
b) Draft technical memorandum (hard copy and electronic).
c) Final unsteady HEC-RAS input and output files for the PMF event.
d) Final technical memorandum.

Phase 2 - Numerical Modeling Scope:

a) Set Up Unsteady HEC-RAS Model for New PMF Inflows
USACE has developed a number of new inflow locations for the unsteady HEC-RAS model that are associated with HMS output hydrographs. These inflow locations have been provided separately in an HEC-RAS unsteady flow data file. Develop a draft unsteady HEC-RAS model with updated inflow locations. If requested, modify names of certain reaches and storage areas to be consistent with the final unsteady HEC-RAS model used for the PMF flow routing.

Deliverables:

i. Draft unsteady HEC-RAS model with updated inflow locations.

b) Unsteady HEC-RAS Modeling of New PMF Inflows
Using the updated unsteady HEC-RAS model with the updated inflow locations, model two sets of hydrographs representing two different runoff scenarios. USACE will provide the two sets of inflow hydrographs. Evaluate the inflow locations and the magnitude and shape of the hydrographs for reasonableness and model stability. Modify as required, in consultation with USACE, to allow the model to run successfully.

Once any model instabilities have been addressed and the model runs are complete, evaluate, in consultation with USACE, the hydrographs at the Fargo gage location to determine whether additional sets of hydrographs representing other runoff scenarios are required to determine the PMF at the Fargo gage location (to be performed under subtask c).

Deliverables:

i. Preliminary unsteady HEC-RAS models.
ii. Draft Technical Memorandum. Prepare a Technical Memorandum that summarizes the work effort and the resulting hydrograph at the Fargo gage location.

c) Additional Unsteady HEC-RAS Modeling of New PMF Inflows (if authorized).
If additional sets of hydrographs need to be developed to determine the PMF at the Fargo gage location, as determined in subtask b, USACE will provide one to four additional sets of hydrographs to be modeled with HEC-RAS. Prepare update of draft Technical Memorandum prepared in subtask b.

Deliverables:

i. Preliminary unsteady HEC-RAS.
ii. Second draft Technical Memorandum.

d) Final Technical Memorandum.
Upon review of the model results and draft Technical Memorandum by USACE, finalize the HEC-RAS models and prepare a Final Technical Memorandum, addressing comments provided by USACE.

Deliverables:

i. Final unsteady HEC-RAS input and output files for the PMF event.
ii. Final Technical Memorandum.

VI. UPDATE HEC-RAS MODEL

a) Update the HEC-RAS model geometry for the revised western alignment from the Maple River to the Sheyenne River and the proposed upstream staging area ring levees.
b) Provide on-going hydrology and hydraulic modeling services as requested in order to keep HEC-RAS model consistent with project features.

VII. CONNECTING CHANNEL AND 20-YEAR EXISTING CONDITIONS

Scope:

a) Connecting Channel Geometry: Update the HEC-RAS model geometry to incorporate the geometry of the connecting channel between the Wild Rice and Red Rivers. Complete the 10-yr, 20-yr, and 50-yr model runs to determine the

proper model modifications and to determine the impacts of the updated geometry. If the modifications affect the 50-yr model results, complete the 100-yr, 500-yr, SPF, and PMF model runs to determine the impact of the updated geometry. If the modifications do not affect the 50-yr model results, the updated 100-yr, 500-yr, SPF, and PMF model runs will be made under a future authorization. Develop flooded outline polygons and depth grids for the 10-yr, 20-yr, 50-yr, 100-yr, 500-yr, SPF, and PMF events.

b) 20-year Existing Conditions Modeling: Develop 20-year Existing Conditions models and provide floodplain mapping for the Staging Area.

Deliverables:

a) Preliminary unsteady HEC-RAS models.
b) Final unsteady HEC-RAS input and output files.
c) 20-year existing conditions model results.

VIII. MAPLE RIVER AQUEDUCT FLOW ANALYSIS

a) Conduct modeling of Maple River flows across the proposed Maple River Aqueduct and into the Risk Reduction Area.
    i. Use the latest HEC-RAS model for the FMMFRM Project and the best available topographic data.
    ii. The study area is the area within the Risk Reduction Area that is affected by the flow coming across the Maple River Aqueduct.
    iii. Account for coincident flows on the Sheyenne River and other local drains and ditches.
    iv. Select Maple River design flows such that insurable structures in the Risk Reduction Area, and within the expected future 1% Maple River floodplain, are minimally affected by the Maple River design flows and the coincident flows on the Sheyenne River and the other local drains and ditches in the Risk Reduction Area.
b) Establish Maple River design flows across the Maple River Aqueduct for the 1% and 0.2% flood events.
c) Recommend a maximum Maple River flow across the Maple River Aqueduct for the Standard Project Flood (SPF) event.

Deliverables:

a) Preliminary unsteady HEC-RAS models.
b) Final unsteady HEC-RAS input and output files.
c) 20-year existing conditions model results.
d) Final Technical Memorandum.

IX. UPDATE HEC-RAS MODELS – MAPLE RIVER AQUEDUCT AND REACH 6 BRIDGE

a) Modify the unsteady-flow HEC-RAS model to reflect the lateral structure and spillway changes recommended by the Maple River aqueduct study team.
b) Update the flow profile information (1% and 0.2% chance events, and 103,000 cfs event) needed for the bridge design effort, using the current Phase 7 unsteady-flow HEC-RAS model as the source of the geometry for the steady-flow HEC-RAS model. Continue to use the bridge design criteria provided in MFR-005 (General Bridge Re-Assessment for the Diversion from Inlet to Outlet) to determine the low-chord elevation and hydraulic opening of bridges in the Diversion Channel.
c) Update the HEC-RAS model geometry: (i) to be consistent with survey and topography dates collected, (ii) to reflect proposed changes to the Maple River natural channel, (iii) to reflect the proposed revised location of the spillway into the

diversion channel; perform QA/QC of model changes; and evaluate revised model performance for various flood events using the HEC-RAS unsteady flow model.

Deliverables:
a) Draft Technical Memorandum.
b) Final Technical Memorandum.

X. WATER MONITORING GAGE SURVEYING

a) Prepare and provide maps and coordinates of installation locations for 10 HOBO gages to USGS installation teams.
b) After HOBO gages are installed, survey the elevations of the installed gages and provide survey data to USGS.

Deliverables:
a) Maps and coordinates of installation locations for 10 HOBO gages.
b) Surveyed elevations of 10 HOBO gages.

XI. HEC-RAS MODELS - MAPLE RIVER AQUEDUCT

a. Provide modeling services to add detail associated with updating HEC-RAS model geometry to be consistent with 2014 changes made on the Maple River aqueduct physical model. Incorporate HEC-RAS cross sections from JV where applicable, combine detailed USACE river survey data into HEC-RAS cross sections, and modify adjacent lateral structures and storage areas.

b. Coordinate with USACE to update model geometry for the relocated Maple River channel. The geometry will have a bank-full wetted area consistent with the natural Maple River channel in the vicinity of the proposed aqueduct.

c. Modify model geometry so the spillway enters the diversion at a 90 degree angle as a lateral structure. Update the width and the upstream weir elevation of the spillway such that a target 3000 cfs flows through the aqueduct for the 1% event on the Maple River with the water surface elevation just upstream of the spillway being as close as possible to the existing-condition water surface elevation. Include additional coordination with USACE.

d. Conduct sensitivity model runs associated with the aqueduct, spillway, and EMB gap for various flood events. Evaluate impacts for 1% chance flood event elevations in the floodplain upstream of the spillway and assess how the project will operate for the SPF event. Determine the proper size and elevation of the EMB gap.

e. Provide QA/QC of modeling.

Deliverables:

a. Updated models.

G. BASIN-WIDE RETENTION SUPPORT

I. Objective: Assist Owner in supporting retention projects by others in the region.

II. Background: The Diversion Board has authorized up to $25 million for Basin-wide Retention Projects that are compatible with, and provide benefits for, the Diversion Project. An initial study is underway by the Red River Basin Commission (RRBC).

This subtask is not creditable by USACE.

III. Scope:

a. Assist Owner with developing a method of evaluating existing, planned, or potential regional retention projects' potential benefits to the Diversion Project. Scope to include up to two (2) site evaluations.

b. Provide technical assistance to the RRBC in its study "Halstad Upstream Retention (HUR) Modeling – Phase 1".

IV. Deliverables

a. As requested.

H. PHASING PLAN INTERIM MODELING

I. Objective: Incorporate the Phase 1 and Phase 2 project features into the hydraulic model, evaluate project benefits, and determine interim measures needed for a phased project.

II. Background: The original project execution plan assumed unconstrained funding, an approximate 8 year project schedule, and project design and construction starting on the downstream (north) end of the project and progressing sequentially upstream. Currently, it is anticipated that Federal funding will be constrained and, therefore, a phased plan was developed to allow the project to proceed with limited Federal funding and provide benefits as early as practical. This results in a three phased project. Phase 1 includes the Diversion Channel from the Outlet to downstream of the Maple River and associated bridges, in-town levees, and the Oxbow-Hickson-Bakke area levee. Phase 2 includes the Red River and Wild Rice River control structures, the Staging Area embankment, overflow embankment, tie-back levee, the Diversion Inlet structure, staging area land, associated bridges and transportation improvements, and associated mitigation projects. Phase 3 includes the Diversion Channel from the Maple River to the Diversion Inlet structure, associated bridges, the Maple River Aqueduct, the Sheyenne River Aqueduct, and associated mitigation projects.

There may be a lag of several years between completion of Phases 1 and 2, and the completion of Phase 3, and, therefore, modeling and evaluation is needed to 1) determine project benefits and 2) the need for and extent of temporary measures between phases of the project.

III. Scope: Perform 100-year and 500-year modeling evaluations of Phase 1 and Phase 2 project components, quantify interim benefits, and determine what interim measures are needed until completion of Phase 3.

IV. Deliverables:

a. Draft Technical Memorandum.

b. Final Technical Memorandum.

I. PHASE 7.1 MODEL UPDATE

I. Task 1 - Update the Red River peak flow model geometry. Complete modeling for the Red River peak flood events, including the 10-, 2-, 1-, 0.2-percent chance events and the 103kcfs and PMF flood events for both existing conditions and with-project conditions. Geometry updates include:

a. Update storage connections for the existing and with-project model in the area west of the diversion between the Maple River and the Sheyenne River to better reflect floodplain impacts and diversion side inlet sizing.

b. Revise the Wild Rice River Control Structure and embankment alignment (combine bridges).

c. Analyze the removal of the connecting channel between the Wild Rice River and Red River. Replace with storage areas.

d. Analyze Hwy 81/Hwy 75/Red River Control Structure Bridge/Culvert Sensitivity at the tie back levee.

e. Change the channel size from the Wild Rice River to the Diversion Inlet based on cross section volume of the southern embankment.

f. Account for staging area levees including the proposed Oxbow/Hickson/Bakke and Comstock levees.

g. Verify the eastern staging area tieback is modeled as being used in storage. Add detail to check if culverts are adequate to convey water west to the Red River Control Structure.

h. Revise Maple River south bank near the Maple River Aqueduct. Set elevation to 901.0.

i. Investigate diversion gate operations for events larger than the 0.2% chance event.

j. Update the Drain 14 inlet at the diversion.

k. Extend the Red River model from Grand Forks, ND to Drayton, ND.

II. Task 2 – Update tributary peak flow models with geometry developed in Task 1. Complete modeling for the 10-, 2-, 1-, 0.2-percent chance flood events for both existing conditions and with-project conditions.

III. Task 3 - Conduct a higher volume sensitivity analysis using the Red River peak flow geometry from Task 1 and the high volume hydrology developed as part of the Phase 5 unsteady modeling effort. Complete evaluations for the 1- and 0.2-percent chance flood events for both existing conditions and with-project conditions. The main objective of this task is to determine how the diversion system would operate with higher volumes and if the higher volumes would affect the staging area elevation. No mapping is required; however, calculate impacts and compare to Phase 7.0. For comparison purposes, match Phase 7.1 downstream impacts, flows through town, and diversion flows to the targeted values from Phase 7.0. The variable parameter will be the staging area elevation. Prepare a technical memorandum to summarize the sensitivity analysis.

IV. Task 4 – QA/QC of Phase 7.1 modeling.

V. Task 5 – Complete additional modeling and mapping tasks as part of the Phase 7.0 modeling effort. These items include details such as:

a. Update geometry to include the City of Fargo Comprehensive Flood Protection Plan.

b. Additional mapping for existing and project conditions.

c. Development of Tributary Peak models.

d. Add detail to Interstate 94 near the Red River and also to Drain 27 area.

e. Update weir coefficients, culverts, initial elevations, and cross section duplication.

f. Diversion centerline alignment rectification due to Microstation and GIS formats.

g. Add Excavated Material Berms into project geometry.

h. Add designed bridges for Reaches 1 through 5 into the geometry.

i. Update HEC-RAS unsteady flow model geometry to reflect most current layout of the Maple River Aqueduct and Spillway being used by the physical modeling team. The Maple River overbank berms near the structure will also be updated. Using the latest project designs, update the layouts and inlet structure geometry for the Rush and Lower Rush Rivers, as well as Drain 30.

a. Update HEC-RAS unsteady flow existing conditions and project conditions for the 10-, 50-, 100-, and 500-year Red River peak events. No diversion gate optimizations will be conducted, as this will be completed as part of the Phase 8 model updates.

b. Update HEC-RAS unsteady flow existing conditions and project conditions for the 10-, 50-, 100-, and 500-year Tributary peak events. No diversion gate optimizations will be conducted, as this will be completed as part of the Phase 8 model updates.

VI. Deliverables:

a. Updated phase 7.1 model for the Red River peak flood events, including the 10-, 2-, 1-, 0.2-percent chance events and the 103kcfs and PMF flood events for both existing conditions and with-project conditions.

b. Updated phase 7.1 tributary peak flow models with geometry developed in Task 1, for the 10-, 2-, 1-, 0.2-percent chance flood events for both existing conditions and with-project conditions.

c. Higher volume sensitivity analysis:

d. Updated phase 7.0 model.

J. UPDATE PMF WITH REVISED DISTRIBUTION OF SNOWMELT RUNOFF:

I. Background:

a. Initial results from the current PMF study for the USGS Gage at Fargo, ND indicate that the peak flow is about 25% higher than what was determined during the 1985 study. Comparisons with the 1985 study indicate that the Wild Rice, North Dakota basin requires further investigation. Contributing drainage area for the PMF also requires further investigation. Two HMS model runs (two storm centerings) are available from the USACE St. Paul District for each of the eight sub-basins that are included in the PMF study. The HMS models that were used in the initial PMF work were modified from the Phase 1 HMS final product by peaking unit hydrograph parameters for each subbasin, re-incorporating the entire drainage area, and extending several storage outflow relationships that were exceeded with the magnitude of discharges generated from the PMF simulations.

b. It has been proposed that GIS can be used in conjunction with the HMS models to better estimate the amount of runoff occurring during a PMF event. The GIS/HMS effort would determine areas that contribute runoff, areas that do not contribute runoff, and areas that partially contribute runoff for the events investigated.

II. Scope:

a. Discuss the GIS/HMS effort with USACE before proceeding with this work.

b. Update the USACA-provided HMS model runs in conjunction with the GIS/HMS-based runoff-determination effort. Determine the order of HMS model simulations and account for the breakout flows between the various models. Coordinate between the HMS model simulations and RES-SIM with USACE. Save Reservoir inflows for Traverse and Orwell in DSS and submit to USACE for simulation. Forward the regulated flow DSS records for inclusion into the RAS Model.

c. Upon completion of the update to the Wild Rice River basin HMS model by USACE, perform final model runs. Perform work that can be accomplished in advance to prepare for the final HMS models runs.
d. Use the HMS results as input for an updated unsteady HEC-RAS model run for each storm centering. Complete the existing scope of work (Subtask F.V) for the PMF study using the updated unsteady HEC-RAS model runs.
e. Prepare a report section documenting the GIS/HMS-based runoff-determination effort and comparing the 1985 PMF study to this current study, including input assumptions. Incorporate this draft report section into the overall current PMF study report.
f. Conduct model runs as requested by USACE to support close out of comments from ITR. Assume 6 additional sensitivity runs will be made as identified in the reviewer comments.
g. Provide map making and figure revisions for final report. Assume two iterations of revisions will be made to maps currently in report and two additional maps to be made to satisfy the review comments.
h. Support report documentation as requested by USACE lead. Assume that USACE will finalize the draft report and HMG will provide supplemental information.

III. Deliverables

a. Updated runoff grids resulting from the GIS/HMS-based runoff-determination effort.
b. Draft report with maps.
c. Updated HMS models (16 models: 2 storms centering for 8 sub-basins.)
d. Updated unsteady HEC-RAS models (2 models, one for each storm centering).

K. PHASE 8 MODEL UPDATE

I. Background:

a. The Phase 8 modeling will incorporate higher volume hydrology developed by the USACE. It will also include the development of the 20-year event model and investigate additional model updates in the staging area based on culvert connections, connecting channel investigations, and tieback embankment alignment adjustments. The downstream model limit will be Drayton, ND.

b. The most recent independent QA/QC review of the FM Diversion project unsteady HEC-RAS model occurred during the Phase 4 modeling (February 28, 2011). Subsequent model updates included peer reviews by modelers, but did not included a full independent review.

II. Scope:

a. Update geometry in the upstream staging area based on culvert details and the local drainage plan (currently under development).

b. Update synthetic model hydrology for the 10, 50-, 100-, and 500-year flood events and develop new 20-year hydrology using new higher volume hydrographs developed by the USACE for the peak Red River flood event. Local inflow development will utilize the Phase 1 HEC-HMS models.

c. Update the existing conditions tributary peak unsteady model using updated hydrology developed by the USACE for the 10-, 50-, 100-, and 500-year flood events and new 20-year hydrology.

d. Conduct QA/QC review of the Phase 8 Existing conditions models for the RRN and tributary peak conditions.

e. Conduct with-project modeling for the 10-, 20-, 50-, 100-, and 500-year events for the RRN peak flood event.

f. Conduct with-project modeling for the 10-, 20-, 50-, 100-, and 500-year events for the tributary peak flood events.

g. Conduct QA/QC of the Phase 8 with-project model runs.

h. Prepare floodplain mapping for the 10-, 20-, 50-, 100-, and 500-year events for existing conditions and with-project for both the RRN and tributary peak flood events.

i. Prepare draft and final Technical Memorandums summarizing Phase 8 modeling results.

j. Conduct an independent QA/QC review of the unsteady HEC-RAS model.

    i. Part 1 – Conduct an independent QA/QC review of the Phase 7.1 unsteady HEC-RAS model geometry and general assumptions. Include a kick-off review meeting, a review of the technical memorandums and previous District Quality Control (DQC) and Agency Technical Review (ATR) reviews developed for the model updates subsequent to Phase 4, and a review of geometry files through Phase 7.1 of the model. Commence review following completion of the Phase 7.1 update.

    ii. Upon completion of the Phase 7.1 model review, provide recommendations for additional QC review of the Phase 8 model updates.

    iii. Document the review findings and recommendations in Technical Memorandum.

    iv. Document the review findings and recommendations in Technical Memorandum.

k. Incorporate geometry and general assumptions QA/QC recommendations into the HEC-RAS model

    i. Review all comments and discus with USACE and review team, and determine which model recommendations should be incorporated into the HEC-RAS model.

    ii. Make revisions in HEC-RAS Model Geometry for Red (from Enloe to Perley), Wild Rice, Sheyenne and Maple Rivers: Update model to HEC-RAS 5.0, convert horizontal projection to Albers Equal Area. Update bridge modeling approaches, ineffective flow limits, bank stations, blocked obstructions, roughness parameters, river junction cross-section geometry, address ineffective flow at bridges and two inconsistencies between EX and WP models. Verify volume continuity.

    iii. Re-calibrate model using 2006, 2009, 2010, 2011 historic events (adjust parameters).

l. Provide additional assistance to USACE for the Hickson Hydrology Update. These modeling tasks include assessing modeling parameters, development of a baseline storage-discharge relationships, comparison modeling downstream of the Otter Tail Diversion, historic flow record checks, and revise model calculation at bridges and inline structures.

m. Additional Updates to Phase 8 Model

i. Revise Phase 8 HEC-RAS model hydrology to match revised Hickson hydrology and HEC-HMS Phase 2 modeling. Recalibrate 10%, 4%, 2%, 1%, and 0.2% chance synthetic events.

ii. Evaluate Red River and tributary hydrographs between Fargo and Drayton, and update Phase 8 HEC-RAS model.

iii. Address outstanding USACE Agency Technical Review (ATR) comments and Independent Technical Review (ITR) comments on Phase 8 HEC-RAS model.

iv. Review Western Cass Flood Insurance Study (FIS) geometry and hydrology, and incorporate into the Phase 8 HEC-RAS model. Update floodplain mapping.

v. Provide review of, and revisions to, Phase 8 model, and assess against Phase 7.1 model. Elements to be considered include staging area elevations and river profiles; effects of new hydrology; geometry; and project operation.

vi. Amendment 16 additional work to complete the Phase 8 model:

1. Generate and incorporate revised tributary peak hydrographs for river inflow hydrographs and local inflow hydrographs. Update tributary peak hydrology for 10, 4, 2, 1, and 0.2% chance events.

2. Update historic peak models after recalibration of models and update floodplain mapping for 1997, 2006, 2009, and 2011 events.

3. Update tributary peak models after recalibration of models and update floodplain mapping for 10, 4, 2, 1, and 0.2% chance events.

4. Update Red River peak models after recalibration of models and update floodplain mapping for 10, 4, 2, 1, and 0.2% chance synthetic Red River peak events.

5. Update extreme event models after recalibration of models. Update floodplain mapping for IDF and PMF events.

6. Update phase 8 report. Document previous modeling and referenced studies, geometry development, hydrology development, QA/QC review comments and responses, calibration, operation, impacts and mapping.

7. QA/QC review and response to close out ATR review comments.

~~vi.~~vii. Perform QA/QC on work products prior to submittal.

III. Deliverables:

a. Updated phase 8 model for the Red River peak flood events, including the 10-, 20-, 50-, 100-, and 500-year events for both existing conditions and with-project conditions.

b. Updated phase 8 models for the tributary peak flood events, including the 10-, 20-, 50-, 100-, and 500-year events for both existing conditions and with-project conditions.

c. Floodplain maps for the 10-, 20-, 50-, 100-, and 500-year events for existing conditions and with-project for both the RRN and tributary peak flood events.

d. Draft and Final Phase 8 Technical Memorandum.

e. Draft and Final QA/QC Technical Memorandum, Kick-off meeting minutes, and Quality Review Form (QRF) summarizing review comments for the Phase 7.1 QC review.

f. Updated Phase 8 model, incorporating modifications resulting from the scope activities described in 2.K.II.m (above).

L. UPDATE THE BALANCED HYDROGRAPHS AT HICKSON, ND

I. Background:

a. The USACE, St. Paul District, requested assistance to update the Red River of the North (RRN) balanced hydrographs at the USGS gage at Hickson, ND. This effort is required prior to starting the Phase 8 model update, and involves working with both the hydrologic (HEC-ResSIM) and hydraulic (unsteady HEC-RAS) routing models to determine the proper ungaged inflow hydrographs and hydrologic modeling parameters such that similar results are obtained from the two methods.

II. Scope:

a. Hydrologic Model Development: Use the unsteady HEC-RAS model to determine peak flows at Hickson and Abercrombie ND and identify breakout flow locations.

b. Initial Storage Outflow Curve Development: Develop storage outflow curves for the hydrologic model reaches determined in above task, and identify bankfull discharges for each routing reach.

c. Quality Control Check on Unregulated Record Generated by Hydrologic Model: Run five test historic, unregulated events through the unsteady HEC-RAS model to check the validity of the unregulated record being developed by the hydrologic modeler.

d. Routed Synthetic-Event Unregulated Hydrographs and Report: Using information developed in previous tasks, provide the resulting unregulated hydrographs at Fargo, ND and Wahpeton, ND, which are produced in concert with the 10-yr, 50-yr, 100-yr, 200-yr, 500-yr synthetic events at Hickson, ND.

e. Fine Tune the Regulated Synthetic Event Analysis: Run the five HEC-RAS models (10-yr, 50-yr, 100-yr, 200-yr, 500-yr synthetic events) for regulated conditions using the outflow hydrographs from the reservoirs developed by USACE using the hydrologic model.

f. Final Technical Memorandum: Develop an overall Technical Memorandum summarizing the work accomplished for Tasks 1-5.

III. Deliverables:

a. Breakout Flow and Hydrologic Routing Reach Report

b. Upstream Input Test Hydrographs and Routed Test Hydrographs at Critical Locations

c. Storage Outflow Curves and bankfull discharges for each routing reach

d. Routed Historic Hydrographs

e. Routed Synthetic-Event Regulated Hydrographs and Report

f. Final Technical Memorandum

M. EASTERN STAGING AREA EVALUATION

I. Background: Hydraulic modeling (Phase 7 HEC-RAS) and design performed in support of the September, 2013 Supplemental Environmental Assessment for the Fargo-Moorhead Metropolitan Area Flood Risk Management Project did not include the area east of Clay County Highway 7 (40th St. S.) and south of the Embankment in the staging area for the FM Diversion. Additional design and modeling in support of the Local Drainage Plan for the staging area has since shown that there may need to be a connection to this area to pass local drainage that could potentially bring this area into the staging area.

II. Scope:

a. Provide preliminary design for two (2) Eastern Staging Area alternatives. This includes civil and hydraulic design in support of the two Alternatives.

i. Alternative 1 includes turning the embankment south near Clay County Highway 7 and extending it to high ground to prevent the staging area from extending into the Eastern area.

ii. Alternative 2 includes keeping the current embankment alignment, but including a penetration through the embankment to pass local drainage for the Eastern area north into the Flood Damage Reduction area along its current drainage path.

b. Prepare Opinions of Probable Cost for the two Eastern Staging Area alternatives.

c. Prepare a summary memorandum outlining the results of the Eastern Staging Area Evaluation.

III. Deliverables:

a. Draft and Final Technical Memorandum.

N. STAGING AREA CULVERT AND BRIDGE SURVEY

I. Background: USACE requested detailed survey information on culverts and bridges in the Staging Area so that this information can be added to the Hydrology and Hydraulic (H&H) models and used to:

a. Better determine project impacts at the fringe areas of the Staging Area.

b. Better assess impacts to road and duration of flooding in the Staging Area during Project operation.

II. Scope:

a. Define the survey area.

b. Gather existing information on culverts and bridges in the survey area and develop a survey plan.

c. Survey culverts, and bridges in the survey area. Information collected to include, but not limited to: culvert diameter, material type, up and downstream inverts, types of end section, and number of culverts; bridge pier and abutment size, shape, and clear space between piers and abutments.

d. Incorporate survey information into the H&H models.

e. Recalibrate H&H models to account for the additional culverts identified in the HEC-RAS model.

III. Deliverables:

a. Electronic survey files

b. Maps

c. Table of data collected for each culvert and bridge surveyed

d. Updated H&H model

O. NORTH DAKOTA STATE UNIVERSITY (NDSU) AGRICULTURAL IMPACTS STUDY SUPPORT

I. Background: Modeling, mapping, and data is needed to support the NDSU agriculture impacts study for areas with impacts of 1-foot and greater.

II. Scope:

a. Coordinate and meet with NDSU staff on data needs.

b. Provide tabular and mapped data for the 10-, 25-, 50-, 100-, and 500-year floods and extended duration hypothetical floods.

III. Deliverables:

a. Maps for the 10-, 25-, 50-, 100-, and 500-year floods and extended duration hypothetical floods

b. Table of data collected for agriculture impacts surveyed

3. Owner's Responsibilities

Owner shall have those responsibilities set forth in Article 2 and in Exhibit B.

4. Times for Rendering Services

Subtask	**Start Time**	**Completion Time**
A. HMS Diversion Inlet Model	April 1, 2012	July 31, 2012
B. Updates to Rush/Lower Rush	March 8, 2012	May 31, 2012
C. Evaluation of channel size	March 8, 2012	December 31, 2016
D. Extend RAS geometry of Rush/Lower Rush	March 8, 2012	May 31, 2012
E. Physical Modeling Assistance	April 26, 2012	September 30, 2015
F. On-Call Services	June 14, 2012	December 31, 2016
F.I Extreme Rainfall Events	September 13, 2012	November 30, 2012
F.II. Extreme Event Evaluations	September 13, 2012	March 31, 2016
F.III. Tributary Peak HEC-RAS Model Runs	September 14, 2012	December 31, 2012
F.IV. Additional Assistance for the Maple River Aqueduct Physical Model	September 14, 2012	December 31, 2016
F.V. Unsteady HEC-RAS Modeling of Existing PMF Inflows	November 8, 2012	January 31, 2013

Subtask	Start Time	Completion Time
F.V. Phase 2 Numerical Modeling	February 14, 2013	September 30, 2013
F.VI. Update HEC-RAS Model	December 13, 2012	January 31, 2014
F.VII. Connecting Channel and 20-year Existing Conditions	December 18, 2012	September 30, 2013
F.VIII. Maple River Aqueduct Flow Analysis	March 14, 2013	September 30, 2013
F.IX. Update HEC-RAS Models – Maple River Aqueduct & Reach 6 Bridge	April 18, 2013	September 30, 2015
F.X. Water Monitoring Gage Survey	April 9, 2013	May 31, 2013
F.XI. HEC-RAS Models - Maple River Aqueduct	December 11, 2014	March 31, 2015
G. Basin-Wide Retention Support	December 13, 2012	December 31, 2016
H. Phasing Plan Interim Modeling	April 24, 2013	September 30, 2015
I. Phase 7.1 Model Update	July 11, 2013	April 30, 2014
J. Update PMF Study with Revised Distribution of Snowmelt Runoff	July 11, 2013	December 31, 2013
K. Phase 8 Model Update	September 12, 2013	December 31, 2016
L. Update the Balanced Hydrographs at Hickson, ND	October 10, 2013	September 30, 2014
M. Eastern Staging Area Evaluation	October 9, 2014	December 31, 2016
N. Staging Area Culvert and Bridge Survey	October 30, 2014	March 31, 2015
O. NDSU Agricultural Impacts Study Support	March 12, 2015	December 31, 2016

5. Payments to Engineer

   A. Owner shall pay Engineer for services rendered as follows:

      I. Compensation for services in accordance with the Standard Hourly Rates shown in Appendix 2 of Exhibit C of the Agreement.

      II. The total compensation for services identified under the Task Order is not-to-exceed the amount as defined in the table below.

      III. Estimated budget for Subtask F. On-Call Services, and G. Basin-Wide Retention Support, is based on an allowance.

         1. Engineer will notify Owner when eighty percent (80%) of the budget on Subtask F. On-Call Services, and G. Basin-Wide Retention Support, is expended.

         2. Engineer will prepare and submit an amendment for additional compensation when ninety percent (90%) of budget on Subtask F. On-Call Services, and G. Basin-Wide Retention Support, is expended.

3. Engineer will not perform work beyond one hundred percent (100%) of the budget for Subtask F. On-Call Services, and G. Basin-Wide Retention Support, without Owner's authorization by an amendment to this Task Order.

Subtask	Activity ID	Current Budget ($)	Change ($)	Revised Budget ($)
A. HMS Diversion Inlet Modeling	SW-1040	~~22,121~~19,419	0~~(2,702)~~	19,419~~19,419~~
B. Updates to Rush/Lower Rush	SW-1050	~~16,401~~15,415	0~~(986)~~	15,415~~15,415~~
C. Evaluation of Channel Size	SW-1040	~~237,605~~68,183	0~~(169,422)~~	68,183~~68,183~~
D. Extend RAS Geometry of Rush/Lower Rush	SW-1040	6,532~~17,714~~	0~~(11,182)~~	6,532
E. Physical Modeling Assistance	SW-1040	10,228~~10,500~~	0~~(272)~~	10,228
F. ON-CALL SERVICES (ALLOWANCE)	SW-1040	44,900~~44,900~~	0~~0~~	44,900
F.I. Extreme Rainfall Events	SW-1270	7,760~~7,500~~	0~~260~~	7,760
F.II. Extreme Event Evaluations	SW-1270	26,418~~26,600~~	0~~(182)~~	26,418
F.III Tributary Peak Model Runs to Support the Maple River Aqueduct Physical Model	SW-6100	20,081~~20,000~~	0~~81~~	20,081
F.IV Additional Assistance for the Maple River Aqueduct Physical Model	SW-6110	172,184~~104,000~~	0~~68,184~~	172,184
F.V Unsteady HEC-RAS Modeling of Existing PMF Inflows	SW-1040	46,801~~50,000~~	0~~(3,199)~~	46,801
F.V Phase 2 Numeric Modeling	SW-1040	29,221~~60,000~~	0~~(30,779)~~	29,221
F.VI Update HEC-RAS Model	SW-1040	35,971~~36,000~~	0~~(29)~~	35,971
F.VII Connecting Channel and 20-year Existing Conditions	SW-1040	6,414~~9,000~~	0~~(2,586)~~	6,414
F.VIII Maple River Aqueduct Flow Analysis	SW-1040	15,052~~15,000~~	0~~52~~	15,052
F.IX Update HEC-RAS Models – Maple River Aqueduct & Reach 6 Bridge	SW-6110	35,090~~40,000~~	0~~(4,910)~~	35,090
F.X Water Monitoring Gage Survey	SW-6080	4,018~~5,000~~	0~~(982)~~	4,018
F.XI. HEC-RAS Models - Maple River Aqueduct	SW-6150	20,090~~25,000~~	0~~(4,910)~~	20,090
G. Basin-Wide Retention Support	SW-1040	55,000~~55,000~~	0~~0~~	55,000
H. Phasing Plan Interim Modeling	SW-6140	55,163~~90,000~~	0~~(34,837)~~	55,163
I. Phase 7.1 Model Update	SW-1040	164,540~~165,000~~	0~~(460)~~	164,540
J. Update PMF Study with Revised Distribution of Snowmelt Runoff	SW-6130	111,609~~116,000~~	0~~(4,391)~~	111,609
K. Phase 8 Model Update	SW-1040	1,082,493~~732,000~~	119,426~~350,493~~	1,201,919~~1,082,493~~

Subtask	Activity ID	Current Budget ($)	Change ($)	Revised Budget ($)
L. Update the Balanced Hydrographs at Hickson, ND	SW-6090	121,518~~167,000~~	0~~(45,482)~~	121,518
M. Eastern Staging Area Evaluation	SW-6070	52,000~~52,000~~	0~~0~~	52,000
N. Staging Area Culvert and Bridge Survey	SW-6060	121,725~~153,000~~	0~~(31,275)~~	121,725
O. NDSU Agricultural Impacts Study Support	SW-1040	74,537~~47,000~~	0~~27,537~~	74,537
TOTAL		**2,422,362~~2,324,341~~**	**119,426~~98,021~~**	**2,541,788~~2,422,36~~**

B. The terms of payment are set forth in Article 4 of the Agreement and in Exhibit C.

C. Provide Monthly Invoice and status report

i. Status report will accompany invoice and detail work completed during the invoice period.

ii. Status report will be organized by subtask and provide narrative of work completed on each subtask.

iii. Status of work completed will include:

1. Outstanding issues to resolve, expected steps to progress work, outstanding items required from either Owner, Owner's Representative, or others to progress work, anticipated completion date of subtasks.

2. Dates of on-call services provided and description of the activities performed by Engineer, including any deliverables produced.

3. Dates of deliverables otherwise required under the Project Management task.

6. Consultants: None

7. Other Modifications to Agreement: None

8. Attachments: None

9. Documents Incorporated By Reference:

A. AWD-00043 REV-0, Eastern Staging Area Evaluation, dated October 9, 2014.
B. AWD-00044 REV-0, Staging Area Culvert Surveying, dated October 30, 2014.

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

    The Effective Date of this Task Order is June 14, 2012.

ENGINEER:	OWNER:
Houston-Moore Group, LLC	**Fargo-Moorhead Metro Diversion Authority**
Signature Date	Signature Date
Jeffry J. Volk Name	Darrell Vanyo Name
President Title	Chairman, Flood Diversion Board of Authority Title
DESIGNATED REPRESENTATIVE FOR TASK ORDER:	DESIGNATED REPRESENTATIVE FOR TASK ORDER:
C. Gregg Thielman Name	Keith Berndt Name
Sr. Project Manager Title	Cass County Administrator Title
925 10th Avenue East West Fargo, ND 58078 Address	211 9th Street South, PO Box 2806 Fargo, ND 58108-2806 Address
cgthielman@houstoneng.com E-Mail Address	berndtk@casscountynd.gov E-Mail Address
(701) 237-5065 Phone	(701) 241-5720 Phone
Fax	(701) 297-6020 Fax

FM Metro Risk Management Project

Cost Proposal for Task Order 9, Amendment 16 - Phase 8 Model Update

Task	Activity Description	Personnel Costs										Cost Per Task
		Senior Project Engineer		Project Manager		Project Engineer		Graduate Engineer		GIS Technician III		
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	
Additional Services												
Task 1	Generate and incorporate revised tributary peak hydrographs for river inflow hydrographs and local inflow hydrographs. Update tributary peak hydrology for 10, 4, 2, 1, and 0.2% chance events.	10	$ 1,620	20	$ 3,140	40	$ 5,120	40	$ 4,400	10	$ 1,230	$ 15,510
Task 2	Update historical peak models after recalibration of models. Update 1997, 2006, 2009 and 2011 events. Update floodplain mapping for these four events.	16	$ 2,592	24	$ 3,768	48	$ 6,144	48	$ 5,280	16	$ 1,968	$ 19,752
Task 3	Update tributary peak models after recalibration of models. Update tributary peak 10, 4, 2, 1, and 0.2% chance events. Update floodplain mapping for these five events.	20	$ 3,240	30	$ 4,710	60	$ 7,680	60	$ 6,600	20	$ 2,460	$ 24,690
Task 4	Update Red River peak models after recalibration of models. Update 10, 4, 2, 1, and 0.2% chance synthetic Red River peak events. Update floodplain mapping for these five events.	20	$ 3,240	30	$ 4,710	60	$ 7,680	60	$ 6,600	20	$ 2,460	$ 24,690
Task 5	Update extreme event models after recalibration of models. Update IDF and PMF events. Update floodplain mapping for these two events.	8	$ 1,296	12	$ 1,884	24	$ 3,072	24	$ 2,640	8	$ 984	$ 9,876
Task 6	Phase 8 Report. Document previous modeling and referenced studies, geometry development, hydrology development, QA/QC review comments and responses, calibration, operation, impacts and mapping.	10	$ 1,620	60	$ 9,420	20	$ 2,560	20	$ 2,200	8	$ 984	$ 16,784
Task 7	QA/QC	10	$ 1,620	20	$ 3,140	10	$ 1,280	10	$ 1,100	8	$ 984	$ 8,124
	Total	94	$ 15,228	196	$ 30,772	262	$ 33,536	262	$ 28,820	90	11070	$ 119,426
	Grand Totals											$ 119,426

Technical Advisory Group Recommendation

Meeting Date: 11/02/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative prepared the following Contract Action(s) for the Technical Staff team:

List description of Contract Action(s):

Houston-Moore Group, LLC

MFDA – Task Order 13, Amendment 14 – Levee Design and Design Support $60,000

- In Town Levees, Phase 2 design closeout budget adjustment.

BACKGROUND:

Houston-Moore Group, LLC (HMG) is the Engineer of Record for the design of the levees along the Red River (WP-42 In-Town Levees) and OHB Ring Levee (WP-43), and has provided levee design and design support services under Task Order 13 from November 8, 2012, to the present time. See the table below for a summary of the amendments to the Task Order.

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Budget ($) Change	Original Project Cost	Revised Project Cost	Agreement Execution Date	Project Completion	Comments
Task Order 13 Amendment 0	-	$425,000	-	8-Nov-12	30-Sep-13	Initial authorization of 2.B.i and 2.B.ii.
Task Order 13 Amendment 1	$150,000	-	$575,000	13-Dec-12	30-Sep-13	Added Ring Levee Evaluations for Oxbow/Hickson/Bakke; Comstock; Christine; and Wolverton. Added Non-Structural Improvement Evaluation for staging area, and public meeting support.
Task Order 13 Amendment 2	$4,090,000	-	$4,665,000	8-Aug-13	31-May-15	Added Red River Levees-Phase 2, and VES reports for WP-43A, WP-43C, WP-43D, and WP-43E. Add mapping of impacted residential structures in Staging Area.
Task Order 13 Amendment 3	$135,000	-	$4,800,000	14-Nov-13	30-Sep-14	Added landscape architecture and master planning for 2nd St. corridor. Added master planning svcs for Mickelson to the 4th St. levee.
Task Order 13 Amendment 4	$600,000	-	$5,400,000	13-Feb-14	30-Sep-14	Added 4th St. Levee Pump Station Replacement.
Task Order 13 Amendment 5	$55,000	-	$5,455,000	8-May-14	30-Sep-14	Added laboratory testing for Red River Levees – Phase 1 Design.

Task Order 13 Amendment 6	$549,000	-	$6,004,000	14-Aug-14	30-Sep-14	Added Phase 2-Design misc design work; misc design work and preparation of bid package for 4th St. Levee PS. Added land surveying for In-Town Levee and O/H/B Ring Levee.
Task Order 13 Amendment 7	$115,000	-	$6,119,000	9-Oct-14	30-Sep-15	Added O/H/B Ring Levee Design Modification – 100-Year Elevation.
Task Order 13 Amendment 8	$450,000	-	$6,569,000	5-Feb-15	31-Mar-16	Added Phase II ESAs for Case Plaza and City Hall; conceptual design for 2nd St. N pedestrian overpass; Mickelson Levee Extension.
Task Order 13 Amendment 9	$190,000	-	$6,759,000	12-Mar-15	31-Mar-16	Added El Zagal Phase 2 Design.
Task Order 13 Amendment 10	$602,000	-	$7,361,000	11-Jun-15	31-Mar-16	Added Phase 2 Design misc design work.
Task Order 13 Amendment 11	$418,000	-	$7,779,000	13-Aug-15	31-Mar-16	Added funding for Upstream Staging Area Ring Levees.
Task Order 13 Amendment 12	$610,000	-	$8,389,000	10-Jul-14	31-Dec-16	Added WP-43D (O/H/B Pump Station Design); WP-43 Wetland Mitigation Design; WP-43A (Levee inspection); Land Surveying for ROW Acquisition; extended POP to 31-Dec-16.
Task Order 13 Amendment 13	$340,723	-	$8,729,723	23-June-16	31-Dec-16	Close 2 subtasks, incorporate AWD-00057, add scope and budget for 6 existing subtasks, and add scope and budget for new subtask WP-42E.
Task Order 13 Amendment 14	$60,000	-	$8,789,723	10-Nov-16	31-Dec-16	In Town Levees, Phase 2 design closeout budget adjustment.

DISCUSSION:

The original In Town Levees (WP-42) Phase 2 (detailed) design scope of work was based on a limited number of construction packages. As design work progress, construction sequencing constraints required that the work be spilt into multiple design and construction work packages. Previous Amendment 10 (June 2015) included an estimate of the WP-42 In Town Levees – Phase 2 Design (subtask 2.B.i.2f.x.ii) scope and budget required to prepare these additional work products for split packages WP-42F1S, WP-42F1N, WP-42F2, and WP-42G. This task order work is invoiced on a time and materials basis.

Packages WP-42F1S, WP-42F1N, and WP-42F2 are now complete, and this work included Post 95% review submittals that were not anticipated in the Amendment 10 budget estimate. The actual cost to complete the design work for these split packages exceeded the budget estimate approved in Amendment 10.

HMG provided the attached cost proposal for the actual additional cost to complete packages WP-42F1S, WP-42F1N, and WP-42F2, and an estimated budget to complete WP-42G (Landscaping). The cost proposal includes 500 hours of labor for approximately $59,000 ($118/hour) and approximately $1,000 in expenses.

The PMC reviewed HMG's cost proposals and found it to be acceptable. A summary of Task Order 13 current and proposed Amendment 14 subtask budgets is included on the table below.

TO13 Levee Design and Design Support Budgets by Work Package:

Work Package	Activity ID	Current Budget ($)	Amendment 14 ($)	Total ($)
Red River Levees – Phase 1 Design	DE-7430	418,462		418,462
Landscape Arch/MP – 2nd St. Corridor	DE-7430	48,082		48,082
Master Planning Svcs – Mickelson to 4th	DE-7430	147,737		147,737
Red River Levees – Phase 2 Design	DE-7430	3,064,000	60,000	3,124,000
Red River Levees – VES	DE-7430	30,000		30,000
4th St. PS Replacement	DE-7430	681,320		681,320
Michelson Levee Ext	DE-7430	116,368		116,368
El Zagal Phase 2 Levee Design	DE-7430	221,654		221,654
WP-42E 2nd St. So. Closure and Pump Station	DE-7430	430,000		430,000
Upstream Staging Area Ring Levees	DE-10150	440,000		440,000
WP-43A Design	DE-10150	362,499		362,499
WP-43C Design	DE-10150	210,747		210,747
WP-43D Design	DE-10150	1,905,932		1,905,932
WP-43E Design	DE-10150	267,500		267,500
O/H/B Ring Levee – VES	DE-10150	33,694		33,694
O/H/B Ring Levee Design Mod	DE-10150	127,240		127,240
O/H/B Wetland Mitigation Design	DE-10150	92,000		92,000
WP-43A Levee Inspection	DE-10150	5,000		5,000
Land Surveying for ROW Acquisition	DE-10150	127,488		127,488
TOTAL		8,729,723	60,000	**8,789,723**

This change amount of $60,000 is within the overall FY-2016 MFDA budget.

ATTACHMENT(S):

1. Draft Task Order 13, Amendment 14
2. HMG Cost Proposal

Presented by:

John W. Glatzmaier, P.E.
CH2M HILL
Project Manager
Metro Flood Diversion Project

November 2, 2016
Date

Keith Berndt, Cass County Administrator
Concur: 3-Nov-16 *Non-Concur:*

April Walker, Fargo City Engineer
Concur: 4-Nov-16 *Non-Concur*

Mark Bittner, Fargo Director of Engineering
Concur: 2-Nov-16 *Non-Concur:*

Jason Benson, Cass County Engineer
Concur: 3-Nov-16 *Non-Concur*

David Overbo, Clay County Engineer
Concur: 2-Nov-16 *Non-Concur:*

Robert Zimmerman, Moorhead City Engineer
Concur: 2-Nov-16 *Non-Concur*

Nathan Boerboom, Diversion Authority Project Manager
Concur: 2-Nov-16 *Non-Concur:*

This is Task Order No. 13, Amendment ~~13~~14, consisting of

Houston-Moore Group, LLC

Task Order No. 13, Amendment ~~13~~14

FMDA Purchase Order No. 157599

Levee Design and Design Support

In accordance with Paragraph 1.01 of the Agreement between **Fargo-Moorhead Flood Diversion Authority** ("Owner") and **Houston-Moore Group, LLC** (HMG) ("Engineer") for Professional Services – Task Order Edition, dated March 8, 2012 ("Agreement"), Owner and Engineer agree as follows:

The parties agree that in the event of a conflict between prior versions of this Task Order No. 13 and this Amendment, the terms and conditions in this Amendment shall prevail, provided however, nothing herein shall preclude ENGINEER from invoicing for work authorized under prior versions of this Task Order and performed prior to effective date of this Amendment, even to the extent such prior work was revised by this Amendment. All other terms and conditions shall remain the same and are hereby ratified and affirmed by the parties.

1. Specific Project Data

   A. Title: **Levee Design and Design Support**

   B. Description: As part of Work-in-Kind (WIK), provide assistance to USACE, in design and design support activities, for design of levees along the Red River to support increased flow through the protected area and for levees in the upstream staging area. Provide Lands, Easements, Rights-of-Way, Relocations, and Disposal areas (LERRDs) assistance to Owner to support the levee designs.

   C. Background:

      i. Red River Levees: At the November 8, 2012 Diversion Board meeting, the Board requested the US Army Corps of Engineers (USACE) add levees along the Red River to allow increased flow through the protected area. This task order allows HMG to provide design and design support to USACE for these Red River levees.

         1. Phase 1 – Screening of alternatives and selecting final alignment scope to include: Development of Alternatives, Public Involvement, Surveying, Geotechnical Exploration and Testing, Preliminary Geotechnical Analysis, Preliminary Hydrologic and Hydraulic Analysis, Preliminary Internal Flood Control Analysis, Preliminary Utility Investigation, Preliminary Levee and Structural Design, Transportation Evaluation, Preliminary Environmental Studies, Preliminary Report and Drawings, and Project Management.

         2. Phase 2 – Detailed Plans and Specifications: Based on the alternative selected in Phase 1, conduct a Value Engineering (VE) evaluation of the proposed project and prepare plans and specifications for 65 and 95 percent submittals, and prepare a cost estimate based on the 95 percent design submittal. Notice To Proceed (NTP) will be subject to the completion and signing of the USACE Supplemental Environmental Assessment (EA).

      ii. Upstream Staging Area Levees/Ring Dikes: At the November 8, 2012 Diversion Board meeting, the Board passed AWD-00020 Recommended Board of Authority Position for Post-Feasibility Alternatives Analysis VE-13A vs. VE-13C, which authorized HMG to begin conceptual design and site investigations of potential levees for the Oxbow.

2. Services of Engineer

A. General

i. Red River Levees. Prepare Preliminary Design Report (PDR) and drawings for the construction of levees through town. The work will be done in 2 phases: Phase 1 will include screening of alternatives, preliminary design, and selecting final alignments. Phase 2 will include detailed plans and specifications.

ii. Support for Upstream Stage Area Levees. Provide, as requested, assistance to USACE for design of ring levees and non-structural improvements in the Upstream Staging Area.

1. Provide detailed designs for four of the Oxbow/Hickson/Bakke ring levee Work Packages (WP-43A, WP-43C, WP-43D, and WP-43E).

B. Scope of Work

i. Red River Levees – Work will be done in 2 phases:

1. Phase 1 - Screening of Alternatives, Selection of Alignment, and Preliminary Design for the area in Fargo, ND along the Red River between the existing railroad embankment near 5th Avenue North and the north end of the existing 4th Street levee (near 2nd Street South). Work will include:

a. Development of Alternatives – Develop up to three (3) protection alignment concepts and conceptual level cost estimates. Participate in an alignment selection meeting.

b. Public involvement – Meet with affected property owners (5 anticipated), participate in two (2) public meetings, and respond to calls after public meetings. Prepare visualizations of alignment alternatives(s).

c. Surveying – Conduct topographic survey of project corridor including elevations, utilities, landscaping, buildings, and streets.

d. Geotechnical Exploration and Testing – Determine location of borings, right-of-entry requests, conduct borings, field and laboratory testing, to determine surface and subsurface geological conditions.

e. Preliminary Geotechnical Analysis – Conduct preliminary stability analysis on alignment alternatives and report of findings.

f. Preliminary Hydrologic and Hydraulic Analysis - Conduct HEC-RAS modeling to complete preliminary evaluation of Red River stage impacts due to proposed project.

g. Preliminary Internal Flood Control Analysis – Conduct SWMM model update for existing conditions and proposed conditions with project (including consideration of interior ponding), review of historical precipitation and stream flow, simulation of low river gravity outlet condition, simulation of high river pumped outlet condition, and determine preliminary pump sizing and additional internal storage needs.

h. Preliminary Utility Investigation – Determine preliminary utility relocation requirements, conduct utility coordination meeting, and document utility relocation requirements and issues.

i. Preliminary Levee Design Structural Design – Develop preliminary design of levee protection system, preliminary estimate of embankment and borrow requirements, and prepare a narrative of design criteria.

j. Preliminary Structural Design – Develop preliminary design for proposed floodwalls and closures, pump stations, and miscellaneous drainage structures. Prepare a narrative with descriptions of features, design considerations, and criteria assumptions.

k. Transportation Evaluation – Develop initial evaluation of transportation impacts, and participate in two (2) coordination meetings with City of Fargo staff and two (2) coordination meetings with railroad staff. Develop up to five (5) alternatives for the 2nd Street road alignment to accommodate flood protection alternatives.

l. Preliminary Environmental Studies – Complete Phase 1 Environmental Site Assessment report for six (6) properties.

m. Preliminary Design Report and Drawings – Prepare Preliminary Design Report (PDR) with cost estimates and preliminary project plans for selected alignment. Prepare artists renderings of selected plan.

n. Project Management – Document coordination and review, schedule and resource management, budgeting, and project team coordination.

o. Landscape Architecture/Master Planning- Provide landscape architecture and master planning services for the Red River Levees.

    i. Provide landscape architecture services for the 2nd St. Corridor from NP Ave. to 4th Ave. Coordinate with the city of Fargo City Hall Project throughout the design phase of the City Hall Project.

    ii. Provide master planning services from Mickelson to the 4th St. Levee.

2. Phase 2 – Detailed Plans and Specifications: Complete detailed project engineering and design and provide plans and technical specifications (Division 2 and higher) for the selected alternative from Phase 1. Include required surveying, environmental studies, permitting, removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, floodwalls, closures, traffic evaluations, road realignments and signal changes, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:

    a. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, USACE Consistency, Agency Technical Review (ATR) and USACE Independent External Peer Review (IEPR) review teams.

    b. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and

specifications for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

c. Cost Estimate – prepare a cost estimate for the project based on the 95 percent submittal documents.

d. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Diversion Authority, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.

e. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.

f. Additional design work to accommodate requested project changes:

    i. Increase 2nd Street N pump station size and pumping capacity to 75,000 gpm and add formed pump suction inlets.

    ii. Coordinate electrical design for connection to new back-up power generator on New City Hall site.

    iii. Add forty feet of floodwall to the pump station construction package.

    iv. Use USACE specifications in lieu of City of Fargo Specifications for the pump station.

    v. Coordinate pump station and floodwall architectural and design and aesthetics with the New City Hall project.

    vi. Provide Computational Fluid Dynamics (CFD) modeling for the pump station wetwell and pump inlet design.

    vii. Phase I ESAs were conducted for the Case Plaza and City Hall parking lot sites in 2013 as part of the preliminary design of WP-42 (In Town Levees). The Phase I ESA recommended additional Phase II ESA testing of the soils and groundwater on these sites.

        1. Provide up to nine (9) borings at the Case Plaza and City Hall parking lot sites, survey boring locations, and provide the following sampling and testing services: boing logs by a field geologist, continuous soil sampling to the groundwater table, soil head space analysis for volatile organic compounds (VOCs), groundwater sampling, laboratory testing and analysis of samples for the presence of contaminants, and a report of the findings.

        2. Deliverables include draft and final Phase II ESA Reports for Case Plaza and City Hall parking lot properties, and laboratory test results.

    viii. A 2nd St N Pedestrian Overpass between the City Hall project and the Red River at 2nd Avenue N is desired and is integral to the 2nd St N floodwall design. Provide the following conceptual design services:

1. Prepare for and attend four (4) coordination meetings and Commission meeting.
2. Develop bridge design concepts for prefabricated and pre-stressed options, at-grade crossing concepts, and coordination with landscape design.
3. Prepare visualizations and graphics for City Commission Meeting.
4. Provide a summary report.

ix. Provide soil characterization for Case Plaza lot, conduct geo-probes and soil characterization to determine if soil is suitable for re-use on the project.

x. Provide additional design services for flood wall including wall aesthetics and accommodation of future pedestrian bridge.

xi. Provide additional planning and design services and coordination to integrate design with the new Fargo City Hall project.

xii. Provide additional design services to prepare multiple bid packages to accommodate construction phasing of flood control features. This includes additional design, plan preparation, and design reviews.

3. Value Engineering Study (VES)

    a. Facilitate a VES in accordance with USACE guidelines (up to 3 days) with staff from the Diversion Authority, Program Management Consultant (PMC), and USACE. Prepare and distribute materials and documents, facilitate the workshop, and prepare a VES report.

4. 4th Street Levee Pump Station Replacement

    a. Background: At the November 8, 2012 Diversion Board meeting, the Board requested the USACE add levees long the Red River to allow increased flow through the protected area. To allow 35 feet through town, the 4th Street levee requires certification. In order to meet certification criteria, the stormwater pump stations on the north end of the levee must be replaced.

    b. Detailed Plans and Specifications: Provide design services and prepare detailed plans as described below.

        i. Complete detailed project engineering and design and provide plans and technical specifications (Division 2 and higher) for the 4th Street Levee Pump Station. Include required surveying, Section 408 permit (if required), removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, closures, traffic evaluations, service road realignments, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:

1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Owner, PMC, and USACE Consistency and ATR review teams.
2. 95 Percent Design Submittal – evaluate and incorporate 35 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.
3. Pre-Purchase Specifications - prepare up to 3 pre-purchase specifications, if requested, for:
    a. Gates
    b. Pumps
    c. Electrical Panels
4. Cost Estimate – prepare a cost estimate for the project based on the 35 percent and 95 percent submittal documents.
5. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Owner, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.
6. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.

c. Additional design work to accommodate requested project changes:
    i. Increase capacity of the back-up power generator to accommodate power for adjacent sanitary sewer lift station.
    ii. Modify the pump station and generator building design including: addition/modification of transoms and lintels, lower pump station slab, deletion of fuel storage, addition of louvers, removal of windows and parapets, and modification of brick veneer. Include design of wet well access ladders and lights in plans, to eliminate the need to lower staff into wet well on a harness for routine maintenance.

d. Deliverables:
    i. Detailed Plans and Specifications
        1. 35 Percent Design Submittal
        2. 95 Percent Design Submittal
    ii. Pre-Purchase Specifications
    iii. 35 Percent Cost Estimate
    iv. 95 Percent Cost Estimate
    v. Operation and Maintenance Plan
        1. Draft Plan
        2. Final Plan

e. Work not included in this Scope of Services:

i. Environmental permitting
ii. Utility Relocation Agreements
iii. ROW Acquisition including Appraisals, Title Searches, Title Opinions, Deeds
iv. Bid documents and bidding services

5. Mickelson Levee Extension

a. Background: The Mickelson Levee Extension is a component of In-Town levees that was conceptually evaluated as part of the July 16, 2012 report entitled "*Final Technical Memorandum, AWD-00002 – Flows Through Flood Damage Reduction Area*" and includes an extension of the existing Mickelson levee to the south to tie into high ground.

b. Detailed Plans and Specifications: Provide design services and prepare detailed plans as described below.

i. Complete detailed project engineering and design and provide plans and technical specifications (Division 2 and higher) for the Mickelson Levee Extension. Include required surveying, Section 408 permit (if required), removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:

1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Owner, PMC, and USACE Consistency and ATR review teams.

2. 65 Percent Design Submittal – evaluate and incorporate 35 percent review comments into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.

3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.

4. Cost Estimate – prepare a cost estimate for the project based on the 65 percent and 95 percent submittal documents.

5. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Owner, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.

6. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.

c. Additional design work to accommodate requested project changes:

ii. None.

d. Deliverables:

iii. Detailed Plans and Specifications

1. 35 Percent Design Submittal
2. 65 Percent Design Submittal
3. 95 Percent Design Submittal

iv. 65 Percent Cost Estimate
v. 95 Percent Cost Estimate
vi. Operation and Maintenance Plan

6. El Zagal Phase 2 Levee Design

a. Background: The El Zagal Phase 2 Levee is a component of In-Town levees that was conceptually evaluated as part of the July 16, 2012 report entitled "Final Technical Memorandum, AWD-00002 – Flows Through Flood Damage Reduction Area" and includes an extension of recently completed El Zagal Phase 1 Levee to the south to tie into high ground.

b. Detailed Plans and Specifications: Provide design services and prepare detailed plans as described below.

i. Complete detailed project engineering and design and provide plans and technical specifications (Division 2 and higher) for the El Zagal Phase 2 Levee. Include required surveying, removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, roadway revisions, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:

1. 65 Percent Design Submittal – advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.

2. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.

3. Cost Estimate – prepare a cost estimate for the project based on the 95 percent submittal documents.

4. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Owner, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.

5. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.

c. Additional design work to accommodate requested project changes:

i. None.

d. Deliverables:

i. Detailed Plans and Specifications
ii. 65 Percent Design Submittal
iii. 95 Percent Design Submittal
iv. 95 Percent Cost Estimate
v. Bid Documents
vi. Operation and Maintenance Plan

7. WP-42E: 2nd St. So. Closure and Pump Station Design

a. Background: The 2nd St. South roadway closure and stormwater pump station project is a component of In-Town levees that was conceptually evaluated as part of the July 16, 2012 report entitled "Final Technical Memorandum, AWD-00002 – Flows Through Flood Damage Reduction Area". It is being developed as a separate design and construction package to align schedule with other adjacent projects.

b. Detailed Plans and Specifications: Provide design services and prepare detailed plans as described below.

i. Complete detailed project engineering and design and provide plans and technical specifications (use and refer to City of Fargo Specifications) for the2nd St. So. Closure and Pump Station project. Include required surveying, removals and demolition, geotechnical and hydraulic analyses, internal flood control and pumping, levee systems, roadway revisions, public and private utility relocations, landscaping, drawings and specifications, internal QA/QC, design documentation, operation and maintenance plan, and project management and coordination. Major milestone deliverables include:

1. 35 Percent Design Submittal – provide 35 percent preliminary design and submit the design report, and plans for review by the Owner, PMC, and USACE Consistency and ATR review teams.

2. 65 Percent Design Submittal – evaluate and incorporate 35 percent review comments into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.

3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Owner, PMC, and USACE Consistency and ATR review teams.
4. BCOE Design Submittal - evaluate and incorporate 95 percent review comments into the design documents, and submit the design report, plans and specifications for comment back check and close-out by the Owner, PMC, and USACE Consistency and ATR review teams.
5. Cost Estimate – prepare a cost estimates for the project based on the 65 and 95 percent submittal documents, and Final Bid Documents.
6. Operation and Maintenance Plan – prepare draft O&M Plan for review by the Owner, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.
7. Bid Document Development – prepare final plans and technical specifications and assist the PMC with development of bid documents.

c. Additional design work to accommodate requested project changes:
   i. None.

d. Deliverables:
   i. 35 Percent Design Submittal
   ii. 65 Percent Design Submittal with cost estimate
   iii. 95 Percent Design Submittal with cost estimate
   iv. BCOE Submittal
   v. Plans and Technical Specifications for Bid Documents
   vi. Operation and Maintenance Plan

ii. Upstream Staging Area Ring Levees:

1. Provide support as defined below and as requested in writing. Types of requests may include:
   a. Respond to information requests by affected residences and develop information for presentations or public meetings.
   b. Conduct a geotechnical site visit(s) of the levee site(s) to observe surface features and, if requested, conduct subsurface investigations.
   c. Determine existing utilities and utility relocation requirements.
   d. Begin conceptual design of the levees and/or floodwalls and floodgates, interior layout (which may include street layout, storm water sewer, storage, and lift station sizing, house relocation planning, and golf course layout), and external infrastructure (road raises for egress).
2. Oxbow/Hickson/Bakke – Ring Levee Evaluation:

a. Prepare a proposed ring levee system to reduce flood risk to Oxbow/Hickson/Bakke, ND during operation of the Diversion Project and staging of water. Show the location of a potential ring levee, develop height required for rink levee, and evaluate access during periods of Diversion operation.

b. The ring levee will impact the golf course and clubhouse. Provide conceptual design services for re-design of the golf course and clubhouse.

    i. Provide an updated conceptual design of golf course and clubhouse based on update levee alignment to accommodate a total of 80 replacement residential lots.

c. Initial Survey and Geotechnical Activities for Levee Design:

    i. Work with USACE to develop a geotechnical investigation plan for the alternative Levee alignments for approval.

    ii. Stake the location of approved borings and record the coordinates and elevations of the borings.

    iii. Conduct laboratory testing on boring samples provide by the USACE for the OHB ring levee alternative alignments and Wild Rice River mirco-siting evaluation. Laboratory testing to include the following: Atterberg Limits, Water Content, Hydrometer and Sieve analysis, Proctor Density, Triaxial Compression-unconsolidated/undrained, Triaxial Compression-consolidated/undrained, Torsional Ring Shear, Consolidation Reporting P-e, and TWT Extrusion and Description. Approximately 580 laboratory tests are planned.

    iv. Obtain and comply with right of entry (ROE) and right of way (ROE) requirements for each property entered.

The construction of the Oxbow/Hickson/Bakke (O/H/B) ring levee and associated work is phased. The work has been divided into five (5) Work Packages, which include: three (3) levee design packages, an interior drainage and road raise package, and a demolition and utility relocations package. One of the levee design packages (WP-43B) will be completed by the USACE. The remaining 4 design packages (WP-43A, WP-43C, WP-43D and WP-43E) will be completed in this scope of work. See Figure 1, attached.

Assumptions for WP-43A, WP-43C, WP-43D and WP-43E include:

- No additional surveys required (included in WP- 43B).
- Soil exploration, laboratory testing, and instrumentation costs included under WP-43B. Geotechnical design of the levee is required. Groundwater evaluation is required to determine impacts to existing septic systems, sewer systems and basements.
- No staging area water hydrologic and hydraulic (H&H) modeling required (included in WP- 43B). H&H for local drainage and interior drainage is required.
- Include design of levee, vegetation free zone, and ditching (input from WP-43B and WP-43D). CR-81 road raise will be in WP-43D. Retention

basin/pump station design will be in WP-43D. Utility relocation design and demolition design will be in WP-43E.

- Coordination between designers for WP-43B, WP-43C, WP-43D, and WP-43E is required, along with review of design submittals from WP-43B.
- Develop design, plans, ROW drawings, technical specs, Design Documentation Report (DDR), cost estimate, and engineering considerations.
- Preliminary Engineering Report (PER) -35% review includes internal review, Sponsor review, and USACE Consistency and ATR review.
- Draft Technical Report (DTR) -65% review includes internal review, Sponsor review, USACE Consistency, ATR, and USACE IEPR. IEPR will be accomplished by the Natural Resources Conservation Service (NRCS)
- Final Technical Report (FTR) -95% review includes internal review, Sponsor review, and USACE ATR.
- Final Technical Certification (Bid Documents). Provide final documents for closeout of remaining comments and technical signoff. There will not be a review associated with this submittal.
- Bid set will include final Plans and Specifications.
- Assume limited work effort during the bid period consisting of: responding to bidders' questions and preparing amendments.
- Provide final contract award CD of all work items.
- Weekly coordination meetings will be held and will include: tech lead, geotech, cost/specs, and H&H designers. Assume the meetings for WP-43A and WP-43C, WP-43D, and WP-43E will be combined into one weekly meeting.
- Provide right of way drawings for the WP-43B portion of the levee.

d. WP-43A – Levee Section from Riverbend Road to CR81 (southeast): Design approximately 7,300 lineal feet (lf) of levee, interior buffer zone, and interior drainage swale (if required – based on interior drainage developed in WP-43D), including geotechnical design, civil design, permitting, cost estimates, and preparation of drawings and technical specifications; coordinate design of interior levee buffer zone (drainage swale, snow drop area, and tree screen) and recreational features with O/H/B community and developer/golf course designer; determine effect of levee and exterior impounded water on existing septic systems, sewer systems, and basements. Coordinate with design of Retention Basin (WP-43D). Coordinate with design of road raise of CR-81 (design WP-43D). To be constructed with interior drainage stormwater pump station (WP-43D).

    i. Deliverables:

        1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Diversion

Authority, PMC, and USACE Consistency and ATR review teams.

2. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR & IEPR review teams.

3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR & IEPR review teams.

4. Cost Estimate – prepare cost estimates for the project based on the 35 percent and 95 percent submittal documents.

5. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.

e. WP-43C - Levee Section from CR-81 (northeast) to Riverbend Road: Design approximately 5,000 lf of levee, including geotechnical design, civil design, permitting, cost estimates, and preparation of drawings and technical specifications; coordinate design of interior levee drainage with interior drainage design as part of WP-43D; coordinate design of interior levee slope and recreational features with O/H/B community and golf course designer. Removal/demolition of existing structures and utility cut, cap and removal will be designed under WP-43E.

    i. Deliverables:

        1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

        2. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR and IEPR review teams.

        3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to

95 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

4. Cost Estimate – prepare cost estimates for the project based on the 35 percent and 95 percent submittal documents.

5. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.

f. WP-43D –Interior Drainage and CR-81 Road Raises: Design interior drainage system for the O/H/B communities, including both new drainage infrastructure and required rehabilitation or upgrades to existing drainage infrastructure; design stormwater retention pond and new stormwater pump station, including surveying, H&H to determine ditch cross sections and slopes, culvert sizes and slopes, geotechnical, structural, electrical, architectural, civil, permitting, cost estimates, and preparation of drawings and technical specifications. Design road raises of CR-81, including geotechnical, geology, civil, cost estimates, and preparation of drawings and technical specifications, coordinate with levee design teams.

i. Deliverables:

1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

2. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR and IEPR review teams.

3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

4. Cost Estimate – prepare cost estimates for the project based on the 35 percent and 95 percent submittal documents.

5. Operation and Maintenance Plan – prepare draft O&M Plan for review by Diversion Authority, PMC, and USACE. Incorporate review comments and prepare final O&M Plan.

6. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.

7. Provide a separate bid package for the pump station and gatewell pre-consolidation construction package.

8. Provide an above ground building for the stormwater pump station.

g. WP-43E – Demolition and Utility Relocations: Develop demolition plan for WP-43C Levee area (CR-81 (northeast) to Riverbend Road, including utility identification, identification of structures to be sold or demolished in place, environmental Phase 1, permitting, and required remediation. Develop Plans and Technical Specifications package for demolition of two (2) residences that are outside of the OHB ring levee (but within project staging area). Design utilities to be cut, capped, and removed, and utilities to be relocated (coordinate with developer of new City of Oxbow infrastructure), including cost estimates, and drawings and technical specifications. Review adequacy of existing wastewater pump station and forcemain for the 38 additional residential units.

i. Deliverables:

1. 35 Percent Design Submittal – prepare preliminary design submittal and submit the design report and preliminary plans for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

2. 65 Percent Design Submittal – evaluate and incorporate accepted VE proposals into the design documents, advance the detailed design to 65 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency, ATR and IEPR review teams.

3. 95 Percent Design Submittal – evaluate and incorporate 65 percent review comments into the design documents, advance the detailed design to 95 percent and submit the design report, plans and specifications for review by the Diversion Authority, PMC, and USACE Consistency and ATR review teams.

4. Cost Estimate – prepare cost estimates for the project based on the 35 percent and 95 percent submittal documents.

5. Bid Document Development – incorporate 95 percent review comments into the design documents and assist the PMC with development of bid documents.

h. VES or Value Based Design Charrette (VBDC) – facilitate a VES or VBDC in accordance with USACE guidelines (up to 3 days) with staff from the Diversion Authority, PMC, and USACE. Prepare and distribute materials and documents, facilitate the workshop, and prepare a VES report.

    i. Coordinate and lead VES or VBDC of the five (5) O/H/B levee design packages (WP-43A through WP-43E).

i. O/H/B Ring Levee Design Modification - 100-year Elevation

Provide the following design services to provide a modified levee design for WP-43C and WP-43D to protect to the without project 100-year event elevation. Work tasks include:

    i. Update interior flood control model based on 100-year levee earthwork quantities.

    ii. Update WP-43D plans to include 100-year levee design.

    iii. Update WP-43C plans to include 100-yr levee design.

    iv. Calculate earthwork balance for 100-year levee design.

    v. Update stormwater pond designs for 100-year levee earthwork quantities.

    vi. Provide roadway replacement plans and traffic control for gravity drain construction area on Cass County Highway 81.

    vii. Update pump station design based on 100-yr levee scenario. Includes reconfiguration of pump station elevation as well as general civil for access, etc.

    viii. Update DDRs for WP-43C and WP-43D, including interior flood control, to include 100-year levee design documentation.

    ix. Provide QA/QC review of design modifications.

j. WP-43A –Levee Inspection

The WP-43A levee was constructed in 2014, and has not been formally inspected or maintained since that time. Anecdotal observations suggest that the levee could benefit from maintenance in 2016. This subtask will provide for the Engineer to inspect the levee and determine the needed maintenance activities. The Engineer's recommendation will be provided to the Owner in the form of a technical brief.

k. WP-43D – O/H/B Pump Station Redesign

Prepare revised engineering contract documents for the O/H/B pump station, based on the full-height 100 year flood elevation. Modify design elements as required to be compliant with building classification (e.g., non-explosion proof wetwell equipment changes).

l. WP-43G – Wetland Mitigation Design

Perform wetland delineation for existing conditions on the current site. Provide design for the OHB Wetland Mitigation

site located on the former Oxbow Country Club. Provide environmental and design assistance on the wetland mitigation for the Diversion Inlet and CH16/CH17 bridge/roadway.

3. Comstock – Ring Levee Evaluation:
    a. Prepare a proposed ring levee system to reduce flood risk to Comstock, MN during operation of the Diversion Project and staging of water. Show the location of a potential ring levee, develop height required for rink levee, and evaluate access during periods of Diversion operation.
4. Christine – Ring Levee Evaluation:
    a. Prepare a proposed ring levee system to reduce flood risk to Christine, ND during operation of the Diversion Project and staging of water. Show the location of a potential ring levee, develop height required for rink levee, and evaluate access during periods of Diversion operation.
5. Wolverton – Ring Levee Evaluation:
    a. Prepare a proposed ring levee system to reduce flood risk to Wolverton, MN during operation of the Diversion Project and staging of water. Show the location of a potential ring levee, develop height required for rink levee, and evaluate access during periods of Diversion operation.
6. Staging Area – Non-Structural Improvement Evaluation:
    a. Identify individual residential properties within the staging area and evaluate the potential benefit from non-structural improvements to reduce flood risk to residential structures during operation of the Diversion Project and staging of water. Show the location of potential improvements and evaluate access during periods of Diversion operation.
        i. Provide mapping of residential structures and farmsteads impacted by the Staging Area for the 100-year event, and include estimated depth of impact for the structures with and without the project.
        ii. Where technically feasible, provide concept for non-structural improvements and estimate cost of improvements.
        iii. Develop database of impacted properties that includes relevant project information (such as depth of impact with and without project, etc.)
        iv. Assist in preparation, provide meeting materials, and attend one-on-one meetings with impacted landowners.
7. Assist with preparation of materials for public meetings.

iii. Provide land surveying services for In Town Levee and OHB Ring Levee projects. The surveying is required to create Right of Way descriptions and certificates of survey for

34 partial takes for the OHB Ring Levee and 17 certificates for the In Town Levee project.

1. Provide real estate drawings for the El Zagal project per USACE requirements.

iv. Deliverables

1. Red River Levees – Phase 1

   a. Project Schedule with milestone dates for key activities and monthly updates
   b. Monthly Progress Reports and meeting minutes
   c. Alignment selection TM
   d. Geotechnical TM, including:
      - Geotechnical field and laboratory findings
      - Geotechnical stability analysis
      - Survey data
      - Geotechnical field logs
   e. Hydrologic and Hydraulic analysis TM
   f. Transportation TM
   g. Phase 1 Environmental Site Assessment reports
   h. Preliminary Design Report, including:
      - Preliminary pump sizing and storage needs
      - Utility relocation requirements and issues
      - Preliminary Levee design
      - Preliminary Structural design
      - Cost Estimate
      - Preliminary Drawings
   i. Landscape concepts and plans for the 2nd St. Corridor from NP Ave. to 4th Ave.
   j. Master Plan from Mickelson to 4th St. Levee.

2. Red River Levees - Phase 2

   a. 65 Percent Design Submittal
   b. 95 Percent Design Submittal
   c. Cost Estimates
   d. Operation and Maintenance Plan
      i. Draft Plan
      ii. Final Plan

3. Red River Levees – VES reports

4. Support for Upstream Staging Area Levees

   a. Oxbow/Hickson/Bakke TM
   b. WP-43A
      i. 35 Percent Design Submittal
      ii. 65 Percent Design Submittal
      iii. 95 Percent Design Submittal
      iv. Cost Estimates
      v. 2016 Engineer's Inspection Report
   c. WP-43C
      i. 35 Percent Design Submittal
      ii. 65 Percent Design Submittal
      iii. 95 Percent Design Submittal
      iv. Cost Estimates

d. WP-43D
    i. 35 Percent Design Submittal
    ii. 65 Percent Design Submittal
    iii. 95 Percent Design Submittal
    iv. Cost Estimates
    v. Operation and Maintenance Plan
        1. Draft Plan
        2. Final Plan
e. WP-43E
    i. 35 Percent Design Submittal
    ii. 65 Percent Design Submittal
    iii. 95 Percent Design Submittal
    iv. Cost Estimates
f. VES or VBDC reports
g. Comstock TM
h. Christine TM
i. Wolverton TM
j. Staging Area Non-Structural Improvements TM
k. WP-43D O/H/B-Diversion Inlet-CH16/CH17 Wetland Mitigation Design
    i. 30 Percent Design Submittal
    ii. 90 Percent Design Submittal
    iii. Cost Estimates
    iv. Additional design and permitting assistance

v. Work not included in this Scope of Services, unless noted otherwise

1. Environmental permitting
2. Utility Relocation Agreements
3. ROW Acquisition including Appraisals, Title Searches, Title Opinions, Deeds
4. Bid documents and bidding services

3. Owner's Responsibilities

Owner shall have those responsibilities set forth in Article 2 and in Exhibit B.

4. Times for Rendering Services

Subtask	**Start Time**	**Completion Time**
2.B.i Red River Levees – Phase 1	November 8, 2012	September 30, 2013
2.B.ii Upstream Staging Area Ring Levees	November 8, 2012	September 30, 2013
Amendment 1 all work	December 13, 2012	September 30, 2013
2.B.ii.2.d WP-43A Bid Documents	August 8, 2013	May 4, 2014
Amendment 2 other work	August 8, 2013	May 31, 2015
Amendment 3 all work	November 14, 2013	September 30, 2014
Amendment 4 all work	February 13, 2014	September 30, 2014
Amendment 5 all work	May 8, 2014	September 30, 2014
Amendment 6 all work	August 14, 2014	September 30, 2015
Amendment 7 all work	October 9, 2014	September 30, 2015
Amendment 8 all work	February 5, 2015	March 31, 2016
Amendment 9 all work	March 12, 2015	March 31, 2016
Amendment 10 all work	June 11, 2015	March 31, 2016

Subtask	Start Time	Completion Time
Amendment 11 all work	August 13, 2015	March 31, 2016
Amendment 12 all work	February 2, 2016	December 31, 2016
Amendment 13 all work	June 23, 2016	July 31, 2017

5. Payments to Engineer

A. Owner shall pay Engineer for services rendered as follows:

i. Compensation for services shall be on a Time and Material basis in accordance with the Standard Hourly Rates shown in Appendix 2 of Exhibit C of the Agreement.

ii. The total compensation for services identified under the Task Order for Subtasks 2.B.i through 2.B.iii is not-to-exceed amount as defined in the table below.

iii. Estimated budget for Subtask 2.B.ii, Upstream Staging Area Levees/Ring Dikes, is based on an allowance.

1. Engineer will notify Owner when eighty percent (80%) of the budget on Subtask 2.B.ii, Upstream Staging Area Levees/Ring Dikes, is expended.

2. Engineer will prepare and submit an amendment for additional compensation when ninety percent (90%) of budget on Subtask 2.B.ii, Upstream Staging Area Levees/Ring Dikes, is expended.

3. Engineer will not perform work beyond one hundred percent (100%) of the budget for Subtask 2.B.ii, Upstream Staging Area Levees/Ring Dikes, without Owner's authorization by an amendment to this Task Order.

Subtask	Activity ID	Current Budget ($)	Change ($)	Revised Budget ($)
2.B.i.1 Red River Levees – Phase 1 Design	DE-7430	418,462~~490,000~~	~~(71,538)~~0	418,462
2.B.i.1.o.i Landscape Architecture/Master Planning - 2nd St. Corridor from NP Ave. to 4th Ave.	DE-7430	48,082~~35,000~~	~~13,082~~0	48,082
2.B.i.1.o.ii Master Planning Services - Mickelson to the 4th St. Levee	DE-7430	147,737~~100,000~~	~~47,737~~0	147,737
2.B.i.2 Red River Levees – Phase 2 Design	DE-7430	3,064,000	60,000~~0~~	3,124,000~~3,064,000~~
2.B.i.3 Red River Levees – VES	DE-7430	30,000	0	30,000
2.B.i.4 4th Street Levee Pump Station Replacement	DE-7430	681,320~~600,000~~	~~81,320~~0	681,320
2.B.i.5 Michelson Levee Extension	DE-7430	116,368~~328,000~~	~~(211,632)~~0	116,368
2.B.i.6 El Zagal Phase 2 Levee Design	DE-7430	221,654~~190,000~~	~~31,654~~0	221,654
2.B.i.7 2nd St. So. closure and Pump Station Design	DE-7430	430,000~~0~~	~~430,000~~0	430,000
2.B.ii Upstream Staging Area Ring Levees (Allowance)	DE-10150	440,000	0	440,000
2.B.ii.2.d WP-43A Design	DE-10150	362,499	0	362,499
2.B.ii.2.e WP-43C Design	DE-10150	210,747	0	210,747

Subtask	Activity ID	Current Budget ($)	Change ($)	Revised Budget ($)
2.B.ii.2.f WP-43D Design	DE-10150	1,905,9321~~,893,332~~	~~12,6000~~	1,905,932
2.B.ii.2.g WP-43E Design	DE-10150	267,500~~260,000~~	~~4,5000~~	267,500
2.B.ii.2.h OHB Ring Levee – VES	DE-10150	33,694	0	33,694
2.B.ii.2.h.i OHB Ring Levee Design Modification - 100-Year Elevation	DE-10150	127,240	0	127,240
2.B.ii.2.i O/H/B Wetland Mitigation Design	DE-10150	92,000	0	92,000
2.B.ii.2.j WP-43A Levee Inspection	DE-10150	5,000	0	5,000
2.B.iii Right of Way Surveying	DE-10150	127,488	0	127,488
TOTAL		**8,729,7238~~,389,000~~**	60,000~~340,723~~	**8,789,7238~~,729,723~~**

B. The terms of payment are set forth in Article 4 of the Agreement and in Exhibit C.

C. When invoicing work, Engineer shall note the Activity ID (shown in the table above) associated with each invoiced activity.

D. Provide monthly invoice and status report

i. Status report will accompany invoice, and detail work completed during the invoice period.

ii. Status report will be organized by subtask, and provide narrative of work completed on each subtask.

iii. Status of work completed will include:

1. Outstanding issues to resolve, expected steps to progress work, outstanding items required from Owner, Owner's Representative, or others to progress work, anticipated completion date of subtasks.
2. Dates of on-call services provided, and description of the activities performed by Engineer, including any deliverables produced.
3. Dates of deliverables otherwise required under the Project Management task.

6. Consultants:

a. Braun Intertec Corporation
b. Northern Technologies, Inc.
c. Robert Trent Jones II, LLC

7. Other Modifications to Agreement: None

8. Attachments: None

9. Documents Incorporated By Reference:

A. AWD-00045, REV-0, WP - 42F.1 Phase II Environmental Site Assessment (ESA), dated December 11, 2014.

B. AWD-00047, REV-0, El Zagal Phase 2 Levee Design, dated February 5, 2015.

C. AWD-00049, REV-0, Soil Characterization for Case Plaza for Work Package 42F.1S, dated June 11, 2015.

D. AWD-00057, REV-0, WP-42A.1 4th Street Pump Station Wet Well Design Modifications, and WP-43E.2C OHB Ring Levee Home Demolition

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

The Effective Date of this Task Order is November 8, 2012.

ENGINEER:	OWNER:
Houston-Moore Group, LLC	**Fargo-Moorhead Metro Diversion Authority**
Signature Date	Signature Date
Jeffry J. Volk Name	Darrell Vanyo Name
President Title	Chairman, Flood Diversion Board of Authority Title
DESIGNATED REPRESENTATIVE FOR TASK ORDER:	DESIGNATED REPRESENTATIVE FOR TASK ORDER:
C. Gregg Thielman Name	Keith Berndt Name
Sr. Project Manager Title	Cass County Administrator Title
925 10th Avenue East West Fargo, ND 58078 Address	211 9th Street South PO Box 2806 Fargo, ND 58108-2806 Address
cgthielman@houstoneng.com E-Mail Address	berndtk@casscountynd.gov E-Mail Address
(701) 237-5065 Phone	(701) 241-5720 Phone
Fax	(701) 297-6020 Fax

HMG

FM Metro Risk Management Project

Cost Proposal for Task Order 13, In Town Levees Phase 2 Additional Services

Task	Activity Description	Personnel Costs										Cost Per Task
		Senior Project Manager		Professional Engineer		Graduate Engineer		CADD Tech II		Clerical		
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	
Additional design assistance for Phase 2 In Town Levees - Includes splitting project into multiple design packages, WP42F1S, WP42F1N, WP42F2, and WP42G. Also includes 95% design packages to help facilitate USACE and Project Sponsor reviews, which weren't anticipated in original budget.												
Task 1	Additional Design Assistance	16	$ 2,784	100	$ 14,600	300	$ 33,000	80	$ 8,400	4	$ 288	$ 59,072
Expenses												$ 928
	Total	16	$ 2,784	100	$ 14,600	300	$ 33,000	80	$ 8,400	4	$ 288	$ 60,000
	Grand Totals											$ 60,000

Technical Advisory Group Recommendation

Meeting Date: 11/02/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative prepared the following Contract Action(s) for the TAG team:

List description of Contract Action(s):

Houston-Moore Group, LLC

Task Order 16, Amendment 5 – Permit Submittal Preparation $116,000

- **Adds scope and budget to prepare the 2nd St FEMA CLOMR Submittal and additional support for the overall FM Diversion Project CLOMR and staging area Mitigation Plan.**
- **Extends POP to 31-Dec-17**

BACKGROUND:

Under Task Order 16, Houston-Moore Group, LLC (HMG) is responsible for obtaining multiple permits for the Project, including but not limited to: the 404 Individual Permit for WP-43, and the remainder of the Project for ND and MN; the 401 Water Quality Certification for ND and MN; floodplain permitting; and other permits, as necessary.

HMG has provided these professional services under Task Order 16 from October 10, 2013, to the present time. See the table below for a summary of the amendments to the Task Order.

This amendment adds scope and budget to prepare the 2nd Street North CLOMR, additional technical support for the overall FM Diversion CLOMR and Mitigation Plan for the staging area, and extends the period of performance through December 31, 2017.

.

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Budget ($) Change	Original Project Cost	Revised Project Cost	Project Start	Project Completion	Comments
Task Order 16 Amendment 0	$ -	$205,000	$ -	10-Oct-13	30-Sep-14	Initial authorization of All Work.
Task Order 16 Amendment 1	$0	-	$205,000	10-Oct-13	30-Sep-15	Extended POP to 30-Sep-15.
Task Order 16 Amendment 2	$0	-	$205,000	10-Oct-13	31-Mar-16	Extended POP to 31-Mar-16.
Task Order 16 Amendment 3	$100,000	-	$305,000	10-Oct-13	31-Dec-16	Adds scope and budget to develop and prepare FEMA CLOMR, and the MN and ND Dam permit applications. Adds requirements for monthly invoicing and status reporting. Extends POP to 31-Dec-16.

Original Agreement or Amendment	Budget ($) Change	Original Project Cost	Revised Project Cost	Project Start	Project Completion	Comments
Task Order 16 Amendment 4	$50,000	-	$355,000	10-Oct-13	31-Dec-16	Adds scope and budget to review existing ordinances, and draft post Project floodplain ordinances.
Task Order 16 Amendment 5	$116,000	-	$471,000	10-Oct-13	31-Dec-17	Adds scope and budget to prepare the 2nd St CLOMR Submittal and additional support for the overall FM Diversion CLOMR and staging area Mitigation Plan. Extends POP to 31-Dec-17

DISCUSSION:

Amendment 5 to Task Order 16 extends the period of performance through December 31, 2017 and adds scope and budget for the following work:

- Prepare the 2nd Street North CLOMR submittal and backup documents for the 2nd Street Projects. A CLOMR is required for these In-Town Levee projects due to portions of WP42F1S encroaching into the floodway. The proposed budget for this work is approximately $51,000.00.

- Amendment 3 added the scope and budget for the overall FM Diversion CLOMR submittal. This budget was based on an estimated level of effort required to complete the submittal. During the submittal preparation process additional technical support was identified for the development of the staging area floodway and compilation of the supporting materials. This includes additional budget to respond to FEMA submittal review comments. The proposed budget for this work is approximately $44,000.00.

- A Mitigation Plan was prepared as part of the response to MN DNR comments on the Dam Permit submittal. Technical support from HMG was requested for the preparation of the Mitigation Plan. That support included document reviews, technical consulting, and the development of staging area maps. The proposed budget for this work is approximately $21,000.00.

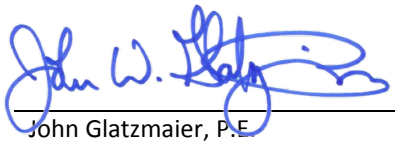
HMG proposed an overall Amendment 5 budget of $116,000 that includes 888 hours of labor and $1,204 in expenses. The average hourly rate for this work is approximately $130/hour. Compensation for services identified under this task order are billed on a time and material basis. The PMC reviewed HMG's cost proposal and found it to be acceptable.

This change amount of $116,000 is included in the FY-2016 FMDA budget.

ATTACHMENT(S):

- Draft Task Order 16 Amendment 5
- Cost Proposal Task Order 16 - Amendment_20161027

Presented by:



November 2, 2016

John Glatzmaier, P.E.
CH2M HILL
Project Manager
Metro Flood Diversion Project

Date

Keith Berndt, Cass County Administrator
Concur: 2-Nov-16 *Non-Concur:* _____

April Walker, Fargo City Engineer
Concur: 4-Nov-16 *Non-Concur* _____

Mark Bittner, Fargo Director of Engineering
Concur: 2-Nov-16 *Non-Concur:* _____

Jason Benson, Cass County Engineer
Concur: 2-Nov-16 *Non-Concur* _____

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

Robert Zimmerman, Moorhead City Engineer
Concur: 1-Nov-16 *Non-Concur* _____

Nathan Boerboom, Diversion Authority Project Manager
Concur: 2-Nov-16 *Non-Concur:* _____

This is Task Order No. 16, Amendment 54, consisting of 6 pages.

Houston-Moore Group, LLC

Task Order No. 16, Amendment 54

MFDA Purchase Order No. 167178

Permit Submittal Preparation and Other Related Services

In accordance with Paragraph 1.01 of the Agreement between Fargo-Moorhead Flood Diversion Authority ("Owner") and Houston-Moore Group, LLC (HMG) ("Engineer") for Professional Services – Task Order Edition, dated March 8, 2012 ("Agreement"), Owner and Engineer agree as follows:

The parties agree that in the event of a conflict between prior versions of this Task Order No. 16 and this Amendment, the terms and conditions in this Amendment shall prevail, provided however, nothing herein shall preclude ENGINEER from invoicing for work authorized under prior versions of this Task Order and performed prior to effective date of this Amendment, even to the extent such prior work was revised by this Amendment. All other terms and conditions shall remain the same and are hereby ratified and affirmed by the parties.

1. Specific Project Data

   A. Title: **Permit Submittal Preparation and Other Related Services**

   B. Scope of Services: The scope of work for this Task Order includes permitting for the Fargo-Moorhead Area Diversion Project (Project). The anticipated major permit submittals for the Project shall be as requested by Owner, and may include, but are not limited to:

      B.1. Major Permits:

         B.1.a. 404 Individual Permit

            i. WP-43 Oxbow/Hickson/Bakke Levees

            ii. Remainder of Project for North Dakota and Minnesota

         B.1.b. 401 Certification for North Dakota and Minnesota

         B.1.c. Floodplain Permitting

         B.1.d. FEMA CLOMR

         B.1.e. MN DNR Dam Safety

         B.1.f. ND SWC Dam Construction

      B.2. Other Permits:

         B.2.a. Identify other permits required for Work Packages 42 and 43

      B.3. The following items are not included in Engineer's Scope of Services:

         B.3.a. Permit submittal fees

2. Services of Engineer

   A. **Subtask A - Permitting Schedule**

      A.1. Develop a schedule for acquiring permits. Consult with regulatory agencies, as approved by Owner. The schedule will include a listing of activities and information needs associated with permit submittal preparation, target dates to submit permit submittals, regulatory agency review times, and anticipated permit issuance dates.

Deliverables:

- Permitting Schedule

B. **Subtask B - Allowance for Permit Submittal Preparation and Acquisition Support**

Objective: The objective of this subtask is to prepare permit submittals in accordance with the associated schedule and to coordinate with regulatory agencies throughout the permit processing period from initial permit submittal through permit issuance.

B.1. **Permit Submittal Preparation:** The deliverables listed below are the permits anticipated. The following description of potential permits is assumed as the basis for Engineer's permitting effort. The deliverables listed are subject to change. The scope of work and budget presented in this Task Order are for permit submittals listed below as required.

B.1.a. **404 Permitting Submittal Preparation and Processing**

B.1.a.1 Prepare the permit submittal based on the information obtained from the Final Environmental Impact Statement (FEIS), Supplemental Environmental Assessment (EA), supporting National Environmental Policy Act (NEPA) documentation, and submit to the Corps. Interaction with the Corps will continue throughout their consultation with other agencies and until the issuance of the permit.

B.1.a.2 Meet periodically with the Omaha District Corps in Fargo, ND or at their District offices in Bismarck, ND.

B.1.a.3 Provide meeting follow-up, responding to Corps' questions and providing additional information, as required.

B.1.a.4 Provide follow-on coordination with the Corps prior to the date of permit submittal delivery.

- Gather and format appropriate FEIS information needed to complete the 404 Permit.
- Gather and format information from other (non-EIS) sources for incorporation into the permit submittal, including the addresses of adjacent property owners and a listing of other certifications and required approvals.

B.1.b. **401 Water Quality Certification Submittal Preparation and Processing**

B.1.b.1 The 401 Water Quality Certification is required for North Dakota and Minnesota approval and authorization of the Corps 404 Permit.

B.1.b.2 Prepare the 401 Water Quality Certifications, along with associated items as requested.

B.1.c. **Floodplain Permitting**

B.1.c.1 Coordinate with the local floodplain administrators to discuss the project and potential effects to floodplains.

B.1.c.2 Prepare documentation associated with floodplain permitting, as required.

B.1.c.3 Develop Post Project Floodplain Ordinances: Draft post Project floodplain ordinances for review and approval by local jurisdictions (Cities of Fargo and Moorhead and Cass and Clay Counties).

- Review existing floodplain ordinances and conduct up to four review meetings with local jurisdictions.

- Develop draft floodplain ordinances, including preliminary mapping based on Phase 8 modeling and planned Project operations, and conduct up to four meetings with local jurisdictions.
- Revise draft floodplain ordinances based on input and comments from local jurisdictions, and conduct four outreach meetings with local jurisdictions.

B.1.d. **Additional Permits**

B.1.d.1 In general, the major requirements for agency review to acquire permits are a permit submittal and design drawings.

B.1.d.2 Prepare the permit submittals under this Task Order.

B.1.d.3 The development of Final Design drawings and floodway mapping that are required to be submitted with the permit submittal will occur under other Task Orders.

Deliverables:

- 404 Permit Submittal
- 401 Water Quality Certification Submittal
- Floodplain Permit submittals
- FEMA 2nd Street North CLOMR submittal
- FEMA Overall FM Diversion CLOMR submittal
- MN DNR Dam Safety submittal
- ND SWC Dam Construction submittal
- Draft and Final Post Project Floodplain Ordinances

B.2. **Permit Acquisition Support Services:** Provide the following general permit acquisition support services as requested by Owner.

B.2.a. Engage in meetings, other communication, and coordination with regulatory agencies as needed to provide information or clarification required to facilitate a timely processing of permit submittal.

B.2.b. Provide responses to regulatory agency comments or questions regarding submittal.

C. **Subtask C - On-Call Services**

Objective: This subtask includes additional services not included in defined scopes.

C.1. **On-Call Services:**

C.1.a. Respond to requests for services from Owner for tasks not included in defined scopes.

Deliverables:

- On-Call Services as requested.

3. Owner's Responsibilities

A. Owner shall have those responsibilities set form in Article 2 and in Exhibit B.

4. Times for Rendering Services

Subtask	Start Time	Completion Time
All Work	October 10, 2013	December 31, 2016

5. Payments to Engineer

A. Owner shall pay Engineer for services rendered as follows:

A.1. Compensation for services identified under Subtasks listed below shall be on a Time and Material basis in accordance with the Standard Hourly Rates shown in Appendix 2 of Exhibit C of the Agreement.

A.2. The total compensation for services identified under the Task Order for Subtasks is not to exceed the amount defined in the table below.

Subtasks	Activity ID	Current Budget ($)	Change ($)	Revised Budget ($)
2.A Permitting Schedules	SW-1190	15,000	0	15,000
2.B Allowance for Permit Submittal Preparation and Acquisition Support	SW-1190	240,000	116,000~~0~~	356,000~~240,000~~
2.B.1.c.3 Development of Post Project Floodplain Ordinances	SW-1190	50,000~~0~~	~~50,000~~0	50,000
2.C On-Call Services	SW-1190	50,000	0	50,000
Total		**355,000~~305,000~~**	**116,000~~50,000~~**	**471,000~~355,000~~**

B. The terms of payment are set forth in Article 4 of the Agreement and in Exhibit C.

C. When invoicing work, Engineer shall note the Activity ID (shown in table above) associated with each invoiced activity.

D. Provide monthly invoice and status report

D.1. Status report will accompany invoice, and detail work completed during the invoice period.

D.2. Status report will be organized by subtask, and provide narrative of work completed on each subtask.

D.3. Status of work completed will include:

D.3.a. Outstanding issues to resolve, expected steps to progress work, outstanding items required from Owner, Owner's Representative, or others to progress work, anticipated completion date of subtasks.

D.3.b. Dates of on-call services provided, and description of the activities performed by Engineer, including any deliverables produced.

D.3.c. Dates of deliverables otherwise required under the Project Management task.

6. Consultants: None

7. Other Modifications to Agreement: None

8. Attachments: None

9. Documents Incorporated by Reference: None

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

The Effective Date of this Task Order is October 10, 2013.

ENGINEER:	OWNER:
Houston-Moore Group, LLC	**Fargo-Moorhead Metro Diversion Authority**
Signature Date	Signature Date
Jeffry J. Volk Name	Darrell Vanyo Name
President Title	Chairman, Flood Diversion Board of Authority Title
DESIGNATED REPRESENTATIVE FOR TASK ORDER:	DESIGNATED REPRESENTATIVE FOR TASK ORDER:
C. Gregg Thielman Name	Keith Berndt Name
Sr. Project Manager Title	Cass County Administrator Title
925 10th Avenue East West Fargo, ND 58078 Address	211 9th Street South , PO Box 2806 Fargo, ND 58108-2806 Address
cgthielman@houstoneng.com E-Mail Address	berndtk@casscountynd.gov E-Mail Address
(701) 237-5065 Phone	(701) 241-5720 Phone
Fax	(701) 297-6020 Fax

HMG

FM Metro Risk Management Project

Cost Proposal for Task Order 16, Additional Services

Task	Activity Description	Personnel Costs										Cost Per Task
		Senior Project Manager		Professional Engineer		Project Engineer		GIS Tech III		Administrative Assistant		
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	
Additional Services for Task Order 16 including CLOMR submittal for 2nd Street/Downtown Work Packages; Additional CLOMR support for FM Diversion CLOMR; and Technical support for the development fo the mitigation plan for the Staging Area												
Task 1	Development of CLOMR submittal and supporting documents for the 2nd Street/Downtown Project, which includes WP42A1/A3; WP42A2; WP42F1N; WP42F1S; WP42F2; and WP42E. A CLOMR is needed due to portions of WP42F1S encroaching into the floodway.	16	$ 2,784	60	$ 8,760	200	$ 25,600	100	$ 12,300	16	$ 1,152	$ 50,596
Task 2	Additional technical support for the overall FM Diversion CLOMR. This includes additional effort required to develop the staging area floodway and compiling all of the supporting materials and expected support in responding to review comments	8	$ 1,392	40	$ 5,840	200	$ 25,600	80	$ 9,840	8	$ 576	$ 43,248
Task 3	Technical support for the development of the Mitigation Plan for the Staging Area, including document review and technical assistance and the development of staging area maps.	16	$ 2,784	20	$ 2,920	40	$ 5,120	80	$ 9,840	4	$ 288	$ 20,952
	Total	40	$ 6,960	120	$ 17,520	440	$ 56,320	260	$ 31,980	28	$ 2,016	$ 114,796
Expenses												$ 1,204
	Grand Totals											$ 116,000

Technical Advisory Group Recommendation

Meeting Date: 11/2/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative prepared the following Contract Action(s) for the Technical Staff team:

List description of Contract Action(s):

Houston-Moore Group, LLC

Task Order 19, Amendment 2 – P3 Document Preparation Support $125,000

- Add scope and budget for P3 RFP technical support services and reviews.

BACKGROUND:

Houston-Moore Group, LLC (HMG) is the Engineer of Record for the H&H modeling and detailed design for Owner delivered Projects. The Owner intends to enter into a Public Private Partnership (PPP) for construction of the Diversion Channel and Associated Infrastructure (DCAI) Project, under a Split Delivery PPP arrangement with USACE. Assistance is required from HMG to integrate the H&H modeling and design information into the PPP procurement documents, and provide technical review of draft and final PPP procurement documents. HMG has provided these services under Task Order 19 from August 13, 2015, to the present time. See the table below for a summary of the amendments to the Task Order.

This amendment adds scope and budget to provide technical and support services to assist in the development of the P3 RFP.

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Budget ($) Change	Original Project Cost	Revised Project Cost	Project Start	Project Completion	Comments
Task Order 19 Amendment 0	$ -	$250,000	$ -	13-Aug-15	31-Mar-16	Initial authorization of subtasks 2.A -2.C.
Task Order 19 Amendment 1	$0	-	$250,000	13-Aug-15	31-Dec-16	Adds requirements for monthly invoicing and status reporting. Extends POP to 31-Dec-16.
Task Order 19 Amendment 2	125,000	-	375,000	13-Aug-15	31-Dec-16	Adds scope and budget for P3 RFP technical support services and reviews.

DISCUSSION:

The original Task Order authorized scope and budget on a time and materials basis for P3 document preparation support services. The budget was based on an estimated level of effort required to complete the scoped services. Amendment 1 added monthly invoicing and status reporting and extended the Period Of Performance (POP) to December 31, 2016.

During the preparation of the P3 procurement documents, additional services were requested to complete the P3 procurement documents. This Amendment 2 to Task Order 19 adds scope and budget to Subtask 2.B for the following:

- Review and support services for P3 RFP Technical Requirements including geotechnical, hydraulics, aqueduct, transportation sections, and other volumes of the P3 RFP. The proposed budget for this work is approximately $37,000.00.
- Updating the Diversion Channel drain inlet sizes and providing hydraulic tables for the Technical Requirements. The proposed budget for this work is approximately $88,000.00.

HMG proposed an overall Amendment 2 budget of $125,000 that includes 860 hours of labor and $1,840 in expenses. The average hourly rate for this work is approximately $145/hour, which seems appropriate for the level of professional services requested. Compensation for services identified under this task order are billed on a time and material basis. The PMC reviewed HMG's cost proposal and found it to be acceptable.

TO19 Public-Private-Partnership (PPP) Document Preparation Support Budgets by Subtask:

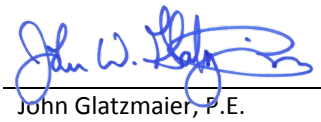
Subtask	Activity ID	Current Budget ($)	Amendment 2 ($)	Total ($)
2.A Meetings and Coordination	PR-11240	50,000	0	50,000
2.B Preparation of Draft PPP Procurement Documents	PR-11240	150,000	125,0000	375,000
2.C Data Room Documentation Support	PR-11240	50,000	0	50,000
TOTAL		**250,000**	**125,000**	**375,000**

This change amount of $125,000 is included in the FY-2016 FMDA budget.

ATTACHMENT(S):

1. Draft Task Order 19 Amendment 2
2. HMG cost proposal

Presented by:



John Glatzmaier, P.E.
CH2M HILL
Project Manager
Metro Flood Diversion Project

November 2, 2016
Date

Keith Berndt, Cass County Administrator
Concur: 2-Nov-16 *Non-Concur:*

April Walker, Fargo City Engineer
Concur: 4-Nov-16 *Non-Concur*

Mark Bittner, Fargo Director of Engineering
Concur: 2-Nov-16 *Non-Concur:*

Jason Benson, Cass County Engineer
Concur: 2-Nov-16 *Non-Concur*

David Overbo, Clay County Engineer
Concur: 2-Nov-16 *Non-Concur:*

Robert Zimmerman, Moorhead City Engineer
Concur: 1-Nov-16 *Non-Concur*

Nathan Boerboom, Diversion Authority Project Manager
Concur: 2-Nov-16 *Non-Concur:*

This is Task Order No. 19, Amendment 2~~1~~, consisting of 4~~4~~ pages.

Houston-Moore Group, LLC

Task Order No. 19, Amendment 2~~1~~

MFDA Purchase Order No. 181464

Public-Private-Partnership (PPP) Document Preparation Support

In accordance with Paragraph 1.01 of the Agreement Between **Fargo-Moorhead Flood Diversion Authority** ("Owner") and **Houston-Moore Group, LLC (HMG)** ("Engineer") for Professional Services – Task Order Edition, dated March 8, 2012 ("Agreement"), Owner and Engineer agree as follows:

The parties agree that an information firewall shall be provided to ensure separation of PPP document information and other HMG work products, such that PPP document information is not available to unauthorized HMG ~~subcontracotors~~subcontractors or affiliates, and that Houston Engineering, Inc. and Moore Engineering, Inc. are the only firms authorized to work under this Task Order No. 19, unless amended.

1. Specific Project Data
    - A. Title: Public-Private-Partnership (PPP) Document Preparation Support
    - B. Description: Provide assistance for the development of Public Private Partnership (PPP) procurement documents, including a Notice of Intent (NOI), Request for Qualifications (RFQ), and Request for Proposals (RFP), including performance, prescriptive, and regulatory specifications.
    - C. Background:
        - i. The Owner and the USACE desire to enter into a Project Partnership Agreement (PPA) for construction of the Project under a Split Delivery PPP, and agree that a Split Delivery project implementation model is the preferred project implementation model.
        - ii. The Engineer has provided H&H modeling and detailed design services for the Project, and assistance from the Engineer is required to incorporate modeling and design information into the PPP procurement documents.
2. Services of Engineer
    - A. Meetings and Coordination
        - i. Provide staff to attend meetings and workshops with Owner, USACE, and PMC to develop PPP procurement documents, including:
            1. A two (2) day kick-off meeting workshop with Owner/USACE/PMC.
            2. Bi-weekly Owner/PMC progress meetings.
            3. Draft and Final PPP procurement document review meetings.
    - B. Preparation of Draft PPP Procurement Documents
        - i. Prepare and package H&H models for inclusion in the PPP procurement documents.
            - ~~i.~~1. Evaluate and updated legal drain inlet sizes and prepare hydraulic tables for use in the PPP procurement documents.
        - ii. Provide support services for preparation of other PPP procurement documents as requested by the Owner, which may include: Notice of Intent (NOI), Request for Qualifications (RFQ), and Request for Proposals (RFP), including performance, prescriptive, and regulatory specifications.

~~ii.~~iii. Provide Geotechnical, Hydraulic, Structural, and Transportation technical reviews of draft and final PPP procurement documents.

C. Data Room Documentation Support

i. Provide descriptions of Engineer's completed technical bridge reach designs, including WP-02 (CR-31 Bridge and Channel), WP-04 (Reach 3 I-29 & CR 81 Bridges and Channel), WP-07 (CR-32 and CR-22 Bridges and Channel), and WP-10A-11 (CR-20 Bridge and Channel).

D. Deliverables include:

i. H&H model packages

ii. Project Descriptions

E. Services Not Included:

i. This scope of work does not include preparation of new PPP bridging document designs.

3. Owner's Responsibilities

Owner shall have those responsibilities set forth in Article 2 and in Exhibit B.

4. Times for Rendering Services

Phase	Start Time	Completion Time
All Work	August 13, 2015	December 31, 2016

5. Payments to Engineer

A. Owner shall pay Engineer for services rendered as follows:

I. Compensation for services in Subtasks 2.A, 2.B, and 2.C shall be on a Time and Material basis in accordance with the Standard Hourly Rates shown in Exhibit C of the Agreement.

B. Engineer will notify Owner when 80 percent of the budget is expended.

C. Engineer will submit an amendment for additional compensation when 90 percent of the budget is expended, or confirm to Owner that this Task Order can be completed for the remaining budget.

D. Engineer will not perform work beyond 100 percent of the budget without Owner's authorization by an amendment to this Task Order.

Subtask	Activity ID	Current Budget ($)	Change ($)	Budget ($)
2.A. Meetings and Coordination	PR-11240	50,000	0	50,000
2.B. Preparation of Draft PPP Procurement Documents	PR-11240	150,00	125,000~~0~~	275,000~~150,000~~
2.C. Data Room Documentation Support	PR-11240	50,000	0	50,000
TOTAL		**250,000**	**125,000~~0~~**	**375,000~~250,000~~**

A. The terms of payment are set forth in Article 4 of the Agreement and in Exhibit C.

B. When invoicing work, Engineer shall note the Activity ID (shown in the table above) associated with each invoiced activity.

C. Provide monthly invoice and status report

i. Status report will accompany invoice, and detail work completed during the invoice period.

ii. Status report will be organized by subtask, and provide narrative of work completed on each subtask.

iii. Status of work completed will include:

1. Outstanding issues to resolve, expected steps to progress work, outstanding items required from Owner, Owner's Representative, or others to progress work, anticipated completion date of subtasks.
2. Dates of on-call services provided, and description of the activities performed by Engineer, including any deliverables produced.
3. Dates of deliverables otherwise required under the Project Management task.

6. Consultants: None
7. Other Modifications to Agreement: None
8. Attachments: None
9. Documents Incorporated By Reference: None
10. Terms and Conditions: Execution of this Task Order by Owner and Engineer shall make it subject to the terms and conditions of the Agreement (as modified above), which Agreement is incorporated by this reference. Engineer is authorized to begin performance upon its receipt of a copy of this Task Order signed by Owner.

The Effective Date of this Task Order is August 13, 2015.

ENGINEER:

Houston-Moore Group, LLC

Signature Date

Jeffry J. Volk
Name

President
Title

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

C. Gregg Thielman
Name

Sr. Project Manager
Title

925 10th Avenue East
West Fargo, ND 58078
Address

cgthielman@houstoneng.com
E-Mail Address

(701) 237-5065
Phone

Fax

OWNER:

Fargo-Moorhead Metro Diversion Authority

Signature Date

Darrell Vanyo
Name

Chairman, Flood Diversion Board of Authority
Title

DESIGNATED REPRESENTATIVE FOR TASK ORDER:

Keith Berndt
Name

Cass County Administrator
Title

211 9th Street South
PO Box 2806
Fargo, ND 58108-2806
Address

berndtk@casscountynd.gov
E-Mail Address

(701) 241-5720
Phone

(701) 297-6020
Fax

HMG

FM Metro Risk Management Project

Cost Proposal for Task Order 19, Amendment 2 - PPP Document Preparation Support

Task	Activity Description	Personnel Costs												Cost Per Task
		Senior Project Manager		Senior Project Engineer		Project Manager		Professional Engineer		Project Engineer		Graduate Engineer		
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	
Additional Services														
Subtask 2.B	Review and support services for P3 RFP Technical Requirements, including geotechnical, hydraulics, aqueduct and transportation sections, as well as other volumes of the P3 RFP.	100	$ 17,400	40	$ 6,480	40	$ 6,280	40	$ 5,840	0	$ -	0	$ -	$ 36,000
Subtask 2.B	Resizing Diversion inlets and providing P3 hydraulic tables and supporting data for the Technical Requirements.	0	$ -	120	$ 19,440	40	$ 6,280	160	$ 23,360	160	$ 20,480	160	$ 17,600	$ 87,160
Subtask 2.B	Expenses													$ 1,840
	Total	100	$ 17,400	160	$ 25,920	80	$ 12,560	200	$ 29,200	160	20480	160	17600	$ 125,000
	Grand Totals													$ 125,000

Technical Advisory Group Recommendation

Meeting Date: 11/1/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative has reviewed and recommends the following Contract Action(s):

List description of Contract Action(s):

Description	Budget Estimate ($)
Industrial Builders, Inc.	
Change Order #11	***($36,492.02)***
• WP-42A.2, 2nd Street North Pump Station – Final Project Cost Adjustment and Decorative Fence De-Scope	

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Previous Project Cost	Budget ($) Change	Revised Project Cost	Project Start	Project Completion	Comments
Original Contract	0.00	8,069,000.00	8,069,000.00	9-Oct-14	31-Jan-16	Contract Award recommended to lowest responsive bidder, Industrial Builders, Inc.
Change Order 1	8,069,000.00	66,920.00	8,135,920.00	9-Oct-14	31-Jan-16	Revisions to traffic control
Change Order 2	8,135,920.00	67,397.00	8,203,317.00	9-Oct-14	31-Jan-16	Accommodate unforeseen subsurface conditions (remove concrete structure and dispose of contaminated soil)
Change Order 3	8,203,317.00	225,056.00	8,428,373.00	9-Oct-14	16-Feb-16	Change in design requirements for backfill of structure
Change Order 4	8,428,373.00	238,871.75	8,667,244.75	9-Oct-14	25-Apr-16	Baffle wall, sheeting, and 2nd Street road closure
Change Order 5	8,667,244.75	7,614.93	8,674,859.68	9-Oct-14	25-Apr-16	Physical model tests, vacuum line, pump station veneer, and cold weather construction costs.
Change Order 6	8,674,859.68	43,488.99	8,718,348.67	9-Oct-14	7-Dec-16	Completion Milestone Changes, Extended Warranty Duration, Modifications to Trash Rack and Rake, and Check Valve Replacement.
Change Order 7	8,718,348.67	1,870.32	8,720,218.99	9-Oct1-14	7-Dec-16	Pump Station Beacons
Change Order 8	8,720,218.99	(47,876.36)	8,672,342.63	9-Oct-14	7-Dec-16	Deduct unused budget for hazardous material removal

Change Order 9	8,672,342.63	5,486.80	8,677,829.43	9-Oct-14	7-Dec-16	Sluice Gate Operator Covers
Change Order 10	5,677,829.43	42,312.57	8,720,142.00	9-Oct-14	7-Dec-16	Decorative Fence Modifations and Differing Subsurface Conditions - removals
Change Order 11	8,677,829.43	(36,492.02)	8,683,649.98	9-Oct-14	7-Dec-16	Final Project Cost Adjustment and Decorative Fence De-Scope

DISCUSSION

Change Order No. 11 will deduct $36,492.02 from the project cost to accommodate actual installed quantities and a contract scope transfer.

1. **Final Project Cost Adjustment:** During project design/bidding the Engineer developed quantity estimates for a basis of bid. This change item is an adjustment to reflect actual installed quantities necessary to meet the requirements of the project. These quantities totaled a deduct of $150, which has already been paid to the Contractor in the respective monthly pay app, but is included in Change Order 11 to document the final Contract Price.

2. **Decorative Fence De-Scope:** The decorative fences associated with the pump station needed to be revised, which was approved under 42A2 Change Order 10. The previously approved revisions have resulted in a delay to the manufacturing of the fence. All other work on the 42A2 Contract is nearly complete so final payment is anticipated before the end of the year. To prevent additional cost associated with Contractor's Insurance for another year, this work is to be transferred onto the 42F1S contract. The same Contractor and Contractor's Project Manager/Work Crew are working on both 42F1S and 42A2 so transfer of the work is not expected to be problematic. The total cost of this change item is a deduct of $36,342.02, which is the exact amount that was added to the 42A.2 Contract on Change Order 10. The decorative fence scope will be added to the 42F1S contract after final resolution is determined between the Contractor and Engineer.

ATTACHMENT(S):

1. Change Order No. 11

Submitted by:

John Glatzmaier
CH2M HILL
Project Manager
Metro Flood Diversion Project

November 1, 2016
Date

Keith Berndt, Cass County Administrator
Concur: 2-Nov-16 *Non-Concur:*

April Walker, Fargo City Engineer
Concur: 4-Nov-16 *Non-Concur*

Mark Bittner, Fargo Director of Engineering
Concur: 2-Nov-16 *Non-Concur:*

Jason Benson, Cass County Engineer
Concur: 2-Nov-16 *Non-Concur*

David Overbo, Clay County Engineer
Concur: 2-Nov-16 *Non-Concur:*

Robert Zimmerman, Moorhead City Engineer
Concur: 1-Nov-16 *Non-Concur*

Nathan Boerboom, Diversion Authority Project Manager
Concur: 2-Nov-16 *Non-Concur:*

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Change Order No. 11

Date of Issuance:	11/10/2016	Effective Date:	11/10/2016
Owner:	Metro Flood Diversion Authority	Owner's Contract No.:	WP-42A.2
Owner's Representative:	CH2M HILL Engineers, Inc.	Owner's Representative Project No.:	435534
Contractor:	Industrial Builders, Inc.	Contractor's Project No.:	
Engineer:	Houston-Moore Group, LLC	Work Package No.:	WP-42A.2
Project:	Fargo-Moorhead Area Diversion	Contract Name:	2nd Street/Downtown – In-Town Levees, 2nd Street N Pump Station, Fargo ND

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

Description:

1. FINAL PROJECT COST ADJUSTMENT
    a. Decrease Bid Item 0006 Fencing as shown in attached Change Order 11 Unit Price Schedule dated 11/10/2016 to account for actual installed quantities as determined throughout the project. No time extension is granted for this change item.
2. DECORATIVE FENCE DE-SCOPE
    a. Decrease Contract Price by removing lump sum bid item *0040 F&I Decorative Fence Modification* as shown in the attached Change Order 11 Unit Price Schedule dated 11/10/2016. There is no schedule change associated with this change item.

Attachments:

- Change Order 11 Unit Price Schedule dated 11/10/2016

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES *[note changes in Milestones if applicable]*
Original Contract Price: **8,069,000.00**	Original Contract Times: Substantial Completion: November 30, 2015 Ready for Final Payment: January 31, 2016
[Increase] [~~Decrease~~] from previously approved Change Orders No. 01 thru 10: **651,142.00**	[Increase] [~~Decrease~~] from previously approved Change Orders No. 01 thru 10: Substantial Completion: October 7, 2016 Ready for Final Payment: December 7, 2016
Contract Price prior to this Change Order: **8,720,142.00**	Contract Times prior to this Change Order: Substantial Completion: October 7, 2016 Ready for Final Payment: December 7, 2016

	days or dates
[~~Increase~~] [Decrease] of this Change Order: **(36,492.02)**	[~~Increase~~] [~~Decrease~~] of this Change Order: Substantial Completion: Ready for Final Payment:
Contract Price incorporating this Change Order: **8,683,649.98**	Contract Times with all approved Change Orders: Substantial Completion: October 7, 2016 Ready for Final Payment: December 7, 2016

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Owner's Representative (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Name: Tyler Smith, P.E.	Name: Darrell Vanyo	Name: David Goulet
Title: Construction Manager	Title: Chairman	Title: Project Manager
Date: _____	Date: _____	Date: _____

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WP-42A.2
2nd Street N Pump Station

Change Order 11 Unit Price Schedule
DATE: 11/10/2016

WP-42A.2 - 2nd Street N Pump Station											
ITEM	DESCRIPTION	UNIT	Current Budget (thru CO-10)			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT
0001	Mobilization	LS	1	400,200.00	$ 400,200.00				1	400,200.00	$ 400,200.00
0002	Demolition – Pavement Removal, Miscellaneous	LS	1	20,000.00	$ 20,000.00				1	20,000.00	$ 20,000.00
0003	Site Civil	LS	1	500.00	$ 500.00				1	500.00	$ 500.00
0004	Erosion and Sediment Control	LS	1	8,000.00	$ 8,000.00				1	8,000.00	$ 8,000.00
0005	Traffic Control	LS	1	116,920.00	$ 116,920.00				1	116,920.00	$ 116,920.00
0006	Fencing	LF	800	25.00	$ 20,000.00	(6)	$ 25.00	$ (150.00)	794	25.00	$ 19,850.00
0007	Pump Station – Structural and Architectural	LS	1	3,645,000.00	$ 3,645,000.00				1	3,645,000.00	$ 3,645,000.00
0008	Stormwater Pumps and Motors	LS	1	1,301,944.14	$ 1,301,944.14				1	1,301,944.14	$ 1,301,944.14
0009	Sump Pumps	LS	1	90,000.00	$ 90,000.00				1	90,000.00	$ 90,000.00
0010	Trash Racks and Miscellaneous Metals	LS	1	357,489.51	$ 357,489.51				1	357,489.51	$ 357,489.51
0011	Sluice Gates and Wall Thimbles	LS	1	200,000.00	$ 200,000.00				1	200,000.00	$ 200,000.00
0012	F&I Floodwall Reinforced Bars - Steel	LB	13,000	2.30	$ 29,900.00				13,000	2.30	$ 29,900.00
0013	F&I Floodwall Reinforced Bars - Epoxy Coated Steel	LB	12,000	1.80	$ 21,600.00				12,000	1.80	$ 21,600.00
0014	F&I Floodwall - Structural Concrete	CY	165	1,200.00	$ 198,000.00				165	1,200.00	$ 198,000.00
0015	F&I Floodwall – Misc.	LS	1	50,000.00	$ 50,000.00				1	50,000.00	$ 50,000.00
0016	Sheetpiling	LS	1	1,125,000.00	$ 1,125,000.00				1	1,125,000.00	$ 1,125,000.00
0017	Switchboard SWBDA, Motor Control Center MCCA, Automatic Transfer Switch, Panel LP1	LS	1	128,000.00	$ 128,000.00				1	128,000.00	$ 128,000.00
0018	Electrical-Interior	LS	1	156,000.00	$ 156,000.00				1	156,000.00	$ 156,000.00
0019	Electrical‑Exterior	LS	1	28,870.32	$ 28,870.32				1	28,870.32	$ 28,870.32
0020	Instrumentation and Controls	LS	1	99,000.00	$ 99,000.00				1	99,000.00	$ 99,000.00
0021	Programming	LS	1	5,500.00	$ 5,500.00				1	5,500.00	$ 5,500.00

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WP-42A.2 - 2nd Street N Pump Station												
ITEM	DESCRIPTION	UNIT	Current Budget (thru CO-10)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0022	HVAC – General	LS	1	90,000.00	$ 90,000.00				1	90,000.00	$ 90,000.00	
0023	Plumbing General	LS	1	5,300.00	$ 5,300.00				1	5,300.00	$ 5,300.00	
0024	Health and Safety	LS	1	50,000.00	$ 50,000.00				1	50,000.00	$ 50,000.00	
0025	Remove Subsurface Concrete Structure	LS	1	7,397.00	$ 7,397.00				1	7,397.00	$ 7,397.00	
0026	Hazardous Fill Removal and Disposal - T&M, Not to Exceed	LS	1	12,123.64	$ 12,123.64				1	12,123.64	$ 12,123.64	
0027	Backfill Below 882'	LS	1	158,293.32	$ 158,293.32				1	158,293.32	$ 158,293.32	
0028	Backfill Above 882'	LS	1	61,324.68	$ 61,324.68				1	61,324.68	$ 61,324.68	
0029	Electric Unit Heater (RFI-029A)	LS	1	1,472.00	$ 1,472.00				1	1,472.00	$ 1,472.00	
0030	Louvers (RFI-043)	LS	1	3,966.00	$ 3,966.00				1	3,966.00	$ 3,966.00	
0031	Install Baffle Wall	LS	1	$ 176,792.50	$ 176,792.50				1	176,792.50	$ 176,792.50	
0032	Leave Sheeting in Place	LS	1	$ 64,179.25	$ 64,179.25				1	64,179.25	$ 64,179.25	
0033	Close 2nd Street North	LS	1	$ 3,950.00	$ 3,950.00				1	3,950.00	$ 3,950.00	
0034	Reduced Vacuum Line Size	LS	1	$ (516.99)	$ (516.99)				1	(516.99)	$ (516.99)	
0036	Substitute Utility Brick Veneer for Stone Veneer	LS	1	$ (12,750.00)	$ (12,750.00)				1	(12,750.00)	$ (12,750.00)	
0037	Cold Weather Construction	LS	1	$ 14,831.92	$ 14,831.92				1	14,831.92	$ 14,831.92	
0038	Warranty Extended Duration	LS	1	$ 34,055.34	$ 34,055.34				1	34,055.34	$ 34,055.34	
0039	F&I Actuator Parts for Sluice Gate Operators	LS	1	$ 5,486.80	$ 5,486.80				1	5,486.80	$ 5,486.80	
0040	F&I Decorative Fence Modification	LS	1	$ 36,342.02	$ 36,342.02	(1)	$ (36,342.02)	$ (36,342.02)	0	0.00	$ -	
0041	Differing Subsurface Condition - Removals	LS	1	$ 5,970.55	$ 5,970.55				1	5,970.55	$ 5,970.55	
			CURRENT BUDGET		$ 8,720,142.00	NET CHANGE		$ (36,492.02)	NEW BUDGET			$ 8,683,649.98

Technical Advisory Group Recommendation

Meeting Date: 11/2/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative has reviewed and recommends the following Contract Action(s):

List description of Contract Action(s):

Description	Budget Estimate ($)
Reiner Contracting Inc.	
Change Order #4	***$420.50***
• WP-42H.2, El Zagal Area Flood Risk Mgmt-Phase 2 – Additional Stop Sign, and Milestone Adjustment for Final Seeding	

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Previous Project Cost	Budget ($) Change	Revised Project Cost	Project Start	Project Completion	Comments
Original Contract	0.00	1,515,798.64	1,515,798.64	7-Mar-16	31-Oct-16	Contract Award recommended to lowest responsive bidder, Reiner Contracting Inc.
Change Order No. 1	1,515,798.64	26,997.30	1,542,795.94	7-Mar-16	7-Nov-16	Additional asbestos containing materials abatement.
Change order No. 2	1,542,795.94	34,568.20	1,577,364.14	7-Mar-16	11-Nov-16	Plugged sanitary gravity line, tree removal, storm manhole repair, and standby time due to lift station/force main problem
Change Order No. 3	1,577,364.14	9,401.21	1,586,765.35	7-Mar-16	21-Nov-16	Floodwall pier caps, sanitary lift station start-up, sidewalk tree removal, storm inlet structure casting, and property drainage adjustment.
Change Order No. 4	1,586,765.35	420.50	1,587,185.85	7-Mar-16	1-Jun-17	Additional Stop Sign, Milestone Adjustment for Final Seeding

DISCUSSION

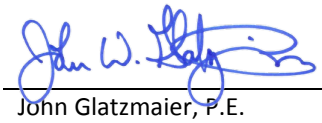
1. **Additional Stop Sign –** The Contract documents did not list a stop sign at the corner of the road to Trefoil Park where it meets Elm St. After site inspection HMG, CH2M and City of Fargo personnel determined that a stop sign would be beneficial at this location for traffic safety purposes. This change item adds $420.50 to the Contract Price. There is no schedule change associated with this change item.

2. **Final Completion Seeding Adjustment –** Seeding for the project has not been sufficiently established and is not expected to be established by the time freeze-up occurs. CH2M recommends extending the Final Completion Date for this work to ensure the Contractor remains responsible for achieving proper grass establishment. This is a no cost change to the Contract Times. The new milestone date is June 1, 2017.

ATTACHMENT(S):

1. Change Order 04

Submitted by:



November 2, 2016

John Glatzmaier, P.E.
CH2M HILL
Project Manager
Metro Flood Diversion Project

Date

Keith Berndt, Cass County Administrator
Concur: 3-Nov-16 *Non-Concur:*

April Walker, Fargo City Engineer
Concur: 4-Nov-16 *Non-Concur*

Mark Bittner, Fargo Director of Engineering
Concur: 2-Nov-16 *Non-Concur:*

Jason Benson, Cass County Engineer
Concur: 3-Nov-16 *Non-Concur*

David Overbo, Clay County Engineer
Concur: 2-Nov-16 *Non-Concur:*

Robert Zimmerman, Moorhead City Engineer
Concur: 2-Nov-16 *Non-Concur*

Nathan Boerboom, Diversion Authority Project Manager
Concur: 2-Nov-16 *Non-Concur:*

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Change Order No. 04

Date of Issuance:	11/10/2016	Effective Date:	11/10/2016
Owner:	Metro Flood Diversion Authority	Owner's Contract No.:	WP-42H.2
Owner's Representative:	CH2M HILL Engineers, Inc.	Owner's Representative Project No.:	435534
Contractor:	Reiner Contracting Inc.	Contractor's Project No.:	
Engineer:	Houston-Moore Group, LLC	Work Package No.:	WP-42H.2
Project:	Fargo-Moorhead Area Diversion	Contract Name:	El Zagal Area Flood Risk Mgmt-Phase 2

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

Description:

1. ADDITIONAL STOP SIGN
    a. Add Lump Sum Bid Item *0097 F&I Additional Stop Sign* as shown in attached Unit Price Schedule dated November 10, 2016. There is no schedule change associated with this change item.
2. FINAL COMPLETION SEEDING ADJUSTMENT
    a. Adjust final completion date to June 1, 2017 to allow for seeding and grass growth/establishment. There is no cost change associated with this change item.

Attachments:

Change Order 4 Unit Price Schedule dated 11/10/2016

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES *[note changes in Milestones if applicable]*
Original Contract Price: **1,515,798.64**	Original Contract Times: Milestone #1: May 1, 2016 Milestone #2: August 1, 2016 Substantial Completion: October 1, 2016 Ready for Final Payment: October 31, 2016
[Increase] [~~Decrease~~] from previously approved Change Orders No. 1 thru 3: **70,966.71**	[Increase] [~~Decrease~~] from previously approved Change Orders No. 1 thru 3: Milestone #1: 5 days Milestone #2: 9 days Substantial Completion: 19 days Ready for Final Payment: 19 days
Contract Price prior to this Change Order: **1,586,765.35**	Contract Times prior to this Change Order: Milestone #1: May 8, 2016 Milestone #2: August 12, 2016 Substantial Completion: October 23, 2016 Ready for Final Payment: November 21, 2016
[Increase] [~~Decrease~~] of this Change Order: **420.50**	[Increase] [~~Decrease~~] of this Change Order: Milestone #2: Substantial Completion: Ready for Final Payment: June 1, 2017
Contract Price incorporating this Change Order: **1,587,185.85**	Contract Times with all approved Change Orders: Milestone #1: May 8, 2016 Milestone #2: August 22, 2016 Substantial Completion: October 23, 2016 Ready for Final Payment: June 1, 2017

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Owner's Representative (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Name: Tyler Smith, P.E.	Name: Darrell Vanyo	Name: Tom Soucek
Title: Construction Manager	Title: Chairman	Title: Project Manager
Date: _____	Date: _____	Date: _____

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WP-42H.2
El Zagal Area Flood Risk Mgmt - Phase 2

Change Order 4 Unit Price Schedule
DATE: 11/10/2016

WP-42H.2 - El Zagal Area Flood Risk Mgmt - Phase 2											
ITEM	DESCRIPTION	UNIT	Current Budget (Thru CO #3)			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT
0001	Abandon Manhole	EA	4	430.34	$ 1,721.36				4	430.34	$ 1,721.36
0002	F&I Manhole 4' Dia Reinf Conc	EA	2	5,447.97	$ 10,895.94				2	5,447.97	$ 10,895.94
0003	F&I Manhole 6' Dia Reinf Conc	EA	1	8,215.58	$ 8,215.58				1	8,215.58	$ 8,215.58
0004	Remove Manhole	EA	1	872.26	$ 872.26				1	872.26	$ 872.26
0005	Plug Pipe 8" Dia	EA	2	293.06	$ 586.12				2	293.06	$ 586.12
0006	Plug Pipe 10" Dia	EA	4	293.07	$ 1,172.28				4	293.07	$ 1,172.28
0007	Plug Pipe 16" Dia	EA	7	293.19	$ 2,052.33				7	293.19	$ 2,052.33
0008	Plug Pipe 30" Dia	EA	2	350.07	$ 700.14				2	350.07	$ 700.14
0009	F&I Pipe SDR 26 - 10" Dia PVC	LF	542	67.00	$ 36,314.00				542	67.00	$ 36,314.00
0010	Remove Pipe All Sizes All Types	LF	215	33.57	$ 7,217.55				215	33.57	$ 7,217.55
0011	F&I Lift Station	LS	1	366,475.00	$ 366,475.00				1	366,475.00	$ 366,475.00
0012	F&I Forcemain 6" Dia	LF	12	89.18	$ 1,070.16				12	89.18	$ 1,070.16
0013	F&I Fittings Ductile Iron	LB	105	6.67	$ 700.35				105	6.67	$ 700.35
0014	F&I Fittings Ductile Iron	LB	115	5.75	$ 661.25				115	5.75	$ 661.25
0015	F&I Hydrant	EA	1	5,701.78	$ 5,701.78				1	5,701.78	$ 5,701.78
0016	Plug Pipe 6" Dia	EA	2	405.05	$ 810.10				2	405.05	$ 810.10
0017	F&I Pipe C900 DR18 - 6" Dia PVC	LF	11	53.55	$ 589.05				11	53.55	$ 589.05
0018	Connect Pipe to Exist Pipe	EA	1	716.25	$ 716.25				1	716.25	$ 716.25
0019	Remove Pipe All Sizes All Types	LF	350	12.16	$ 4,256.00				350	12.16	$ 4,256.00
0020	Abandon Manhole	EA	1	358.11	$ 358.11				1	358.11	$ 358.11
0021	F&I Manhole 4' Dia Reinf Conc	EA	4	3,044.06	$ 12,176.24				4	3,044.06	$ 12,176.24
0022	F&I Manhole 5' Dia Reinf Conc	EA	1	4,644.60	$ 4,644.60				1	4,644.60	$ 4,644.60

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WP-42H.2 - El Zagal Area Flood Risk Mgmt - Phase 2												
ITEM	DESCRIPTION	UNIT	Current Budget (Thru CO #3)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0023	F&I Manhole 6' Dia Reinf Conc	EA	2	5,637.56	$ 11,275.12				2	5,637.56	$	11,275.12
0024	F&I Inlet - Manhole (MHI) 4' Dia Reinf Conc	EA	1	2,352.05	$ 2,352.05				1	2,352.05	$	2,352.05
0025	F&I Inlet - Manhole (MHI) Type E Reinf Conc	EA	1	22,079.52	$ 22,079.52				1	22,079.52	$	22,079.52
0026	F&I Inlet - Round (RDI) Reinf Conc	EA	1	1,187.63	$ 1,187.63				1	1,187.63	$	1,187.63
0027	F&I Gatewell	EA	1	101,383.76	$ 101,383.76				1	101,383.76	$	101,383.76
0028	Plug Pipe 18" Dia	EA	3	381.26	$ 1,143.78				3	381.26	$	1,143.78
0029	Connect Pipe to Existing Structure	EA	1	1,701.18	$ 1,701.18				1	1,701.18	$	1,701.18
0030	F&I Pipe 30" Dia Reinf Conc	LF	153	79.98	$ 12,236.94				153	79.98	$	12,236.94
0031	F&I Pipe 30" Dia Reinf Conc - CL5	LF	203	103.54	$ 21,018.62				203	103.54	$	21,018.62
0032	F&I Pipe 12" Dia Polypropylene	LF	49	39.75	$ 1,947.75				49	39.75	$	1,947.75
0033	F&I Pipe 15" Dia Polypropylene	LF	148	42.52	$ 6,292.96				148	42.52	$	6,292.96
0034	F&I Pipe 18" Dia Polypropylene	LF	227	51.13	$ 11,606.51				227	51.13	$	11,606.51
0035	F&I Pipe 30" Dia Polypropylene	LF	108	99.87	$ 10,785.96				108	99.87	$	10,785.96
0036	Remove Pipe All Sizes All Types	LF	142	17.06	$ 2,422.52				142	17.06	$	2,422.52
0037	Subgrade Preparation	SY	1,392	1.62	$ 2,255.04				1,392	1.62	$	2,255.04
0038	F&I Nonwoven Geotextile	SY	1,392	2.08	$ 2,895.36				1,392	2.08	$	2,895.36
0039	Remove Sidewalk 4" Thick Conc	SY	185	4.09	$ 756.65				185	4.09	$	756.65
0040	F&I Sidewalk 4" Thick Reinf Conc	SY	1,065	50.65	$ 53,942.25				1,065	50.65	$	53,942.25
0041	F&I Det Warn Panels Cast Iron	SF	56	51.14	$ 2,863.84				56	51.14	$	2,863.84
0042	Remove Curb and Gutter	LF	605	3.26	$ 1,972.30				605	3.26	$	1,972.30
0043	F&I Curb & Gutter Standard (Type I)	LF	95	37.29	$ 3,542.55				95	37.29	$	3,542.55
0044	F&I Curb & Gutter Standard (Type II)	LF	607	26.10	$ 15,842.70				607	26.10	$	15,842.70
0045	F&I Class 5 Agg - 6" Thick	SY	255	9.10	$ 2,320.50				255	9.10	$	2,320.50
0046	F&I Class 5 Agg - 8" Thick	SY	317	10.60	$ 3,360.20				317	10.60	$	3,360.20
0047	F&I Class 5 Agg - 9" Thick	SY	1,025	11.29	$ 11,572.25				1,025	11.29	$	11,572.25
0048	F&I Pavement Mix Base Course Asphalt - 6"	SY	1,025	31.45	$ 32,236.25				1,025	31.45	$	32,236.25

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WP-42H.2 - El Zagal Area Flood Risk Mgmt - Phase 2												
ITEM	DESCRIPTION	UNIT	Current Budget (Thru CO #3)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0049	F&I Pavement Mix Wear Course Asphalt - 2"	SY	1,025	11.19	$ 11,469.75				1,025	11.19	$	11,469.75
0050	F&I Pavement 6" Thick Reinf Conc	SY	255	71.39	$ 18,204.45				255	71.39	$	18,204.45
0051	F&I Pavement 7" Thick Reinf Conc	SY	65	76.71	$ 4,986.15				65	76.71	$	4,986.15
0052	F&I Pavement 8" Thick Reinf Conc	SY	317	83.11	$ 26,345.87				317	83.11	$	26,345.87
0053	Remove Pavement All Thickness Asphalt	SY	85	9.87	$ 838.95				85	9.87	$	838.95
0054	Remove Pavement 8" Thick Conc	SY	1,240	6.68	$ 8,283.20				1,240	6.68	$	8,283.20
0055	Rem & Rep Pavement 8" Thick Asphalt	SY	105	62.37	$ 6,548.85				105	62.37	$	6,548.85
0056	Temp Fence -Safety	LF	700	2.82	$ 1,974.00				700	2.82	$	1,974.00
0057	Excavation	CY	3,000	4.00	$ 12,000.00				3,000	4.00	$	12,000.00
0058	Fill - CL3	CY	3,000	20.10	$ 60,300.00				3,000	20.10	$	60,300.00
0059	Remove Tree	EA	41	178.67	$ 7,325.47				41	178.67	$	7,325.47
0060	Remove Landscaping	LS	1	881.08	$ 881.08				1	881.08	$	881.08
0061	Remove Driveway All Thicknesses All Types	SY	280	4.25	$ 1,190.00				280	4.25	$	1,190.00
0062	Demolition - Structures	EA	8	13,612.66	$ 108,901.28				8	13,612.66	$	108,901.28
0063	Demolition - Foundation	EA	8	7,440.76	$ 59,526.08				8	7,440.76	$	59,526.08
0064	F&I Decid Tree 1.0"	EA	44	202.44	$ 8,907.36				44	202.44	$	8,907.36
0065	F&I Decid Tree 1.5"	EA	66	303.66	$ 20,041.56				66	303.66	$	20,041.56
0066	F&I Landscaping	LS	1	1,278.56	$ 1,278.56				1	1,278.56	$	1,278.56
0067	F&I Weed Barrier Geotextile	SY	25	4.26	$ 106.50				25	4.26	$	106.50
0068	F&I Bullet Edging	LF	70	3.20	$ 224.00				70	3.20	$	224.00
0069	Traffic Control - Type 2	LS	1	19,224.58	$ 19,224.58				1	19,224.58	$	19,224.58
0070	Topsoil - Strip and Spread	SY	13,350	1.95	$ 26,032.50				13,350	1.95	$	26,032.50
0071	Inspection Trench	CY	5,000	4.13	$ 20,650.00				5,000	4.13	$	20,650.00
0072	Fill - Import	CY	8,500	9.30	$ 79,050.00				8,500	9.30	$	79,050.00
0073	F&I Floodwall - Structural Concrete	CY	132	750.06	$ 99,007.92				132	750.06	$	99,007.92
0074	F&I Floodwall - Reinf Bars	LB	18,469	1.09	$ 20,131.21				18,469	1.09	$	20,131.21

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WP-42H.2 - El Zagal Area Flood Risk Mgmt - Phase 2												
ITEM	DESCRIPTION	UNIT	Current Budget (Thru CO #3)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0075	F&I Floodwall - Safety Cap	LF	56	97.04	$ 5,434.24				56	97.04	$ 5,434.24	
0076	F&I Floodwall - Removable	SF	282	174.33	$ 49,161.06				282	174.33	$ 49,161.06	
0077	Seeding Type B	SY	13,350	0.15	$ 2,002.50				13,350	0.15	$ 2,002.50	
0078	Mulching Type 1 - Hydro	SY	8,800	0.37	$ 3,256.00				8,800	0.37	$ 3,256.00	
0079	Weed Control Type B	SY	13,350	0.06	$ 801.00				13,350	0.06	$ 801.00	
0080	Temp Construction Entrance	EA	3	1,975.00	$ 5,925.00				3	1,975.00	$ 5,925.00	
0081	Silt Fence - Standard	LF	2,126	1.76	$ 3,741.76				2,126	1.76	$ 3,741.76	
0082	Sediment Control Log 6" to 8" Dia	LF	150	2.40	$ 360.00				150	2.40	$ 360.00	
0083	Inlet Protection - New Inlet	EA	6	213.09	$ 1,278.54				6	213.09	$ 1,278.54	
0084	Inlet Protection - Existing Inlet	EA	6	191.79	$ 1,150.74				6	191.79	$ 1,150.74	
0085	F&I Erosion Control Blanket Type 3	SY	4,535	1.60	$ 7,256.00				4,535	1.60	$ 7,256.00	
0086	Concrete Washout Area	EA	1	611.83	$ 611.83				1	611.83	$ 611.83	
0087	Storm Water Management	LS	1	2,490.01	$ 2,490.01				1	2,490.01	$ 2,490.01	
0088	Additional Asbestos Abatement	LS	1	26,997.30	$ 26,997.30				1	26,997.30	$ 26,997.30	
0089	Plugged Sanitary Gravity Line	LS	1	2,068.82	$ 2,068.82				1	2,068.82	$ 2,068.82	
0090	Tree Removal	LS	1	2,950.00	$ 2,950.00				1	2,950.00	$ 2,950.00	
0091	Storm Manhole Repair	LS	1	18,025.25	$ 18,025.25				1	18,025.25	$ 18,025.25	
0092	Standby Time Due to Lift Station/Forcemain Problem	LS	1	11,524.13	$ 11,524.13				1	11,524.13	$ 11,524.13	
0093	Floodwall Pier Caps	LS	1	$ 6,166.29	$ 6,166.29				1	6,166.29	6,166.29	
0094	Sidwalk Tree Removal	LS	1	$ 735.00	$ 735.00				1	735.00	735.00	
0095	Storm Inlet Structure Casting	LS	1	$ 449.92	$ 449.92				1	449.92	449.92	
0096	Property Drainage Adjustment	LS	1	$ 2,050.00	$ 2,050.00				1	2,050.00	2,050.00	
0097	F&I Additional Stop Sign	LS				1	$ 420.50	$ 420.50	1	420.50	420.50	
WP-42H.2 - TOTAL AMOUNT			**CURRENT BUDGET**		**$ 1,586,765.35**	**NET CHANGE**		**$ 420.50**	**NEW BUDGET**		**$ 1,587,185.85**	

Technical Advisory Group Recommendation

Meeting Date: 11/1/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative has reviewed and recommends the following Contract Action(s):

List description of Contract Action(s):

Description	Budget Estimate ($)
WP-42I.1: Industrial Builders, Inc.	
Change Order #3	***$7,891.50***
WP-42I.1, Mickelson Levee Extension – Final Cost Adjustment, Asphalt Millings, and Final Completion Seeding Adjustment	

Summary of Contracting History and Current Contract Action:

BACKGROUND

Industrial Builders, Inc. (IBI) was the low responsive bidder for this publically bid project and the Metro Flood Diversion Authority (MFDA) board awarded the project to IBI on Feb 26, 2016. The Contract was signed and executed Mar 10, 2016, and field activities started May 3, 2016.

Original Agreement or Amendment	Original Project Cost	Budget ($) Change	Revised Project Cost	Project Start	Project Completion	Comments
Original Contract	$0.00	$659,910.00	$659,910.00	10-Mar-16	15-Oct-16	Contract Award recommended to lowest responsive bidder, IBI.
Change Order No. 1	$659,910.00	$65,000.00	$724,910.00	10-Mar-16	15-Oct-16	Additional asbestos containing materials abatement.
Change Order No. 2	$724,910.00	$6,079.00	$730,989.00	10-Mar-16	15-Oct-16	Additional asbestos containing materials abatement at 18 N Terrace, remove concrete swimming pool at 16 North Terrace
Change Order No. 3	730,989.00	7,891.50	738,880.50	10-Mar 16	1-Jun-16	Final Cost Adjustment, Asphalt Millings, Final Completion Seeding Adjustment

DISCUSSION

Change Order No. 3 increases the project cost by a total of $7,891.50

1. **Final Cost Adjustment** –During project design/bidding the Engineer developed quantity estimates for a basis of bid. This change item is an adjustment to reflect actual installed quantities necessary to meet the requirements of the project. These quantities totaled $6,051.50 which has already been paid to the

Contractor in their respective monthly pay apps, but is included in Change Order 03 to document the final Contract Price. There is no schedule impact associated with this change item.

2. **Asphalt Millings** – While North Terrace was being prepared for pavement, it was decided by HMG/City of Fargo personnel that an additional 45 linear feet of the road should be milled to allow for a uniform driving surface between the two removal areas that were associated with the project. The total cost of this change item is $1,840.00. There is no schedule impact associated with this change item.
3. **Final Completion Seeding Adjustment** – Seeding for the project has not been sufficiently established and is not expected to be established by the time freeze-up occurs. CH2M recommends extending the Final Completion for this work to ensure the Contractor remains responsible for achieving proper grass establishment. The new Final Completion date is June 1, 2016. This is a no cost change to the Contract Times.

ATTACHMENT(S):

1. Change Order No. 3
2. Contractor's Change Proposal Dated 9/30/2016

Submitted by:

John Glatzmaier, P.E.
CH2M HILL
Project Manager
Metro Flood Diversion Project

November 1, 2016
Date

Keith Berndt, Cass County Administrator
Concur: 2-Nov-16 *Non-Concur:* _____

April Walker, Fargo City Engineer
Concur: 4-Nov-16 *Non-Concur* _____

Mark Bittner, Fargo Director of Engineering
Concur: 2-Nov-16 *Non-Concur:* _____

Jason Benson, Cass County Engineer
Concur: 2-Nov-16 *Non-Concur* _____

David Overbo, Clay County Engineer
Concur: 2-Nov-16 *Non-Concur:* _____

Robert Zimmerman, Moorhead City Engineer
Concur: 1-Nov-16 *Non-Concur* _____

Nathan Boerboom, Diversion Authority Project Manager
Concur: 2-Nov-16 *Non-Concur:* _____

Change Order No. 03

Date of Issuance:	11/10/2016	Effective Date:	11/10/2016
Owner:	Metro Flood Diversion Authority	Owner's Contract No.:	
Owner's Representative:	CH2M HILL Engineers, Inc.	Owner's Representative Project No.:	435534
Contractor:	Industrial Builders, Inc.	Contractor's Project No.:	
Engineer:	Houston-Moore Group, LLC	Work Package No.:	WP-42I.1
Project:	Fargo-Moorhead Area Diversion	Contract Name:	Mickelson Levee Extension

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

Description:

1. FINAL PROJECT COST ADJUSTMENT
    a. Adjust various Bid Items as shown in attached Unit Price Schedule Dated 11/10/2016 to account for actual installed quantities as determined throughout the project. No time extension is granted for this change.
2. ASPHALT MILLINGS
    a. Add Bid Item *0077 Asphalt Millings* as shown in the attached Unit Price Schedule Dated 11/102016. No time extension is granted for this change
3. FINAL COMPLETION SEEDING ADJUSTMENT
    a. Adjust Final Completion date to June 1, 2017 to allow for seeding and grass growth/establishment. There is no cost change associated with this change item.

Attachments:

- Change Order 03 Unit Price Schedule dated 11/10/2016

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES *[note changes in Milestones if applicable]*
Original Contract Price: **659,910.00**	Original Contract Times: Substantial Completion: September 15, 2016 Ready for Final Payment: October 15, 2016
[Increase] [~~Decrease~~] from previously approved Change Orders 1 thru 2: **71,079.00**	[~~Increase~~] [~~Decrease~~] from previously approved Change Orders Substantial Completion: Ready for Final Payment
Contract Price prior to this Change Order: **730,989.00**	Contract Times prior to this Change Order: Substantial Completion: September 15, 2016 Ready for Final Payment: October 15, 2016
[Increase] [~~Decrease~~] of this Change Order: **7,891.50**	[Increase] [~~Decrease~~] of this Change Order: Substantial Completion: Ready for Final Payment: June 1, 2017
Contract Price incorporating this Change Order: **738,880.50**	Contract Times with all approved Change Orders: Substantial Completion: September 15, 2016 Ready for Final Payment: June 1, 2017

RECOMMENDED:		ACCEPTED:		ACCEPTED:	
By:	Owner's Representative (Authorized Signature)	By:	Owner (Authorized Signature)	By:	Contractor (Authorized Signature)
Name:	Tyler Smith, P.E.	Name:	Darrell Vanyo	Name:	Aaron Maley
Title:	Construction Manager	Title:	Chairman	Title:	Project Manager
Date:		Date:		Date:	

WP-42I.1
Mickelson Levee Extension

Change Order 3 Unit Price Schedule
DATE: 11/10/2016

WP-42I.1 - Mickelson Levee Extension												
ITEM	DESCRIPTION	UNIT	Current Budget (Thru C0-02)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0001	Remove Sanitary Manhole	EA	4	600.00	$ 2,400.00		$ -	$ -	4	600.00	$ 2,400.00	
0002	Remove Sanitary Pipe All Sizes All Types	LF	668	22.00	$ 14,696.00		$ -	$ -	668	22.00	$ 14,696.00	
0003	Eliminate Sanitary Sewer Service	EA	5	4,200.00	$ 21,000.00		$ -	$ -	5	4,200.00	$ 21,000.00	
0004	Plug Sanitary Pipe 6" Diameter	EA	2	210.00	$ 420.00	(1)	$ -	$ (210.00)	1	210.00	$ 210.00	
0005	F&I Sanitary Pipe SDR 26 - 12" Dia PVC	LF	407	98.00	$ 39,886.00		$ -	$ -	407	98.00	$ 39,886.00	
0006	F&I Sanitary Pipe w/GB SDR 26 - 12" Dia PVC	LF	129	210.00	$ 27,090.00		$ -	$ -	129	210.00	$ 27,090.00	
0007	F&I Sanitary Manhole 4' Dia Reinf Conc	EA	5	5,500.00	$ 27,500.00		$ -	$ -	5	5,500.00	$ 27,500.00	
0008	Transfer Sewer Svc	EA	2	1,600.00	$ 3,200.00		$ -	$ -	2	1,600.00	$ 3,200.00	
0009	F&I Eccentric Cone	EA	1	1,600.00	$ 1,600.00		$ -	$ -	1	1,600.00	$ 1,600.00	
0010	Salvage Hydrant	EA	1	750.00	$ 750.00		$ -	$ -	1	750.00	$ 750.00	
0011	Remove Water Main Pipe All Sizes All Types	LF	195	11.00	$ 2,145.00		$ -	$ -	195	11.00	$ 2,145.00	
0012	Eliminate Water Service	EA	5	2,600.00	$ 13,000.00		$ -	$ -	5	2,600.00	$ 13,000.00	
0013	Sleeve Water Main Pipe w/GB 8" Dia	LS	1	1,300.00	$ 1,300.00		$ -	$ -	1	1,300.00	$ 1,300.00	
0014	Remove Storm Inlet	EA	4	650.00	$ 2,600.00		$ -	$ -	4	650.00	$ 2,600.00	
0015	Remove Storm Manhole	EA	1	950.00	$ 950.00		$ -	$ -	1	950.00	$ 950.00	
0016	Remove Storm Pipe All Sizes All Types	LF	359	16.00	$ 5,744.00	(125)	$ -	$ (2,000.00)	234	16.00	$ 3,744.00	
0017	F&I Inlet - Single Box (SBI) Reinf Conc	EA	1	2,600.00	$ 2,600.00		$ -	$ -	1	2,600.00	$ 2,600.00	
0018	F&I Inlet - Storm Manhole (MHI) 5' Dia Reinf Conc	EA	1	5,300.00	$ 5,300.00		$ -	$ -	1	5,300.00	$ 5,300.00	
0019	Connect Storm Pipe to Exist Storm Pipe	EA	1	550.00	$ 550.00		$ -	$ -	1	550.00	$ 550.00	
0020	F&I Storm Manhole 4' Dia Reinf Conc	EA	1	3,200.00	$ 3,200.00	(1)	$ -	$ (3,200.00)	0	3,200.00	$ -	
0021	F&I Inlet - Storm Manhole (MHI) 4' Dia Reinf Conc	EA	1	3,000.00	$ 3,000.00		$ -	$ -	1	3,000.00	$ 3,000.00	

WP-42I.1 - Mickelson Levee Extension												
ITEM	DESCRIPTION	UNIT	Current Budget (Thru C0-02)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0022	F&I Storm Pipe 12" Dia Reinf Conc	LF	35	52.00	$ 1,820.00	(35)	$ -	$ (1,820.00)	0	52.00	$ -	
0023	F&I Storm Pipe w/GB 12" Dia Reinf Conc	LF	28	70.00	$ 1,960.00		$ -	$ -	28	70.00	$ 1,960.00	
0024	F&I Storm Pipe w/GB 15" Dia Reinf Conc	LF	137	95.00	$ 13,015.00	(77)	$ -	$ (7,315.00)	60	95.00	$ 5,700.00	
0025	Remove Pavement All Thicknesses All Types	SY	2,105	5.00	$ 10,525.00		$ -	$ -	2,105	5.00	$ 10,525.00	
0026	Remove Sidewalk All Thicknesses All Types	SY	528	5.00	$ 2,640.00	39	$ -	$ 195.00	567	5.00	$ 2,835.00	
0027	Remove Driveway All Thicknesses All Types	SY	666	5.00	$ 3,330.00		$ -	$ -	666	5.00	$ 3,330.00	
0028	Remove Curb & Gutter	LF	1,157	6.00	$ 6,942.00		$ -	$ -	1,157	6.00	$ 6,942.00	
0029	Subgrade Preparation	SY	1,687	2.00	$ 3,374.00		$ -	$ -	1,687	2.00	$ 3,374.00	
0030	F&I Woven Geotextile	SY	1,687	1.00	$ 1,687.00		$ -	$ -	1,687	1.00	$ 1,687.00	
0031	F&I Class 5 Agg - 7" Thick	SY	1,687	7.00	$ 11,809.00		$ -	$ -	1,687	7.00	$ 11,809.00	
0032	F&I Edge Drain 4" Dia PVC	LF	936	6.00	$ 5,616.00	(266)	$ -	$ (1,596.00)	670	6.00	$ 4,020.00	
0033	F&I Curb & Gutter Standard (Type II)	LF	936	25.00	$ 23,400.00	10	$ -	$ 250.00	946	25.00	$ 23,650.00	
0034	F&I Sidewalk 4" Thick Reinf Conc	SY	226	65.00	$ 14,690.00	183	$ -	$ 11,895.00	409	65.00	$ 26,585.00	
0035	F&I Sidewalk 6" Thick Reinf Conc	SY	320	80.00	$ 25,600.00		$ -	$ -	320	80.00	$ 25,600.00	
0036	F&I Driveway 6" Thick Reinf Conc	SY	132	80.00	$ 10,560.00	(7)	$ -	$ (560.00)	125	80.00	$ 10,000.00	
0037	F&I Aggregate for Asph Pavement FAA 43	TON	517	68.00	$ 35,156.00	13	$ -	$ 884.00	530	68.00	$ 36,040.00	
0038	F&I Asphalt Cement PG 58-28	GAL	7,434	2.00	$ 14,868.00	185	$ -	$ 370.00	7,619	2.00	$ 15,238.00	
0039	F&I Casting - Std Manhole	EA	3	800.00	$ 2,400.00		$ -	$ -	3	800.00	$ 2,400.00	
0040	F&I Casting - Inlet	EA	2	900.00	$ 1,800.00	(1)	$ -	$ (900.00)	1	900.00	$ 900.00	
0041	GV Box to Grade - w/Conc	EA	1	400.00	$ 400.00		$ -	$ -	1	400.00	$ 400.00	
0042	Traffic Control - Type 1	LS	1	2,000.00	$ 2,000.00		$ -	$ -	1	2,000.00	$ 2,000.00	
0043	Temp Construction Entrance	EA	2	2,500.00	$ 5,000.00		$ -	$ -	2	2,500.00	$ 5,000.00	
0044	Mobilization	LS	1	28,000.00	$ 28,000.00		$ -	$ -	1	28,000.00	$ 28,000.00	
0045	Temp Fence - Safety	LF	353	3.00	$ 1,059.00		$ -	$ -	353	3.00	$ 1,059.00	
0046	Clear & Grub	LS	1	8,000.00	$ 8,000.00		$ -	$ -	1	8,000.00	$ 8,000.00	

WP-42I.1 - Mickelson Levee Extension												
ITEM	DESCRIPTION	UNIT	Current Budget (Thru C0-02)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0047	Remove Tree	EA	2	700.00	$ 1,400.00		$ -	$ -	2	700.00	$ 1,400.00	
0048	F&I Decid Tree 1.5" Dia	EA	129	300.00	$ 38,700.00		$ -	$ -	129	300.00	$ 38,700.00	
0049	F&I Conif Tree 6' Height	EA	5	400.00	$ 2,000.00		$ -	$ -	5	400.00	$ 2,000.00	
0050	Demolition	EA	4	4,000.00	$ 16,000.00		$ -	$ -	4	4,000.00	$ 16,000.00	
0051	Remove Foundation All Types	EA	5	16,000.00	$ 80,000.00		$ -	$ -	5	16,000.00	$ 80,000.00	
0052	Remove Landscaping	EA	5	500.00	$ 2,500.00		$ -	$ -	5	500.00	$ 2,500.00	
0053	Remove Fence	LF	108	2.00	$ 216.00		$ -	$ -	108	2.00	$ 216.00	
0054	Remove Sign Assembly	EA	2	100.00	$ 200.00		$ -	$ -	2	100.00	$ 200.00	
0055	Relocate Sign Assembly	EA	1	200.00	$ 200.00		$ -	$ -	1	200.00	$ 200.00	
0056	Relocate Street Light	EA	1	4,500.00	$ 4,500.00	(0.8)	$ -	$ (3,600.00)	0.2	4,500.00	$ 900.00	
0057	Silt Fence - Standard	LF	1,070	2.00	$ 2,140.00		$ -	$ -	1,070	2.00	$ 2,140.00	
0058	Sediment Control Log 10" to 15" Dia	LF	485	3.00	$ 1,455.00	15	$ -	$ 45.00	500	3.00	$ 1,500.00	
0059	Inlet Protection - New Inlet	EA	5	250.00	$ 1,250.00		$ -	$ -	5	250.00	$ 1,250.00	
0060	Inlet Protection - Existing Inlet	EA	5	250.00	$ 1,250.00		$ -	$ -	5	250.00	$ 1,250.00	
0061	Topsoil - Strip (6")	CY	1,370	1.50	$ 2,055.00		$ -	$ -	1,370	1.50	$ 2,055.00	
0062	Topsoil - Spread (6")	CY	1,765	2.00	$ 3,530.00		$ -	$ -	1,765	2.00	$ 3,530.00	
0063	Topsoil - Import	CY	395	5.00	$ 1,975.00		$ -	$ -	395	5.00	$ 1,975.00	
0064	Fill - Haul	CY	100	14.00	$ 1,400.00	550	$ -	$ 7,700.00	650	14.00	$ 9,100.00	
0065	Fill - Import (Foundations)	CY	1,100	9.00	$ 9,900.00		$ -	$ -	1,100	9.00	$ 9,900.00	
0066	Subcut	CY	100	5.00	$ 500.00	550	$ -	$ 2,750.00	650	5.00	$ 3,250.00	
0067	Embankment	CY	3,000	2.00	$ 6,000.00		$ -	$ -	3,000	2.00	$ 6,000.00	
0068	Embankment Import	CY	5,280	9.00	$ 47,520.00	650	$ -	$ 5,850.00	5,930	9.00	$ 53,370.00	
0069	Inspection Trench	CY	1,700	3.00	$ 5,100.00		$ -	$ -	1,700	3.00	$ 5,100.00	
0070	Excavation	CY	3,000	1.00	$ 3,000.00		$ -	$ -	3,000	1.00	$ 3,000.00	
0071	Mulching Type 1 - Hydro	SY	17,910	0.40	$ 7,164.00		$ -	$ -	17,910	0.40	$ 7,164.00	

WP-42I.1 - Mickelson Levee Extension												
ITEM	DESCRIPTION	UNIT	Current Budget (Thru C0-02)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0072	Seeding Type B	SY	17,910	0.15	$ 2,686.50		$ -	$ -	17,910	0.15	$ 2,686.50	
0073	Overseeding	SY	17,910	0.10	$ 1,791.00	(17910)	$ -	$ (1,791.00)	0	0.10	$ -	
0074	Weed Control Type B	SY	17,910	0.05	$ 895.50	(17910)	$ -	$ (895.50)	0	0.05	$ -	
0075	Additional Asbestos Abatement	LS	1	66,568.00	$ 66,568.00		$ -	$ -	1	66,568.00	$ 66,568.00	
0076	Remove Concrete Swimming Pool at 16 North Terrace	LS	1	4,511.00	$ 4,511.00		$ -	$ -	1	4,511.00	$ 4,511.00	
0077	Asphalt Millings	LS				1	$ 1,840.00	$ 1,840.00	1	1,840.00	$ 1,840.00	
WP-42H.2 - TOTAL AMOUNT			**CURRENT BUDGET**		**$ 730,989.00**	**NET CHANGE**		**$ 7,891.50**	**NEW BUDGET**		**$ 738,880.50**	

Industrial Builders, Inc.
PO Box 406
Fargo
Cass/ND 58107-0406 United States
Ph. +1 701 2824977

MAIL TYPE	MAIL NUMBER	REFERENCE NUMBER
Change Proposal	IBI-CHP-000001	IBI-CHP-000001

WP-42I1 - Mickelson Levee Extension - Change Proposal #003

From	Aaron Maley - Industrial Builders, Inc.
To	Mr David Buck - Diversion Authority
Sent	Friday, September 30, 2016

DETAILS

Project Name	WP42I1 - Dwtn Levees Mickelson Levee Extension
Sub-Program	Mitigation and Associated Infrastructure
Functional Area/Discipline	Document Control
Description of Change Proposal	Addition of asphalt pavement milling to scope of work.
New Bid Item	Yes
Associated Bid Item	037 & 038
Work Impact	No Impact
Root Cause	Project Scope (Add/Delete)
Cost Impact	Yes
Total Potential Cost Impact	
Order Of Magnitude	
Schedule Impact	No
Total Potential Schedule Impact	
Associated Milestones	
Cost Backup Attached	Yes
Related Documents Attached	Yes
Related Activity ID(s)	

MESSAGE

David,
Attached is the previously approved proposal that just needs to be run through officially and initiate the change order process.

Thanks,
Aaron Maley
IBI

Industrial Builders, Inc.

PAUL W. DIEDERICH, PRESIDENT
DONN O. DIEDERICH, EXECUTIVE VICE PRESIDENT

General Contractors

PHONE 701/282-4977 FAX 701/281-1409
P.O. BOX 406 FARGO, NORTH DAKOTA 58107-0406

September 30, 2016

Mr. David Buck
CH2M Hill

Re: WP-42I.1, Mickelson Levee Extension
Change Order 003

Dear Mr. Buck,

As required by Article 11 of the contract specification, we submit the following Change Order;

It was requested to add a section of pavement mill and overlay to our scope of work. This section is located between the small roadway removal plug and the main portion of the roadway restoration limits. This change order is to cover the milling portion of the work and will be in the amount of $1840.00. The quantity associated with overlay portion of work will be accounted for in Bid Items 037 & 038.

This work has been previously approved via the attached email chain, and this serves as formal submission to initiate the change order.

No additional contract time will be required.

Respectfully Submitted,
INDUSTRIAL BUILDERS, INC.

Aaron Maley
Project Manager

Cc: IBI File 16140

Aaron Maley

From: Aaron Maley
Sent: Monday, August 08, 2016 12:02 PM
To: 'Kristen Lotvedt'
Subject: RE: WP-42I1: Additional Milling on N. Terrace

Milling only. So you'll need to include the add'l tonnage as you stated below.

Thanks,

Aaron Maley
Project Manager
Industrial Builders, Inc.
PO Box 406 Fargo, ND 58107
701.282.4977 o | 701.281.1409 f | 701.840.1955 c
amaley@industrialbuilders.com

From: Kristen Lotvedt [mailto:klotvedt@houstoneng.com]
Sent: Monday, August 08, 2016 11:59 AM
To: Aaron Maley <amaley@industrialbuilders.com>; Mike Buerkley <mbuerkley@houstoneng.com>
Cc: David.Buck@ch2m.com
Subject: RE: WP-42I1: Additional Milling on N. Terrace

Thanks Aaron. Does this include the replacement of the 1.5" of asphalt? Or would we need to include that when I provide to the city as an anticipated cost?

Kristen Lotvedt
Civil Engineer
Houston Engineering, Inc.
O 701.237.5065 | **D** 701.499.2093 | **F** 701.237.5101

From: Aaron Maley [mailto:amaley@industrialbuilders.com]
Sent: Monday, August 08, 2016 11:18 AM
To: Mike Buerkley <mbuerkley@houstoneng.com>; Kristen Lotvedt <klotvedt@houstoneng.com>
Cc: David.Buck@ch2m.com
Subject: WP-42I1: Additional Milling on N. Terrace

Mike/Kristen,
The additional milling will be $1840, which includes IBI's markup. Let me know if it's a go.

Thanks,

Aaron Maley
Project Manager
Industrial Builders, Inc.
PO Box 406 Fargo, ND 58107

701.282.4977 o | 701.281.1409 f | 701.840.1955 c
amaley@industrialbuilders.com

From: Rory McCormick [mailto:rmccormick@nicnd.com]
Sent: Monday, August 08, 2016 11:05 AM
To: Aaron Maley <amaley@industrialbuilders.com>
Subject: FW: Attached Image

Milling quote for the roadway. The guy at Houston asked that you call him (Cody) or Mike onsite and let him know what it would cost to do this. Let me know if this is a go for sure.

Thanks,
Rory McCormick
Estimator/Project Manager
Northern Improvement
701-277-1225
Cell: 701-261-0290

From: nic fargo [mailto:northern@nicnd.com]
Sent: Monday, August 08, 2016 11:00 AM
To: rory
Subject: Attached Image

Home Office
Fargo, North Dakota
4000-12th Avenue North
58102-2910

PO Box 2846
58108-2846
Phone 701-277-1225
Fax 701-277-1516

Northern IMPROVEMENT COMPANY

August 8, 2016

TO: Industrial Builders

RE: Mickelson Levee Extension

Northern Improvement Company quotes the following on the above referenced project:

Description	Quantity	Unit			Amount
2" Mill of Existing Asphalt Roadway (Approx 110 SY)	1	LS	@	$	1,600.00

1.) INCLUDES ONLY ITEMS AS STATED ABOVE
2.) PRICE DOES NOT INCLUDE MATERIAL TESTING, SURVEY STAKING OR TRAFFIC CONTROL.
3.) PROPOSAL MAY BE WITHDRAWN IF NOT ACCEPTED WITHIN 14 DAYS

Respectfully submitted,
NORTHERN IMPROVEMENT COMPANY

RORY MCCORMICK

ACCEPTANCE:

PRINT NAME

SIGNATURE

Technical Advisory Group Recommendation

Meeting Date: 11/3/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative has reviewed and recommends the following Contract Action(s):

List description of Contract Action(s):

Description	Budget Estimate ($)
WP-42F.1S: Industrial Builders Inc.	
Change Order #14	***$81,816.44***

- **WP-42F.1S, 2nd Street North (South of Pump Station) – Streetlight Modifications, City of Fargo Library Landscaping, Epoxy Paint, Differing Site Conditions, 3rd Street Lighting Modifications, 1st Ave Plaza Bench Modifications, Topsoil Import, and Temporary Straw Mulch**

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Previous Project Cost	Budget ($) Change	Revised Project Cost	Project Start	Project Completion	Comments
Original Contract	0.00	0.00	16,184,905.85	08-Oct-15	15-Jun-17	Contract Award recommended to lowest responsive bidder, Industrial Builders, Inc.
Change Order No. 1	16,184,905.85	0.00	16,184,905.85	08-Oct-15	15-Jul-17	Adds 30 days to the Contract Time, revises Interim Milestone A work items, and adds an option for descoping a portion of the Work
Change Order No. 2	16,184,905.85	169,490.20	16,354,396.05	08-Oct-15	15-Jul-17	Incorporates Work revisions to allow work around utility lines
Change Order No. 3	16,354,396.05	96,806.17	16,451,202.22	08-Oct-15	15-Jul-17	Water main, traffic poles, traffic control plan, Milestone A scope
Change Order No. 4	16,451,202.22	6,985.96	16,458,188.18	08-Oct-15	15-Jul-17	Bridge Lighting, concrete disposal, winter traffic control, extend 4th St signal mods requirement
Change Order No. 5	16,458,188.18	68,743.01	16,526,931.19	08-Oct-15	15-Jul-17	Concrete grading within pump station, Unit price change, additional H Pile, bridge abutment seal, traffic signals, bridge abutment concrete disposal and floodwall connections.
Change Order No. 6	16,526,931.19	89,243.21	16,616,174.40	08-Oct-15	15-Jul-17	10 Feet of additional flood wall, incentive and disincentive changes to the Agreement.

Original Agreement or Amendment	Previous Project Cost	Budget ($) Change	Revised Project Cost	Project Start	Project Completion	Comments
Change Order No. 7	16,616,174.40	16,378.55	16,632,552.95	08-Oct-15	22-Jul-17	Tee Manhole Addition, SS-10 Manhole Revision
Change Order No. 8	16,632,552.95	257,901.37	16,890,454.32	08-Oct-15	22-Jul-17	Differing Subsurface Conditions, floating castings
Change Order No. 9	16,890,454.32	(55,349.74)	16,835,104.58	08-Oct-15	22-Jul-17	Differing Subsurface Condition, Wall Penetrations, CenturyLink Concrete Removal, Furnish and Install Signal Light Pull Boxes, City Hall Construction Accommodation and Misc. Items
Change Order No. 10	16,835,104.58	32,505.68	16,867,610.26	08-Oct-15	22-Jul-17	Disposal of 2B Vault, Differing Subsurface Conditions – Silo Disposal in Case Plaza, and Floodwall Cap Modification
Change Order No. 11	16,867,610.26	52,242.85	16,919,853.11	08-Oct-15	22-Jul-17	Differing Subsurface Conditions July Removals, Repair Storm Manholes, Contaminated Soils Removal, Storm Structure ST-8 Cover, Impressioned Concrete Modifications, Administrative – Accounting Change, Administrative – Owner's Rep and Engineer Roles and Responsibilities Change
Change Order No. 12	16,919,853.11	85,411.36	17,004,753.35	08-Oct-15	22-Jul-17	Differing Subsurface Conditions, Repair Storm Manholes
Change Order No. 13	17,004,735.35	75,899.63	17,080,652.98	08-Oct-15	22-Jul-17	Utility Vault Adjustment, 1st Ave N Bridge Spall Removal, 42A2 Pump Station Elevation Discrepancy, Flared End Section Riprap, Case Plaza Parking Lot
Change Order No. 14	17,080,652.98	81,816.44	17,162,469.42	08-Oct-15	22-Jul-17	Streetlight Modifications, City of Fargo Library Landscaping, Epoxy Paint, Differing Site Conditions, 3rd Street Lighting Modifications, 1st Ave Plaza Bench Modifications, Topsoil Import, and Temporary Straw Mulch

DISCUSSION

Change Order No. 14 adds new and modifies existing scope elements to total an increase of $81,816.44 to the Contract Price. The Change Order consists of the following items:

1. **Street Light Modifications** – This change item includes cost for removal and reinstallation of a light pole as well as installation of lighting for the Civic Center parking lot. During construction of project features Xcel Energy needed to install temporary power poles to facilitate the work. In order to place these power poles the Contractor moved a light pole adjacent to the first Ave Bridge. Additionally, City of Fargo personnel requested lighting for the Civic Center parking lot, which recently became available for parking. At the time of bidding it was unclear whether or not this parking lot would be available due to the volume of projects in the area. The total cost for this change item is $6,991.60. HMG personnel have reviewed the cost and find it acceptable.

2. **City of Fargo Library Landscaping** – The majority of the landscaping work in the area of the project will occur under a separate work package (WP 42G). Due to other non-Diversion Authority work in the 42F1S project area, the work package 42G landscaping is scheduled to occur in either 2017 or 2018 to prevent relandscaping of areas that are still under construction. The City of Fargo requested that a small section of landscaping, that will not require rework, be added to this work package. The total cost of this change item is $3,462.80 and includes the cost for installing mulch, rocks, and edging at the NW corner of 1st Ave and 3rd St. HMG personnel have reviewed the cost and find it acceptable.

3. **Epoxy Paint** – The project team determined that epoxy paint and epoxy messages should be installed on 3rd St. The Contract does not include a bid item for epoxy painting The total cost of this change item is $714.00 The portions of 3rd st that are striped with epoxy paint will not be striped with grooved plastic film. HMG personnel have reviewed the cost and find it acceptable.

4. **Differing Site Conditions** – During the month of September the Contractor encountered additional unsuitable soils that cannot be used on-site. This change item includes labor and equipment costs for the removal of unsuitable soils during the month of September and adds $16,200.39. HMG personnel have reviewed the cost and find it acceptable.

5. **3rd Street Lighting Modifications** – The Contract Plans call for the reuse of existing light bases on the east side of 3rd St; however, the light bases are over 50 years old. The Project Team determined that new light light fixtures should be installed. The total cost for this change item is $5,406.50 and includes labor, materials, and equipment costs for installing the light fixtures. HMG personnel have reviewed the cost and find it acceptable.

6. **1st Ave Plaza Bench Modifications** – The 1st Ave plaza work includes concrete benches. After installation of the benches it was realized that one bench was too low and another had incorrect alignment. The incorrect installation was a result of an error in the plan drawings and incorrectly approved shop drawings. The total cost of this change item is $8,317.15 which includes the labor, material and equipment costs associated with fixing the plaza benches. HMG personnel have reviewed the cost and find it acceptable. CH2M, HMG and the Owner's technical staff will include this error in an on-going review of design Quality Control and the Engineer's financial responsibility for changes resulting from design issues across the program. CH2M will present the findings of this review to the board at a future date.

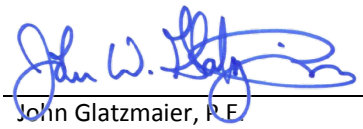
7. **Topsoil Import** – The intent of the plans was for the Contractor to use existing soils on-site, which during construction have been found to be unsuitable. Soils throughout the site contain large quantities of brick, glass and other debris. Additionally, soils in the Case Plaza lot had been previously chemically contaminated. Because of the large amount of unsuitable material the Contractor does not have enough topsoil from the site and needs to import from an offsite location. The total cost of this change item is $40,184.00 for 1,600 cubic yards of imported top soil. This change item includes two new unit rate line items to accommodate project needs. The Contractor will be paid based on the actual quantity of material imported. HMG personnel have reviewed the cost and find it acceptable.

8. **Temporary Straw Mulch** – This change item adds the option to use straw mulch for temporary cover over the winter months. Hydromulching is the intended final stabilization method required for erosion control; however, it is more expensive than straw mulch. Because this area will be disturbed with future construction activities the project team determined that straw mulch should be placed for cover during the winter months. The total cost of this change item is $510.00. HMG personnel have reviewed the cost and find it acceptable.

ATTACHMENT(S):

1. Change Order 14
2. Contractor's Change Order Request Dated 10/11/2016 (Differing Site Conditions, 3rd St Lighting Modifications, 1st Ave Plaza Bench Modifications)
3. Contractor's Change Order Request Dated 10/18/2016 (Topsoil Import)
4. Contractor's Change Order Request Dated 10/20/2016 (City of Fargo Library Landscaping)
5. Contractor's Change Order Request Dated 10/26/2016 (Street Light Modifications)
6. Contractor's Change Order Request Dated 11/1/2016 (Epoxy Paint)

Submitted by:



November 4, 2016

John Glatzmaier, P.E.
CH2M
Metro Flood Diversion Project

Date

Keith Berndt, Cass County Administrator
Concur: 4-Nov-16 *Non-Concur:* _____

April Walker, Fargo City Engineer
Concur: 4-Nov-16 *Non-Concur* _____

Mark Bittner, Fargo Director of Engineering
Concur: 4-Nov-16 *Non-Concur:* _____

Jason Benson, Cass County Engineer
Concur: 4-Nov-16 *Non-Concur* _____

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

Robert Zimmerman, Moorhead City Engineer
Concur: 4-Nov-16 *Non-Concur* _____

Nathan Boerboom, Diversion Authority Project Manager
Concur: 4-Nov-16 *Non-Concur:* _____

Change Order No. 14

Date of Issuance:	11/10/2016	Effective Date:	11/10/2016
Owner:	Metro Flood Diversion Authority	Owner's Contract No.:	WP-42F.1S
Owner's Representative:	CH2M HILL Engineers, Inc.	Owner's Representative Project No.:	435534
Contractor:	Industrial Builders, Inc.	Contractor's Project No.:	
Engineer:	Houston-Moore Group, LLC	Work Package No.:	WP-42F.1S
Project:	Fargo-Moorhead Area Diversion	Contract Name:	Flood Control, 2nd Street North, South of Pump Station

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

Description:

1. STREET LIGHT MODIFICATIONS
    a. Add lump sum bid item *0254 Street Light Modifications* for $6,991.60 to accommodate lighting modifications to the 1st Ave bridge and the City Hall parking lot. The attached Change Order 14 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.
2. CITY OF FARGO LIBRARY LANDSCAPING
    a. Add lump sum bid item *0255 City of Fargo Library Landscaping for* $3,462.80 to accommodate re-landscaping the area in the southeast corner of the Fargo Library The attached Change Order 14 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.
3. EPOXY PAINT
    a. Add bid item *0256 Paint Epoxy Line 24" Wide* for $13.20/LF to accommodate adding temporary paint on 3rd Street North. Add bid item *0257 Paint Epoxy Messages* for $16.50/SF to accommodate adding temporary paint messages on 3rd Street North. Modify bid item *0135 Paint Epoxy Line 4" Wide* to accommodate adding epoxy paint. Decrease quantities in bid items 0131, 0132, and 0133 to accommodate grooved plastic film no longer used. The attached Change Order 14 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.
4. DIFFERING SITE CONDITIONS
    a. Increase bid item *0233 Differing Subsurface Condition by* $16,200.39 to accommodate removing unsuitable material from the project site. The attached Change Order 14 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.
5. 3rd STREET LIGHTING MODIFICATIONS
    a. Add lump sum bid item *0258 3rd Street Lighting Modifications* for $5,406.50 to accommodate new light bases and wiring for the street lights along 3rd Street North in coordination with the City of Fargo. The attached Change Order 14 Unit Price Schedule

dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.

6. 1st AVE PLAZA BENCH MODIFICATIONS
    a. Add lump sum bid item *0259 1st Ave Plaza Bench Modifications* for $8,317.15 to accommodate modifications required to the precast benches due to grading issues and plaza layout. The attached Change Order 14 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.
7. TOPSOIL IMPORT
    a. Add bid item *0260 Topsoil Import Compacted Volume* for $28.39/CY to accommodate importing topsoil required in the Case Plaza area to replace the contaminated topsoil removed from the area. Add bid item *0261 Topsoil Import Loose Volume* for $21.84/CY to accommodate importing topsoil required in the project area to replace the topsoil that was too debris-laden for re-use and removed from the area. The attached Change Order 14 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.
8. TEMPORARY STRAW MULCH
    a. Add bid item *0262 Temporary Straw Mulch* for $0.17/SY to accommodate installing straw mulch as temporary cover over the disturbed ground for the winter. The attached Change Order 14 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.

Attachments:
Change Order 14 Unit Price Schedule Dated 11/10/2016

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES *[note changes in Milestones if applicable]*
Original Contract Price: **16,184,905.85**	Original Contract Times: Interim Milestone A: November 30, 2015 Substantial Completion: October 1, 2016 Ready for Final Payment: June 15, 2017
[Increase] [~~Decrease~~] from previously approved Change Orders No. 01 thru 13: **895,747.13**	[~~Increase~~] [~~Decrease~~] from previously approved Change Orders No. 01 thru 13: Interim Milestone A: December 30, 2015 Substantial Completion: November 7, 2016 Ready for Final Payment: July 22, 2017
Contract Price prior to this Change Order: **17,080,652.98**	Contract Times prior to this Change Order: Interim Milestone A: December 30, 2015 Substantial Completion: November 7, 2016 Ready for Final Payment: July 22, 2017
[Increase] [~~Decrease~~] of this Change Order: **81,816.44**	[~~Increase~~] [~~Decrease~~] of this Change Order:
Contract Price incorporating this Change Order: **17,162,469.42**	Contract Times with all approved Change Orders: Interim Milestone A: December 30, 2015 Substantial Completion: November 7, 2016 Ready for Final Payment: July 22, 2017

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Owner's Representative (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Name: Tyler Smith, P.E.	Name: Darrell Vanyo	Name: David Goulet
Title: Construction Manager	Title: Chairman	Title: Project Manager
Date: _____	Date: _____	Date: _____

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11/03/2016 9:22:03 PM

WP-42F.1S
2nd Street/Downtown Area - In-Town Levees

Change Order 14 Unit Price Schedule
DATE: 11/10/2016

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0001	Remove Sanitary Manhole	EA	15	2,000.00	$ 30,000.00			$ -	15	2,000.00	$ 30,000.00	
0002	Remove Sanitary Lift Station	LS	1	23,000.00	$ 23,000.00			$ -	1	23,000.00	$ 23,000.00	
0003	Remove 10x10 Clay Filled Regulator Pit	EA	1	16,000.00	$ 16,000.00			$ -	1	16,000.00	$ 16,000.00	
0004	Remove 12x10 Sanitary Junction Vault	EA	1	14,000.00	$ 14,000.00			$ -	1	14,000.00	$ 14,000.00	
0005	F&I Sanitary Manhole 4' Dia Reinf Conc	EA	11	5,800.00	$ 63,800.00			$ -	11	5,800.00	$ 63,800.00	
0006	F&I Sanitary Manhole w/Ext Drop 4' Dia Reinf Conc	EA	3	7,100.00	$ 21,300.00			$ -	3	7,100.00	$ 21,300.00	
0007	F&I Sanitary Manhole SS-1	EA	1	27,000.00	$ 27,000.00			$ -	1	27,000.00	$ 27,000.00	
0008	F&I Sanitary Manhole SS-8	EA	1	18,000.00	$ 18,000.00			$ -	1	18,000.00	$ 18,000.00	
0009	F&I Sanitary Manhole Type E Reinf Conc	EA	3	25,500.00	$ 75,988.95			$ -	3	25,500.00	$ 75,988.95	
0010	F&I 2-Way Cleanout	EA	1	3,000.00	$ 3,000.00			$ -	1	3,000.00	$ 3,000.00	
0011	F&I Casting - Floating Manhole	EA	1	1,800.00	$ 1,800.00			$ -	1	1,800.00	$ 1,800.00	
0012	Connect Sanitary Pipe to Exist Pipe	EA	1	2,500.00	$ 2,500.00			$ -	1	2,500.00	$ 2,500.00	
0013	F&I Insulation 2" Thick	SY	425	20.00	$ 8,500.00			$ -	425	20.00	$ 8,500.00	
0014	F&I Sanitary Pipe Sch 40 - 4" Dia PVC	LF	21	200.00	$ 4,200.00			$ -	21	200.00	$ 4,200.00	
0015	F&I Sanitary Pipe SDR 26 - 6" Dia PVC	LF	18	120.00	$ 2,160.00			$ -	18	120.00	$ 2,160.00	
0016	F&I Sanitary Pipe SDR 26 - 12" Dia PVC	LF	185	206.00	$ 38,110.00			$ -	185	206.00	$ 38,110.00	
0017	F&I Sanitary Pipe SDR 26 - 18" Dia PVC	LF	251	180.00	$ 45,180.00			$ -	251	180.00	$ 45,180.00	
0018	F&I Sanitary Pipe SDR 26 - 36" Dia PVC	LF	38	350.00	$ 13,300.00			$ -	38	350.00	$ 13,300.00	
0019	F&I Sanitary Pipe w/GB Sch 40 - 4" Dia PVC	LF	38	275.00	$ 10,450.00			$ -	38	275.00	$ 10,450.00	
0020	F&I Sanitary Pipe w/GB SDR 26 - 6" Dia PVC	LF	22	261.00	$ 5,742.00			$ -	22	261.00	$ 5,742.00	
0021	F&I Sanitary Pipe w/GB SDR 26 - 12" Dia PVC	LF	865	470.00	$ 406,550.00			$ -	865	470.00	$ 406,550.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0022	F&I Sanitary Pipe w/GB SDR 35 - 12" Dia PVC	LF	49	300.00	$ 14,700.00			$ -	49	300.00	$ 14,700.00	
0023	F&I Sanitary Pipe w/GB SDR 26 - 15" Dia PVC	LF	95	290.00	$ 27,550.00			$ -	95	290.00	$ 27,550.00	
0024	F&I Sanitary Pipe w/GB SDR 35 - 15" Dia PVC	LF	6	415.00	$ 2,490.00			$ -	6	415.00	$ 2,490.00	
0025	F&I Sanitary Pipe w/GB SDR 26 - 18" Dia PVC	LF	430	420.00	$ 180,600.00			$ -	430	420.00	$ 180,600.00	
0026	F&I Sanitary Pipe w/GB SDR 26 - 36" Dia PVC	LF	30	810.00	$ 24,300.00			$ -	30	810.00	$ 24,300.00	
0027	F&I DI Fittings-Sanitary Force Main	LB	11965	7.00	$ 83,755.00			$ -	11965	7.00	$ 83,755.00	
0028	F&I Sanitary Valve 8" Dia-Plug Valve	EA	1	4,300.00	$ 4,300.00			$ -	1	4,300.00	$ 4,300.00	
0029	F&I Sanitary Valve 16" Dia-Plug Valve	EA	1	9,000.00	$ 9,000.00			$ -	1	9,000.00	$ 9,000.00	
0030	F&I Sanitary Valve 24" Dia-Plug Valve	EA	1	27,000.00	$ 27,000.00			$ -	1	27,000.00	$ 27,000.00	
0031	F&I Sanitary Valve 30" Dia-Plug Valve	EA	1	41,000.00	$ 41,000.00			$ -	1	41,000.00	$ 41,000.00	
0032	F&I Pipe w/GB Class 53-8" Dia DIP (Protecto 401)	LF	10	355.00	$ 3,550.00			$ -	10	355.00	$ 3,550.00	
0033	F&I Sanitary Pipe w/GB DR 25 - 16" Dia PVC	LF	310	330.00	$ 102,300.00			$ -	310	330.00	$ 102,300.00	
0034	F&I Sanitary Pipe w/GB DR 25 - 24" Dia PVC	LF	125	500.00	$ 62,500.00			$ -	125	500.00	$ 62,500.00	
0035	F&I Sanitary Pipe w/GB DR 25 - 30" Dia PVC	LF	795	400.00	$ 318,000.00			$ -	795	400.00	$ 318,000.00	
0036	Remove Sanitary Pipe All Sizes All Types	LF	2249	$ 15.00	$ 33,735.00			$ -	2249	$ 15.00	$ 33,735.00	
0037	Plug Sanitary Pipe 10" Diameter	EA	3	$ 1,150.00	$ 3,450.00			$ -	3	$ 1,150.00	$ 3,450.00	
0038	Plug Sanitary Pipe 12" Diameter	EA	6	$ 1,270.00	$ 7,620.00			$ -	6	$ 1,270.00	$ 7,620.00	
0039	Plug Sanitary Pipe 16" Diameter	EA	1	$ 1,465.00	$ 1,465.00			$ -	1	$ 1,465.00	$ 1,465.00	
0040	Plug Sanitary Pipe 18" Diameter	EA	3	$ 1,660.00	$ 4,980.00			$ -	3	$ 1,660.00	$ 4,980.00	
0041	Abandon Sanitary Manhole	EA	1	$ 2,000.00	$ 2,000.00			$ -	1	$ 2,000.00	$ 2,000.00	
0042	F&I Emergency Overflow Manhole Equipment	LS	0.618092	$ 15,200.00	$ 9,395.00			$ -	0.618092	$ 15,200.00	$ 9,395.00	
0043	F&I 5" Hydrant	EA	5	$ 4,600.00	$ 23,000.00			$ -	5	$ 4,600.00	$ 23,000.00	
0044	Remove Hydrant	EA	4	$ 1,000.00	$ 4,000.00			$ -	4	$ 1,000.00	$ 4,000.00	
0045	F&I Insulation 4" Thick	SY	10	$ 72.00	$ 720.00			$ -	10	$ 72.00	$ 720.00	
0046	Connect Water Service	EA	1	$ 900.00	$ 900.00			$ -	1	$ 900.00	$ 900.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0047	F&I Watermain Pipe C900 DR 18 - 4" Dia PVC	LF	21	$ 70.00	$ 1,470.00			$ -	21	$ 70.00	$ 1,470.00	
0048	F&I Watermain Pipe C900 DR 18 - 6" Dia PVC	LF	89	$ 55.00	$ 4,895.00			$ -	89	$ 55.00	$ 4,895.00	
0049	F&I Watermain Pipe C900 DR 18 - 8" Dia PVC	LF	214	$ 44.00	$ 9,416.00			$ -	214	$ 44.00	$ 9,416.00	
0050	F&I Watermain Pipe w/GB C900 DR 18 - 6" Dia PVC	LF	22	$ 183.00	$ 4,026.00			$ -	22	$ 183.00	$ 4,026.00	
0051	F&I Watermain Pipe w/GB C900 DR 18 - 8" Dia PVC	LF	333	$ 185.00	$ 61,605.00			$ -	333	$ 185.00	$ 61,605.00	
0052	F&I Gate Valve 4" Dia	EA	1	$ 1,350.00	$ 1,350.00			$ -	1	$ 1,350.00	$ 1,350.00	
0053	F&I Gate Valve 6" Dia	EA	9	$ 1,750.00	$ 15,750.00			$ -	9	$ 1,750.00	$ 15,750.00	
0054	F&I Gate Valve 8" Dia	EA	2	$ 2,370.00	$ 4,740.00			$ -	2	$ 2,370.00	$ 4,740.00	
0055	F&I Watermain Pipe 1" Dia Copper	LF	3	$ 75.00	$ 225.00			$ -	3	$ 75.00	$ 225.00	
0056	F&I Watermain Pipe w/GB 1" Dia Copper	LF	64	$ 180.00	$ 11,520.00			$ -	64	$ 180.00	$ 11,520.00	
0057	Remove Watermain Pipe All Sizes All Types	LF	1765	$ 17.00	$ 30,005.00			$ -	1765	$ 17.00	$ 30,005.00	
0058	Temporary Water Service (Howard Johnson Hotel)	LS	1	$ 28,000.00	$ 28,000.00			$ -	1	$ 28,000.00	$ 28,000.00	
0059	Plug Watermain Pipe 6" Dia	EA	4	$ 900.00	$ 3,600.00			$ -	4	$ 900.00	$ 3,600.00	
0060	F&I Watermain Fittings Ductile Iron	LBS	6275	$ 8.51	$ 53,400.25			$ -	6275	$ 8.51	$ 53,400.25	
0061	F&I Storm Manhole 4' Dia Reinf Conc	EA	5	$ 2,675.00	$ 13,375.00			$ -	5	$ 2,675.00	$ 13,375.00	
0062	F&I Storm Manhole 7' Dia Reinf Conc	EA	3	$ 15,300.00	$ 45,900.00			$ -	3	$ 15,300.00	$ 45,900.00	
0063	F&I Storm Manhole 8.1	EA	1	$ 22,000.00	$ 22,000.00			$ -	1	$ 22,000.00	$ 22,000.00	
0064	F&I Storm Manhole 8' Dia Reinf Conc	EA	3	$ 16,700.00	$ 50,100.00			$ -	3	$ 16,700.00	$ 50,100.00	
0065	F&I Storm Manhole Type E Reinf Conc	EA	8	$ 54,000.00	$ 432,000.00			$ -	8	$ 54,000.00	$ 432,000.00	
0066	F&I Storm Manhole ST-2 Special Manhole	EA	1	$ 2,465.00	$ 2,465.00			$ -	1	$ 2,465.00	$ 2,465.00	
0067	F&I Inlet - Manhole (MHI) 4' Dia Reinf Conc	EA	4	$ 2,365.00	$ 9,460.00			$ -	4	$ 2,365.00	$ 9,460.00	
0068	F&I Inlet - Manhole (MHI) 6' Dia Reinf Conc	EA	1	$ 4,000.00	$ 4,000.00			$ -	1	$ 4,000.00	$ 4,000.00	
0069	Raise Storm Sewer Structure	EA	2	$ 3,530.00	$ 7,060.00			$ -	2	$ 3,530.00	$ 7,060.00	
0070	F&I Inlet - Single Box (SBI) Reinf Conc	EA	9	$ 2,000.00	$ 18,000.00			$ -	9	$ 2,000.00	$ 18,000.00	
0071	F&I Inlet - Triple Box Reinf Conc	EA	2	$ 5,900.00	$ 11,800.00			$ -	2	$ 5,900.00	$ 11,800.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0072	F&I Inlet - Bridge Drain	EA	1	$ 5,500.00	$ 5,500.00			$ -	1	$ 5,500.00	$ 5,500.00	
0073	F&I Storm Manhole Type E Crossing Chamber	EA	1	$ 11,000.00	$ 11,000.00			$ -	1	$ 11,000.00	$ 11,000.00	
0074	Connect Storm Pipe to Exist Structure	EA	2	$ 17,000.00	$ 34,000.00			$ -	2	$ 17,000.00	$ 34,000.00	
0075	Connect Storm Pipe to Exist Pipe	EA	1	$ 4,000.00	$ 4,000.00			$ -	1	$ 4,000.00	$ 4,000.00	
0076	Remove Storm Manhole	EA	8	$ 900.00	$ 7,200.00			$ -	8	$ 900.00	$ 7,200.00	
0077	Remove Storm Inlet	EA	22	$ 1,200.00	$ 26,400.00			$ -	22	$ 1,200.00	$ 26,400.00	
0078	Remove Existing Storm Lift Station	LS	1	$ 48,000.00	$ 48,000.00			$ -	1	$ 48,000.00	$ 48,000.00	
0079	Riprap (Outlet)	CY	695	$ 180.00	$ 125,100.00			$ -	695	$ 180.00	$ 125,100.00	
0080	Remove Storm Pipe All Sizes All Types	LF	2283	$ 17.00	$ 38,811.00			$ -	2283	$ 17.00	$ 38,811.00	
0081	F&I Flared End Section 12" Dia Corr Steel	EA	1	$ 272.00	$ 272.00			$ -	1	$ 272.00	$ 272.00	
0082	Box Culvert End Section with Grate	EA	1	$ 160,000.00	$ 160,000.00			$ -	1	$ 160,000.00	$ 160,000.00	
0083	Plug Storm Pipe 4" thru 12" Dia	EA	2	$ 1,600.00	$ 3,200.00			$ -	2	$ 1,600.00	$ 3,200.00	
0084	Plug Storm Pipe 14" thru 24" Dia	EA	1	$ 1,980.00	$ 1,980.00			$ -	1	$ 1,980.00	$ 1,980.00	
0085	Plug Storm Pipe 42" thru 54" Dia	EA	2	$ 3,000.00	$ 6,000.00			$ -	2	$ 3,000.00	$ 6,000.00	
0086	F&I Storm Pipe 12" Dia Reinf Conc	LF	25	$ 64.00	$ 1,600.00			$ -	25	$ 64.00	$ 1,600.00	
0087	F&I Storm Pipe 15" Dia Reinf Conc	LF	49	$ 64.00	$ 3,136.00			$ -	49	$ 64.00	$ 3,136.00	
0088	F&I Storm Pipe 18" Dia Reinf Conc	LF	182	$ 66.00	$ 12,012.00			$ -	182	$ 66.00	$ 12,012.00	
0089	F&I Storm Pipe 24" Dia Reinf Conc	LF	70	$ 77.00	$ 5,390.00			$ -	70	$ 77.00	$ 5,390.00	
0090	F&I Storm Pipe 48" Dia Reinf Conc	LF	47	$ 177.00	$ 8,319.00			$ -	47	$ 177.00	$ 8,319.00	
0091	F&I Storm Pipe 54" Dia Reinf Conc	LF	22	$ 222.00	$ 4,884.00			$ -	22	$ 222.00	$ 4,884.00	
0092	F&I Storm Box Culvert 6'x6' Wide Reinf Conc Cast In Place	LF	100	$ 2,400.00	$ 240,000.00			$ -	100	$ 2,400.00	$ 240,000.00	
0093	F&I Storm Pipe 12" Dia PVC	LF	223	$ 60.00	$ 13,380.00			$ -	223	$ 60.00	$ 13,380.00	
0094	F&I Storm Pipe w/GB 12" Dia Reinf Conc	LF	42	$ 190.00	$ 7,980.00			$ -	42	$ 190.00	$ 7,980.00	
0095	F&I Storm Pipe w/GB 15" Dia Reinf Conc	LF	74	$ 190.00	$ 14,060.00			$ -	74	$ 190.00	$ 14,060.00	
0096	F&I Storm Pipe w/GB 18" Dia Reinf Conc	LF	167	$ 192.00	$ 32,064.00			$ -	167	$ 192.00	$ 32,064.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0097	F&I Storm Pipe w/GB 24" Dia Reinf Conc	LF	334	$ 204.00	$ 68,136.00			$ -	334	$ 204.00	$ 68,136.00	
0098	F&I Storm Pipe w/GB 48" Dia Reinf Conc	LF	155	$ 575.00	$ 89,125.00			$ -	155	$ 575.00	$ 89,125.00	
0099	F&I Storm Pipe w/GB 54" Dia Reinf Conc	LF	598	$ 710.00	$ 424,580.00			$ -	598	$ 710.00	$ 424,580.00	
0100	F&I Storm Pipe w/GB 60" Dia Reinf Conc	LF	10	$ 785.00	$ 7,850.00			$ -	10	$ 785.00	$ 7,850.00	
0101	F&I Storm Box Culvert w/GB 6'x6' Wide Reinf Conc Precast	LF	658	$ 1,440.00	$ 947,520.00			$ -	658	$ 1,440.00	$ 947,520.00	
0102	Remove Pavement All Thicknesses All Types	SY	24454	$ 5.00	$ 122,270.00			$ -	24454	$ 5.00	$ 122,270.00	
0103	Remove Sidewalk All Thicknesses All Types	SY	5606	$ 4.00	$ 22,424.00			$ -	5606	$ 4.00	$ 22,424.00	
0104	Excavation (Roadway)	CY	906	$ 4.00	$ 3,624.00			$ -	906	$ 4.00	$ 3,624.00	
0105	Fill - Import (Roadway)	CY	9910	$ 15.00	$ 148,650.00			$ -	9910	$ 15.00	$ 148,650.00	
0106	Subgrade Preparation	SY	12981	$ 0.70	$ 9,086.70			$ -	12981	$ 0.70	$ 9,086.70	
0107	F&I Woven Geotextile	SY	12981	$ 2.00	$ 25,962.00			$ -	12981	$ 2.00	$ 25,962.00	
0108	F&I Class 5 Agg - 6" Thick	SY	4060	$ 10.00	$ 40,600.00			$ -	4060	$ 10.00	$ 40,600.00	
0109	F&I Class 5 Agg - 8" Thick	SY	295	$ 11.00	$ 3,245.00			$ -	295	$ 11.00	$ 3,245.00	
0110	F&I Class 5 Agg - 12" Thick	SY	8626	$ 14.00	$ 120,764.00			$ -	8626	$ 14.00	$ 120,764.00	
0111	F&I Edge Drain 4" Dia PVC	LF	3353	$ 11.00	$ 36,883.00			$ -	3353	$ 11.00	$ 36,883.00	
0112	F&I Curb & Gutter Standard (Type II)	LF	3749	$ 36.00	$ 134,964.00			$ -	3749	$ 36.00	$ 134,964.00	
0113	Remove Curb & Gutter	LF	4772	$ 5.00	$ 23,860.00			$ -	4772	$ 5.00	$ 23,860.00	
0114	F&I Pavement 9" Thick Doweled Conc	SY	7490	$ 98.00	$ 734,020.00			$ -	7490	$ 98.00	$ 734,020.00	
0115	F&I Crushed Conc - 6" Thick	SY	1063	$ 12.00	$ 12,756.00			$ -	1063	$ 12.00	$ 12,756.00	
0116	F&I Aggregate for Asph Pavement FAA 43	TON	1322	$ 83.00	$ 109,726.00			$ -	1322	$ 83.00	$ 109,726.00	
0117	F&I Asphalt Cement PG 58-28	GAL	14727	$ 2.50	$ 36,817.50			$ -	14727	$ 2.50	$ 36,817.50	
0118	F&I Asphalt Cement PG 58-34	GAL	4296	$ 3.00	$ 12,888.00			$ -	4296	$ 3.00	$ 12,888.00	
0119	F&I Median Nose - Conc	SY	31	$ 112.00	$ 3,472.00			$ -	31	$ 112.00	$ 3,472.00	
0120	F&I Sidewalk 4" Thick Reinf Conc	SY	3017	$ 73.00	$ 220,241.00			$ -	3017	$ 73.00	$ 220,241.00	
0121	F&I Sidewalk 6" Thick Reinf Conc	SY	2845	$ 85.00	$ 241,825.00			$ -	2845	$ 85.00	$ 241,825.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
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			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0122	Temp Construction Entrance	EA	4	$ 3,500.00	$ 14,000.00			$ -	4	$ 3,500.00	$ 14,000.00	
0123	F&I Impressioned 4" Thick Reinf Conc	SY	701	$ 230.00	$ 161,230.00			$ -	701	$ 230.00	$ 161,230.00	
0124	F&I Driveway 6" Thick Reinf Conc	SY	197	$ 85.00	$ 16,745.00			$ -	197	$ 85.00	$ 16,745.00	
0125	F&I Det Warn Panels Cast Iron	SF	284	$ 62.00	$ 17,608.00			$ -	284	$ 62.00	$ 17,608.00	
0126	F&I Sign Assembly	EA	26	$ 260.00	$ 6,760.00			$ -	26	$ 260.00	$ 6,760.00	
0127	F&I Engineering Grade	SF	47	$ 32.00	$ 1,491.20			$ -	47	$ 32.00	$ 1,491.20	
0128	F&I Diamond Grade Cubed	SF	39	$ 80.00	$ 3,136.00			$ -	39	$ 80.00	$ 3,136.00	
0129	F&I High Intensity Prismatic	SF	49	$ 74.00	$ 3,648.20			$ -	49	$ 74.00	$ 3,648.20	
0130	F&I Flexible Delineator	EA	24	$ 80.00	$ 1,920.00			$ -	24	$ 80.00	$ 1,920.00	
0131	F&I Grooved Plastic Film Message	SF	416	$ 31.50	$ 13,104.00	(32)	$ 31.50	$ (1,008.00)	384	$ 31.50	$ 12,096.00	
0132	F&I Grooved Plastic Film 4" Wide	LF	5737	$ 5.20	$ 29,832.40	(392)	$ 5.20	$ (2,038.40)	5345	$ 5.20	$ 27,794.00	
0133	F&I Grooved Plastic Film 8" Wide	LF	1219	$ 10.40	$ 12,677.60	(50)	$ 10.40	$ (520.00)	1169	$ 10.40	$ 12,157.60	
0134	F&I Grooved Contrast Film 7" Wide	LF	744	$ 9.40	$ 6,993.60			$ -	744	$ 9.40	$ 6,993.60	
0135	Paint Epoxy Line 4" Wide	LF	0	$ 8.40	$ -	312	$ 8.40	$ 2,620.80	312	$ 8.40	$ 2,620.80	
0136	F&I Methacrylate 6" Wide	LF	1040	$ 21.00	$ 21,840.00			$ -	1040	$ 21.00	$ 21,840.00	
0137	F&I Methacrylate 16" Wide	LF	264	$ 36.00	$ 9,504.00			$ -	264	$ 36.00	$ 9,504.00	
0138	F&I Methacrylate 24" Wide	LF	56	$ 53.00	$ 2,968.00			$ -	56	$ 53.00	$ 2,968.00	
0139	Traffic Control - Type 2	LS	1	$ 175,000.00	$ 175,000.00			$ -	1	$ 175,000.00	$ 175,000.00	
0140	Obliterate Pavement Markings	SF	18	$ 8.40	$ 151.20			$ -	18	$ 8.40	$ 151.20	
0141	4" Special Concrete 1	SY	318	$ 152.00	$ 48,336.00			$ -	318	$ 152.00	$ 48,336.00	
0142	4" Special Concrete 3	SY	48	$ 265.00	$ 12,720.00			$ -	48	$ 265.00	$ 12,720.00	
0143	6" Special Concrete 1	SY	536	$ 165.00	$ 88,440.00			$ -	536	$ 165.00	$ 88,440.00	
0144	6" Special Concrete 2	SY	172	$ 265.00	$ 45,580.00			$ -	172	$ 265.00	$ 45,580.00	
0145	Sloped Planter Edge	LF	309	$ 132.00	$ 40,788.00			$ -	309	$ 132.00	$ 40,788.00	
0146	Rolled Planter Edge	LF	198	$ 130.00	$ 25,740.00			$ -	198	$ 130.00	$ 25,740.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0147	Mobilization	LS	1	$ 744,700.00	$ 744,700.00			$ -	1	$ 744,700.00	$ 744,700.00	
0148	Temp Fence - Safety	LF	1929	$ 6.00	$ 11,574.00			$ -	1929	$ 6.00	$ 11,574.00	
0149	F&I Chain Link Fence	LF	1124	$ 16.00	$ 17,984.00			$ -	1124	$ 16.00	$ 17,984.00	
0150	F&I Construction Entrance Gate	EA	4	$ 600.00	$ 2,400.00			$ -	4	$ 600.00	$ 2,400.00	
0151	Temp Pumping	LS	1	$ 90,000.00	$ 90,000.00			$ -	1	$ 90,000.00	$ 90,000.00	
0152	Clear & Grub	LS	1	$ 5,000.00	$ 5,000.00			$ -	1	$ 5,000.00	$ 5,000.00	
0153	Remove Tree	EA	115	$ 360.00	$ 41,400.00			$ -	115	$ 360.00	$ 41,400.00	
0154	Silt Fence - Standard	LF	1368	$ 2.70	$ 3,693.60			$ -	1368	$ 2.70	$ 3,693.60	
0155	Floating Silt Fence	LF	149	$ 27.00	$ 4,023.00			$ -	149	$ 27.00	$ 4,023.00	
0156	Sediment Control Log 10" to 15" Dia	LF	1748	$ 3.50	$ 6,118.00			$ -	1748	$ 3.50	$ 6,118.00	
0157	Inlet Protection - New Inlet	EA	17	$ 270.00	$ 4,590.00			$ -	17	$ 270.00	$ 4,590.00	
0158	Inlet Protection - Existing Inlet	EA	16	$ 160.00	$ 2,560.00			$ -	16	$ 160.00	$ 2,560.00	
0159	Install Tree Grate	EA	4	$ 2,625.00	$ 10,500.00			$ -	4	$ 2,625.00	$ 10,500.00	
0160	Structural Soil Including Drain Tile	LS	1	$ 25,000.00	$ 25,000.00			$ -	1	$ 25,000.00	$ 25,000.00	
0161	Topsoil Import - Special Including Drain Tile	LS	1	$ 22,000.00	$ 22,000.00			$ -	1	$ 22,000.00	$ 22,000.00	
0162	Gateway Monument	EA	2	$ 28,000.00	$ 56,000.00			$ -	2	$ 28,000.00	$ 56,000.00	
0163	15' Cast Stone Bench	EA	3	$ 9,000.00	$ 27,000.00			$ -	3	$ 9,000.00	$ 27,000.00	
0164	30' Cast Stone Bench	EA	2	$ 15,000.00	$ 30,000.00			$ -	2	$ 15,000.00	$ 30,000.00	
0165	Street Lighting	LS	1	$ 150,000.00	$ 150,000.00			$ -	1	$ 150,000.00	$ 150,000.00	
0166	Plaza Lighting	LS	1	$ 9,000.00	$ 9,000.00			$ -	1	$ 9,000.00	$ 9,000.00	
0167	Remove Fence with Brick Columns (Includes Case Plaza Sign)	LS	1	$ 5,000.00	$ 5,000.00			$ -	1	$ 5,000.00	$ 5,000.00	
0168	Remove and Salvage City of Fargo Sign/Remove Landscaping	LS	1	$ 2,000.00	$ 2,000.00			$ -	1	$ 2,000.00	$ 2,000.00	
0169	Remove Outfall Including Adjacent Concrete Structures	EA	2	$ 21,000.00	$ 42,000.00			$ -	2	$ 21,000.00	$ 42,000.00	
0170	Remove Crosswalk Pavement Markings and Signal from NP Avenue	LS	1	$ 2,000.00	$ 2,000.00			$ -	1	$ 2,000.00	$ 2,000.00	
0171	Remove and Salvage Parking Lot Concrete Stops	EA	120	$ 60.00	$ 7,200.00			$ -	120	$ 60.00	$ 7,200.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0172	Remove Landscaped Area (Howard Johnson Hotel)	LS	1	$ 6,500.00	$ 6,500.00			$ -	1	$ 6,500.00	$ 6,500.00	
0173	Remove Concrete Planter	EA	8	$ 80.00	$ 640.00			$ -	8	$ 80.00	$ 640.00	
0174	Remove Sidestreet Grill Sign	LS	1	$ 4,000.00	$ 4,000.00			$ -	1	$ 4,000.00	$ 4,000.00	
0175	Remove Building (Parking Lot Attendant Building)	LS	1	$ 5,000.00	$ 5,000.00			$ -	1	$ 5,000.00	$ 5,000.00	
0176	Remove and Salvage Traffic Signal Equipment - System "A" (2ND ST/4TH AVE N)	LS	1	$ 6,000.00	$ 6,000.00			$ -	1	$ 6,000.00	$ 6,000.00	
0177	Traffic Signal System "A" (2 ST / 1 AVE N)	LS	1	$ 260,000.00	$ 260,000.00			$ -	1	$ 260,000.00	$ 260,000.00	
0178	Traffic Signal System "B" (3 ST / 1 AVE N)	LS	1	$ 235,000.00	$ 235,000.00			$ -	1	$ 235,000.00	$ 235,000.00	
0179	Modify Traffic Signal System "C" (2 ST / NP AVE)	LS	1	$ 105,000.00	$ 105,000.00			$ -	1	$ 105,000.00	$ 105,000.00	
0180	Modify Traffic Signal System "D" (4 ST / 2 AVE N)	LS	1	$ 36,000.00	$ 36,000.00			$ -	1	$ 36,000.00	$ 36,000.00	
0181	Modify Traffic Signal System "E" (4 ST / 3 AVE N)	LS	1	$ 26,000.00	$ 26,000.00			$ -	1	$ 26,000.00	$ 26,000.00	
0182	Modify Traffic Signal System "F" (4 ST / 4 AVE N)	LS	1	$ 38,000.00	$ 38,000.00			$ -	1	$ 38,000.00	$ 38,000.00	
0183	Class 1 Overlay	SY	25	$ 600.00	$ 15,000.00			$ -	25	$ 600.00	$ 15,000.00	
0184	Bridge Concrete Removal	LS	1	$ 45,000.00	$ 45,000.00			$ -	1	$ 45,000.00	$ 45,000.00	
0185	Jersey Barrier Formed or Slipformed	LF	42	$ 230.00	$ 9,660.00			$ -	42	$ 230.00	$ 9,660.00	
0186	Bridge Curb	LF	20	$ 65.00	$ 1,300.00			$ -	20	$ 65.00	$ 1,300.00	
0187	Class AAE-3 Concrete	CY	54	$ 1,500.00	$ 81,000.00			$ -	54	$ 1,500.00	$ 81,000.00	
0188	Compression Seal	LF	180	$ 65.00	$ 11,700.00			$ -	180	$ 65.00	$ 11,700.00	
0189	Structural Steel	LS	1	$ 75,000.00	$ 75,000.00			$ -	1	$ 75,000.00	$ 75,000.00	
0190	Remove Foundation (Case Plaza and Mid America Steel, Inc.)	LS	1	$ 40,000.00	$ 40,000.00			$ -	1	$ 40,000.00	$ 40,000.00	
0191	F&I Sheet Piling - Steel	SF	470	$ 60.00	$ 28,200.00			$ -	470	$ 60.00	$ 28,200.00	
0192	Topsoil - Strip	CY	4085	$ 2.00	$ 8,170.00			$ -	4085	$ 2.00	$ 8,170.00	
0193	Topsoil - Spread	CY	3429	$ 2.00	$ 6,858.00			$ -	3429	$ 2.00	$ 6,858.00	
0194	Embankment	CY	3210	$ 4.00	$ 12,840.00			$ -	3210	$ 4.00	$ 12,840.00	
0195	Fill - Haul	CY	8370	$ 8.00	$ 66,960.00			$ -	8370	$ 8.00	$ 66,960.00	
0196	Inspection Trench	CY	175	$ 12.00	$ 2,100.00			$ -	175	$ 12.00	$ 2,100.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0197	Subcut	CY	500	$ 15.00	$ 7,500.00			$ -	500	$ 15.00	$ 7,500.00	
0198	Excavation	CY	1815	$ 9.00	$ 16,335.00			$ -	1815	$ 9.00	$ 16,335.00	
0199	Removal of Contaminated Soil	CY	2929.677	$ 155.00	$ 454,099.94			$ -	2929.677	$ 155.00	$ 454,099.94	
0200	Removal of Highly Contaminated Soil	CY	200	$ 160.00	$ 32,000.00			$ -	200	$ 160.00	$ 32,000.00	
0201	Mulching Type 1 - Hydro	SY	20439	$ 0.42	$ 8,584.38			$ -	20439	$ 0.42	$ 8,584.38	
0202	Seeding Type B	SY	20439	$ 0.42	$ 8,584.38			$ -	20439	$ 0.42	$ 8,584.38	
0203	Overseeding	SY	20439	$ 0.11	$ 2,248.29			$ -	20439	$ 0.11	$ 2,248.29	
0204	Weed Control Type B	SY	20439	$ 0.07	$ 1,430.73			$ -	20439	$ 0.07	$ 1,430.73	
0205	Removable Floodwall	SF	1475	$ 110.00	$ 162,250.00			$ -	1475	$ 110.00	$ 162,250.00	
0206	F&I Floodwall Reinf Bars - Steel	LB	496765	$ 1.15	$ 571,279.75			$ -	496765	$ 1.15	$ 571,279.75	
0207	F&I Floodwall Reinf Bars - Epoxy Coated Steel	LB	217633	$ 1.30	$ 282,922.90			$ -	217633	$ 1.30	$ 282,922.90	
0208	F&I Floodwall - Structural Conc	CY	3847.37	$ 888.00	$ 3,416,464.56			$ -	3847.37	$ 888.00	$ 3,416,464.56	
0209	Not Used				$ -			$ -			$ -	
0210	Diesel Generator	LS	1	$ 410,000.00	$ 410,000.00			$ -	1	$ 410,000.00	$ 410,000.00	
0211	Generator Foundation Pad	LS	1	$ 40,000.00	$ 40,000.00			$ -	1	$ 40,000.00	$ 40,000.00	
0212	Misc. (fence, etc.)	LS	1	$ 25,000.00	$ 25,000.00			$ -	1	$ 25,000.00	$ 25,000.00	
0213	Health and Safety	LS	1	$ 20,000.00	$ 20,000.00			$ -	1	$ 20,000.00	$ 20,000.00	
0214	Incentive	LS	1	$ 150,000.00	$ 150,000.00			$ -	1	$ 150,000.00	$ 150,000.00	
0215	Small Utility Work-Around	LS	1	$ 169,490.20	$ 169,490.20			$ -	1	$ 169,490.20	$ 169,490.20	
0216	Traffic Control Revisions and Concrete Barriers for Xcel Lines	LS	1	$ 13,225.02	$ 13,225.02			$ -	1	$ 13,225.02	$ 13,225.02	
0217	F&I Watermain Pipe C900 DR 18 - 10" Dia PVC	LF	792	$ 52.50	$ 41,580.00			$ -	792	$ 52.50	$ 41,580.00	
0218	F&I Watermain Pipe w/GB C900 DR 18 - 10" Dia PVC	LF	682	$ 204.20	$ 139,264.40			$ -	682	$ 204.20	$ 139,264.40	
0219	F&I Gate Valve 10" Dia.	EA	4	$ 4,041.50	$ 16,166.00			$ -	4	$ 4,041.50	$ 16,166.00	
0220	Paint Traffic Signal Poles	EA	9	$ 4,235.00	$ 38,115.00			$ -	9	$ 4,235.00	$ 38,115.00	
0221	Bridge Lighting	LS	1	$ 1,815.00	$ 1,815.00			$ -	1	$ 1,815.00	$ 1,815.00	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0222	Excavated Concrete Disposal	LS	1	$ 1,443.46	$ 1,443.46			$ -	1	$ 1,443.46	$ 1,443.46	
0223	Winter Traffic Control	LS	1	$ 3,727.50	$ 3,727.50			$ -	1	$ 3,727.50	$ 3,727.50	
0224	Pump Station Concrete Grading	LS	1	$ 20,068.90	$ 20,068.90			$ -	1	$ 20,068.90	$ 20,068.90	
0225	Bridge Abutment Seal	LS	1	$ 8,108.33	$ 8,108.33			$ -	1	$ 8,108.33	$ 8,108.33	
0226	Bridge Abutment Concrete Disposal	LS	1	$ 4,256.28	$ 4,256.28			$ -	1	$ 4,256.28	$ 4,256.28	
0227	Additional H-Piling	LS	1	$ 6,587.50	$ 6,587.50			$ -	1	$ 6,587.50	$ 6,587.50	
0228	Traffic Signal modifications	LS	1	$ 29,722.00	$ 29,722.00			$ -	1	$ 29,722.00	$ 29,722.00	
0229	Additional Forming-Step Footing	LS	1	$ 1,608.52	$ 1,608.52			$ -	1	$ 1,608.52	$ 1,608.52	
0230	Wall Cap for Abutment	LS	1	$ 2,843.38	$ 2,843.38			$ -	1	$ 2,843.38	$ 2,843.38	
0231	Tee Manhole Addition	LS	1	$ 13,549.70	$ 13,549.70			$ -	1	$ 13,549.70	$ 13,549.70	
0232	SS-10 Manhole Revision	LS	1	$ 2,828.85	$ 2,828.85			$ -	1	$ 2,828.85	$ 2,828.85	
0233	Differing Subsurface Condition	LS	1	$ 324,135.10	$ 324,135.10	1	$ 16,200.39	$ 16,200.39	1	$ 340,335.49	$ 340,335.49	
0234	Floating Manhole Castings	LS	1	$ 28,473.07	$ 28,473.07			$ -	1	$ 28,473.07	$ 28,473.07	
0235	F&I Sanitary Pipe SDR 26 - 8" Dia PVC	LF	11	$ 150.46	$ 1,655.06			$ -	11	$ 150.46	$ 1,655.06	
0236	F&I Sanitary Pipe w/GB SDR 26 - 8" Dia PVC	LF	30	$ 392.46	$ 11,773.80			$ -	30	$ 11,773.80	$ 11,773.80	
0237	Remove Parking Attendant Structure	LS	1	$ 6,615.00	$ 6,615.00			$ -	1	$ 6,615.00	$ 6,615.00	
0238	Wall Penetrations	LS	1	$ 5,980.75	$ 5,980.75			$ -	1	$ 5,980.75	$ 5,980.75	
0239	CenturyLink Concrete Removal	LS	1	$ 10,021.00	$ 10,021.00			$ -	1	$ 10,021.00	$ 10,021.00	
0240	F&I Light Pull Boxes	EA	14	$ 1,100.00	$ 15,400.00			$ -	14	$ 1,100.00	$ 15,400.00	
0241	Floodwall Caps Modification	EA	1	$ 7,572.00	$ 7,572.00			$ -	1	$ 7,572.00	$ 7,572.00	
0242	Repair Storm Manholes	LS	1	$ 12,913.20	$ 12,913.20			$ -	1	$ 12,913.20	$ 12,913.20	
0243	Contaminated Soil Removal	LS	1	$ 200,000.00	$ 200,000.00			$ -	1	$ 200,000.00	$ 200,000.00	
0244	ST-8.1 Cover	LS	1	$ 8,553.35	$ 8,553.35			$ -	1	$ 8,553.35	$ 8,553.35	
0245	F&I Impressioned 6" Thick Reinf Conc	SY	1	$ 252.00	$ 252.00			$ -	1	$ 252.00	$ 252.00	
0246	Pipe Bursting 1st Ave N and 3rd St N	LS	1	$ 10,215.06	$ 10,215.06			$ -	1	$ 10,215.06	$ 10,215.06	

WP-42F.1S - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget (Through Change Order 13)			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0247	Utility Vault Adjustment	EA	2	$ 313.50	$ 627.00			$ -	2	$ 313.50	$ 627.00	
0248	1st Ave N Bridge Spall Removal	LS	1	$ 2,305.60	$ 2,305.60			$ -	1	$ 2,305.60	$ 2,305.60	
0249	F&I Storm Pipe 8" Dia PVC	LF	38	$ 87.73	$ 3,333.74			$ -	38	$ 87.73	$ 3,333.74	
0250	F&I Pump Station Manhole Inlet	EA	2	$ 2,219.23	$ 4,438.46			$ -	2	$ 2,219.23	$ 4,438.46	
0251	12" PVC Flared End Section Riprap	LS	1	$ 825.00	$ 825.00			$ -	1	$ 825.00	$ 825.00	
0252	Paint Line 4" Wide	LF	2309	$ 2.07	$ 4,779.63			$ -	2309	$ 2.07	$ 4,779.63	
0253	Case Plaza Street Light	LS	1	$ 5,170.00	$ 5,170.00			$ -	1	$ 5,170.00	$ 5,170.00	
0254	Street Light Modifications	LS				1	$ 6,991.60	$ 6,991.60	1	$ 6,991.60	$ 6,991.60	
0255	City of Fargo Library Landscaping	LS				1	$ 3,462.80	$ 3,462.80	1	$ 3,462.80	$ 3,462.80	
0256	Paint Epoxy Line 24" Wide	LF				88	$ 13.20	$ 1,161.60	88	$ 13.20	$ 1,161.60	
0257	Paint Epoxy Messages	SF				32	$ 16.50	$ 528.00	32	$ 16.50	$ 528.00	
0258	3rd Street Lighting Modifications	LS				1	$ 5,406.50	$ 5,406.50	1	$ 5,406.50	$ 5,406.50	
0259	1st Ave Plaza Bench Modifications	LS				1	$ 8,317.15	$ 8,317.15	1	$ 8,317.15	$ 8,317.15	
0260	Topsoil Import Compacted Volume	CY				800	$ 28.39	$ 22,712.00	800	$ 28.39	$ 22,712.00	
0261	Topsoil Import Loose Volume	CY				800	$ 21.84	$ 17,472.00	800	$ 21.84	$ 17,472.00	
0262	Temporary Straw Mulch	SY				3000	$ 0.17	$ 510.00	3000	$ 0.17	$ 510.00	
WP-42F.1S - TOTAL AMOUNT			**CURRENT BUDGET**		**$ 17,080,652.98**	**NET CHANGE**		**$ 81,816.44**	**NEW BUDGET**		**$ 17,162,469.42**	

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CHANGE ORDER REQUEST

Industrial Builders, Inc.
15274- - 2nd Street Floodwall and Road Relocation

DATE: 10/11/2016
PCO#:

To:	Tyler Smith CH2M Hill Engineer's Inc 657 2nd Ave N Fargo, ND 58105-5405	**From:**	David Goulet Industrial Builders, Inc. PO Box 406 Fargo, ND 58107-0406
Phone:	701-566-5470	**Phone:**	701-356-9827
Fax:		**Fax:**	
Email:	tyler.smith@ch2m.com	**Email:**	dgoulet@industrialbuilders.com
CC:			

Below is the detail for our proposal to complete the following changes in contract work:

- **PCO: Removals – 3rd St Rework – Plaza Bench – Topsoil Import**

PCO Item	Status	Change (in Days)	Quantity	UM	Unit Price	Amount
1 : September Removals	Initiated		1.00	L S	16200.39	16,200.39
2 : 3rd St. Modifications	Initiated		1.00	L S	5406.50	5,406.50
Rework and new light bases installed per City of Fargo representative						
3 : Plaza Bench Re-work	Initiated		1.00	L S	8317.15	8,317.15
4 : Topsoil Import	Initiated		?	CY	21.84	
This price is loose volume delivered price, due to the additional small areas that need the black dirt an in place quantity will be challenging to survey.						

Submitted By:

10/12/2016

David Goulet — Date

Approved By:

Tyler Smith
CH2M Hill Engineer's Inc — Date

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Reiner Contracting, Inc.
Change Order for Debris Removal
8/21/2016 - 9/24/2016

Loading

Date	Employee	Hours	Classification	Rate	Labor Charge	Equipment	Rate	Equipment Charge
8/22/2016	Eric Prentice	2	Operator	$ 98.62	$ 197.24	349E Excavator	$ 286.42	$ 572.84
8/22/2016	Kit Miller	1	Operator	$ 98.62	$ 98.62	950G II Loader	$ 93.31	$ 93.31
8/22/2016	William Lundberg	1	Laborer	$ 94.51	$ 94.51			
8/22/2016	Lyle Olson	1	Laborer	$ 94.51	$ 94.51			
8/22/2016	Austin Prentice	1	Laborer	$ 94.51	$ 94.51			
8/22/2016	Pete Nistler	1	Foreman	$ 121.13	$ 121.13			
8/22/2016	Frank Little	1	Project Mgr	$ 141.10	$ 141.10			
9/6/2016	Eric Prentice	8	Operator	$ 98.62	$ 788.96	349E Excavator	$ 286.42	$ 2,291.36
9/6/2016	Pete Nistler	1	Foreman	$ 121.13	$ 121.13			
9/6/2016	Frank Little	1	Project Mgr	$ 141.10	$ 141.10			
9/7/2016	Kit Miller	3.5	Operator	$ 98.62	$ 345.17	950G II Loader	$ 93.31	$ 326.59
9/7/2016	Pete Nistler	1	Foreman	$ 121.13	$ 121.13			
9/7/2016	Frank Little	1	Project Mgr	$ 141.10	$ 141.10			
9/21/2016	Kit Miller	1.5	Operator	$ 98.62	$ 147.93	950G II Loader	$ 93.31	$ 139.97
9/21/2016	Pete Nistler	0.5	Foreman	$ 121.13	$ 60.57			
9/21/2016	Frank Little	0.5	Project Mgr	$ 141.10	$ 70.55			
9/22/2016	Kit Miller	2.5	Operator	$ 98.62	$ 246.55	950G II Loader	$ 93.31	$ 233.28
9/22/2016	Pete Nistler	0.5	Foreman	$ 121.13	$ 60.57			
9/22/2016	Frank Little	0.5	Project Mgr	$ 141.10	$ 70.55			
			Total-Additional Time		$ 3,156.92			$ 3,657.34
					a			a
			Grand Total-Aug 22 - Sep 24		$ 12,694.32	= Σa		

Hauling

Employee	Hours	Rate	Hauling Charge	Trailer Style
Jeremiah Andreoff	2.25	$ 130.89	$ 294.50	Sidedump
Karl Nelson	2	$ 130.89	$ 261.78	Sidedump
Luke Olson	9.5	$ 130.89	$ 1,243.46	Sidedump
Luke Olson	8.5	$ 130.89	$ 1,112.57	Sidedump
David Mumm	3	$ 130.89	$ 392.67	Sidedump
Dean Krippner	2.5	$ 130.89	$ 327.23	Sidedump
David Mumm	5.75	$ 130.89	$ 752.62	Sidedump
Dean Krippner	5	$ 130.89	$ 654.45	Sidedump
			$ 5,039.27	
			a	

Disposal

Unsuitable Backfill-IBI Yard	Bricks/Small Logs-IBI Yard	Conduit / Large Timber-Landfill	Concrete-IBI Yard
		$ 65.00	
		$ 65.00	
	X	$ 65.00	
		$ 190.80	
		$ 65.00	
		$ 65.00	
		$ 65.00	
		$ 65.00	
		$ 65.00	
		$ 65.00	
		$ 65.00	
	X		
	X		
	X		
	X		
		$ 840.80	
		a	

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September - Haul out Debris

	Total Hours	Regular Hours		Overtime Hours (20%)		Total	
1 Project Manager	2	116	1.6	127.6	0.4	$	236.64
					Total:	***$***	***236.64***

Debris Removal

Date	Loads	Units	Price	Total	
8/22/16: Reiner - Sidedumps		6	$ 125.00	**$**	**750.00**
9/21/16: Reiner - Sidedumps		2	$ 125.00	**$**	**250.00**
9/22/16: Reiner - Sidedumps		8	$ 125.00	**$**	**1,000.00**
			Material Total:	***$***	***2,000.00***
			Total Change Order:	**$**	**2,236.64**

DENNER CONTRACTING INC.
TRUCK DRIVER'S TIME & LOG

21541 Hwy. 7 W • Hutchinson, MN 55350 • 320-587-9886

NO. 22676

DRIVER Jeremiah Ardisoff COMPANY JOB 15-112

UNIT 34 TRAILER 752 OIL ADDED GALS FUEL DATE 8-22-16

	TIME	LOADING SITE	CUSTOMER	WEIGHT/VOLUME	DESTINATION	MATERIAL
1	6:50	Fargo	15-112	Load	Landfill	concrete
2	8:15	Summit Pit	"	22.95 tons	Fargo	class 3
3	9:06	Fargo	"	Load	iBi	concrete
4	10:07	"	"	"	"	"
5	11:22	Fargo	"	Load	iBi	clay
6	12:35	"	"	"	"	"
7	1:37	"	"	"	"	"
8						
9						
10						
11						
12						
13						
14						
15						
16			2.25 hrs.			
17				change order		
18						
19						
20						

UNIT NO.	TIME START	TIME STOP	MAN HOURS	EQUIP. HOURS	DESCRIPTION OF WORK
	2:30	4:30	2.0	2.0	Drive to Fargo
34/752	6:00	6:15	.25	.25	Pre trip
	6:15	6:30	.25	.25	Drive to Job
	6:30	9:00	2.50	2.50	Haul concrete to Landfill, sand back
	9:00	11:15	2.25	2.25	Haul concrete to iBi
	11:15	2:30	3.25	3.25	Haul clay to iBi
	2:30	6:15	3.75	3.75	Drive to Hutch fuel up, shop
	6:15	7:15	1.0	1.0	wash, tnk & trl
	7:15	7:30	.25	.25	Post trip
TOTAL			15.50	15.50	

Page 1

REMMER CONTRACTING INC.

TRUCK DRIVER'S TIME & LOG

ID 23085

21541 Hwy. 7 W • Hutchinson, MN 55350 • 320-587-9886

DRIVER KARL NELSON COMPANY JOB

UNIT 19/36 TRAILER 751 OIL ADDED GALS FUEL DATE 8/22/16

	TIME	LOADING SITE	CUSTOMER	WEIGHT/VOLUME	DESTINATION	MATERIAL
1	719	Jobsite	15-112	Load	Clay Landfill	Demo Clean up
2	919	Summit 41		23.02	Jobsite	Class 3
3	1025	Jobsite		Load	IBI	Concrete
4	1131	↓		↓	↓	Clay
5	1237					↓
6	142	↓	↓	↓	↓	
7						
8						
9						
10						
11						
12						
13						
14						
15						
16			2 hrs - change order			
17						
18						
19						
20						

UNIT NO.	TIME START	TIME STOP	MAN HOURS	EQUIP. HOURS	DESCRIPTION OF WORK
19	200	215	1/4		PRE TRIP
19	215	545	3 1/2	3 1/2	TRAVEL Hutch to moorhead
19	545	600	1/4		POST TRIP
36/751	600	615	1/4		PRE TRIP
36/751	615	630	1/4	1/4	TRAVEL TO FUEL
36/751	630	645	1/4		FUEL
36/751	645	700	1/4	1/4	TRAVEL TO Jobsite
36/751	700	800	1	1	CLAY CO LNDFLL - DEMO CLEANUP
36/751	800	900	1	1	CLASS 3 - Summit 41 TO Jobsite
36/751	900	1130	2 1/2	2 1/2	Concrete - Jobsite TO IBI
36/751	1130	230	3	3	Clay - Jobsite TO IBI
	230	500	2 1/2	2 1/2	
TOTAL			15	14	

REINER CONTRACTING INC.
TRUCK DRIVER'S TIME & LOG

21541 Hwy. 7 W • Hutchinson, MN 55350 • 320-587-9886

№ 21850

DRIVER Luke Olson COMPANY Diesel Dogs JOB 15-112

UNIT 115 TRAILER 6403 OIL ADDED _____ GALS FUEL _____ DATE 9-6-16

	TIME	LOADING SITE	CUSTOMER	WEIGHT/VOLUME	DESTINATION	MATERIAL
1	700	2ND Street		18 Yd	[illegible] TBI	Concrete
2	845	"		"	"	"
3	1000	"		"	"	"
4	11:15	"		"	"	"
5	12:25	Case Plaza		"	Clay [illegible] County	Rubble
6	1:45	"		"	Clay County	"
7	3:00	"		"	"	"
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

UNIT NO.	TIME START	TIME STOP	MAN HOURS	EQUIP. HOURS	DESCRIPTION OF WORK
	7	430	9½	9½	
					Pete Minter
					C.O. 3.4 Dep haul off
TOTAL					

REINER CONTRACTING INC.
TRUCK DRIVER'S TIME & LOG

21541 Hwy. 7 W • Hutchinson, MN 55350 • 320-587-9886

№ 21851

DRIVER Luke Olson COMPANY JOB 15-112
UNIT 115 TRAILER 27 OIL ADDED GALS FUEL - DATE 9-7-16

	TIME	LOADING SITE	CUSTOMER	WEIGHT/VOLUME	DESTINATION	MATERIAL
1	800	Case plaza			Clay County	Demo
2	935	"			"	"
3	1010	"			"	"
4	1225	"			"	"
5	1 40	"			"	"
6	2 55	"			"	"
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						

UNIT NO.	TIME START	TIME STOP	MAN HOURS	EQUIP. HOURS	DESCRIPTION OF WORK
	800	430	8 1/2	8 1/2	
TOTAL					

Pete Mento

CO-3.5 sup haul off
Case Plaza

REINER CONTRACTING INC.

TRUCK DRIVER'S TIME & LOG

22637

21541 Hwy. 7 W • Hutchinson, MN 55350 • 320-587-9886

DRIVER David Mumm COMPANY _____ JOB 15-107

UNIT 19 TRAILER 758 OIL ADDED _____ GALS FUEL _____ DATE 9-21-16

	TIME	LOADING SITE	CUSTOMER	WEIGHT/VOLUME	DESTINATION	MATERIAL
1	7:15	ICS	15-107	Load	Hawley Landfill	demo
2	8:31	"	"	"	"	"
3	9:46	"	"	"	"	"
4	10:56	"	"	"	"	"
5	12:04	"	"	"	"	"
6	1:18	"	"	"	"	"
7	2:17	"	"	"	"	"
8	3:31	ICS	15-107	Load	Algozzo	clay
9	4:06	IBI site	"	Load	IBI	concrete
10	5:20	"	"	"	TSI	clay
11						
12						
13		4:00 → 7:00				
14			change order			
15		3 hrs				
16						
17						
18						
19						
20						

UNIT NO.	TIME START	TIME STOP	MAN HOURS	EQUIP HOURS	DESCRIPTION OF WORK
19	6:30	6:45	.25	.25	pre trip
19	6:45	7:00	.25	.25	Drive to Job
19	7:00	3:30	8.5	8.5	Haul Demo to Hawley
19	3:30	4:00	.5	.5	Haul clay to Algozzo
19	4:00	6:00	2.0	2.0	Haul concrete to TSI / clay
19	6:00	6:45	.75	.75	Drive to Hotel & fuel up
19	6:45	7:00	.25	.25	Post trip
TOTAL			12.5	12.5	

REINERT CONTRACTING INC.
TRUCK DRIVER'S TIME & LOG

NO. 22644

21541 Hwy. 7 W • Hutchinson, MN 55350 • 320-587-9886

DRIVER Dean Knippen COMPANY _____ JOB 15-102

UNIT 18 TRAILER 750 OIL ADDED _____ GALS FUEL 68,642 DATE 9-21-16

	TIME	LOADING SITE	CUSTOMER	WEIGHT/VOLUME	DESTINATION	MATERIAL
1	7:26	ICS	15-102	17 yrds	Hawley landfill	Demo
2	8:42					
3	9:54					
4	11:07					
5	12:18					
6	1:24					
7	2:33					
8	3:51	ICS	15-101	17 yrds	Alzago	Clay
9	4:20	Fargo	15-102		IBI	Dirty Dirt
10	5:24					
11						
12						
13		2.5 hours	change order			
14						
15						
16						
17						
18						
19						
20						

UNIT NO	TIME START	TIME STOP	MAN HOURS	EQUIP. HOURS	DESCRIPTION OF WORK
18	6:30	6:45	.25		P.T
	6:45	7:00	.25		Drive to Job site
	7:00	3:45	8.75		Haul Demo to Hawley landfill
	3:45	4:15	1.5		Haul Load to Alzago
	4:15	6:00	1.75		Haul to IBI
	6:00	6:15	.25		Drive to fuel station
	6:15	6:30	.25		fuel
	6:30	6:45	.25		Drive to hotel
	6:45	7:00	.25		Put mud flap Backon
TOTAL			12.5		

REMER CONTRACTING INC.
TRUCK DRIVER'S TIME & LOG

21541 Hwy. 7 W • Hutchinson, MN 55350 • 320-587-9886

22638

DRIVER David Munn COMPANY _____ JOB 15-102

UNIT 19 TRAILER 758 OIL ADDED _____ GALS FUEL _____ DATE 9-22-16

	TIME	LOADING SITE	CUSTOMER	WEIGHT/VOLUME	DESTINATION	MATERIAL
1	8:12	ICS	15-107	Load	Hawley	Demo
2	9:25	ICS	15-107	Load	Hawley	Demo
3	10:29	ICS	15-107	Load	Hawley	Demo
4	11:39	Fargo *	15-112	Load	TBT	clay
5	12:35	ICS	15-107	Load	Fargo steel	scrap
6	1:38	ICS	15-107	Load	Fargo steel	scrap
7	2:44	Fargo *	15-112	Load	TBT	clay
8	3:47	Fargo *	15-112	Load	TBT	clay
9	4:49	Fargo *	15-112	Load	TBT	clay
10						
11						
12		5.75 hours				
13		~~4 hours~~ - change order				
14						
15						
16						
17						
18						
19						
20						

UNIT NO.	TIME START	TIME STOP	MAN HOURS	EQUIP. HOURS	DESCRIPTION OF WORK
19	6:45	7:00	.25	.25	pre trip
19	7:00	8:00	1.0	1.0	Go get tire on trailer (shoaded)
19	8:00	11:30	3.5	3.5	Haul Demo to Hawley
19	11:30	12:30	1.0	1.0	Haul clay to TBT
19	12:30	2:30	2.0	2.0	Haul steel to Fargo
19	2:30	6:45	4.25	4.25	Haul clay to TBT
19	6:45	7:00	.25	.25	Drive to Hotel
19	7:00	7:15	.75	.75	Rest trip
TOTAL			12.5	12.5	

KEINER CONTRACTING INC.
TRUCK DRIVER'S TIME & LOG

NO. 22502

21541 Hwy. 7 W • Hutchinson, MN 55350 • 320-587-9886

DRIVER Dean Krieger COMPANY _____ JOB 15-102

UNIT 18 TRAILER 750 OIL ADDED _____ GALS FUEL _____ DATE 9-22-16

	TIME	LOADING SITE	CUSTOMER	WEIGHT/VOLUME	DESTINATION	MATERIAL
1	7:15	ICS	15-102	17 yrds	Hawley landfill	Demo
2	8:27	"	"	"	"	"
3	9:29	"	"	"	"	"
4	10:37	"	"	"	"	"
5	11:46	Fargo *	"	"	IBI	clay
6	12:58	ICS	15-102	"	Gendau	Steel Scrap
7	2:00	"	"	"	"	"
8	3:00	Fargo *	"	17 yrds	IBI	clay
9	4:00	" *	"	"	"	"
10	5:00	" *	"	"	"	"
11	6:00	" *	"	"	"	"
12						
13						
14						
15		5 hours - change order				
16						
17						
18						
19						
20						

UNIT NO.	TIME START	TIME STOP	MAN HOURS	EQUIP. HOURS	DESCRIPTION OF WORK
18	6:45	7:00	.25		P.T
	7:00	7:15	.25		Drive to Job Site
	7:15	11:45	4.5		Haul Demo to Hawley landfill
	11:45	12:45	1		Haul clay to IBI
	12:45	3:00	2.25		Haul steel to Gendau
	3:00	6:30	3.5		Haul clay to IBI
	6:30	6:45	.25		Drive to Hotel
	6:45	7:00	.25		P.T
TOTAL			12.25		

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before 13 yds. Date: 8-22-16
Weight After $65.00 Time: AM ____ PM ____
Net Weight 130.80 Location ____
Tons $7.80 Height ____
To Transfer 137.80 To Landfill ____

Company Name Reiner Cont.
Address ____
State ____
Driver's Name ____
Vehicle License # semi 36
Vehicle Description: Model ____ Year ____
Color ____
Load Description: pipe

Source:
Demolition / New Construction ____
Transfer Station ____ Industrial ____
Recycle ____ Remodeling ____
Address Where Waste Originated: Fgo

Driver's Signature: Karl Nelson

C92-1004-JM-2M-6/94 250316

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before ____ Date: 8-22-16
Weight After $65.00 Time: AM ____ PM ____
Net Weight (R) Location ____
Tons ____ Height ____
To Transfer ____ To Landfill ____

Company Name Reiner Cont.
Address ____
State ____
Driver's Name ____
Vehicle License # semi 34
Vehicle Description: Model ____ Year ____
Color ____
Load Description: concrete

Source:
Demolition ____ New Construction ____
Transfer Station / Industrial ____
Recycle ____ Remodeling ____
Address Where Waste Originated: Fgo

Driver's Signature: [signature]

C92-1004-JM-2M-6/94 250314

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before 18 yds. Date: 9-6-16
Weight After $180.80 Time: AM ____ PM ____
Net Weight $180.80 Location ____
Tons tax $10.00 Height ____
To Transfer $190.80 To Landfill ____

Company Name Reiner Const. (Diesel Dogs)
Address ____
State ____
Driver's Name ____
Vehicle License # semi 115
Vehicle Description: Model ____ Year ____
Color ____
Load Description: demo

Source:
Demolition / New Construction ____
Transfer Station ____ Industrial ____
Recycle ____ Remodeling ____
Address Where Waste Originated: Fgo

Driver's Signature: [signature]

C92-1004-JM-2M-6/94 250419

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before ____ Date: 9-6-16
Weight After $165.00 Time: AM ____ PM ____
Net Weight R Location ____
Tons ____ Height ____
To Transfer ____ To Landfill ____

Company Name Reiner Const (Diesel Dogs)
Address ____
State ____
Driver's Name ____
Vehicle License # semi 115
Vehicle Description: Model ____ Year ____
Color ____
Load Description: concrete

Source:
Demolition ____ New Construction ____
Transfer Station / Industrial ____
Recycle ____ Remodeling ____
Address Where Waste Originated: Fgo

Driver's Signature: [signature]

C92-1004-JM-2M-6/94 250429

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before _____ Date: 9-7-16
Weight After $65.00 Time: AM _____ PM _____
Net Weight (R) Location _____
Tons _____ Height _____
To Transfer _____ To Landfill _____

Company Name Reyer Cont (Diesel Dogs)
Address _____
State _____
Driver's Name _____
Vehicle License # _____
Vehicle Description: Model _____ Year _____
Color _____
Load Description: concrete

Source:
Demolition _____ New Construction _____
Transfer Station / Industrial _____
Recycle _____ Remodeling _____
Address Where Waste Originated: Fgo

Driver's Signature: [signature]

C92-1004-JM-2M-6/94

250441

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before _____ Date: 9-6-16
Weight After $65.00 Time: AM _____ PM _____
Net Weight (R) Location _____
Tons _____ Height _____
To Transfer _____ To Landfill _____

Company Name Reyer Cont (Diesel Dogs)
Address _____
State _____
Driver's Name _____
Vehicle License # Semi 115
Vehicle Description: Model _____ Year _____
Color _____
Load Description: concrete

Source:
Demolition / New Construction _____
Transfer Station _____ Industrial _____
Recycle _____ Remodeling _____
Address Where Waste Originated: Fgo

Driver's Signature: [signature]

C92-1004-JM-2M-6/94

250425

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before _____ Date: 9-7-16
Weight After 65[illegible] Time: AM _____ PM _____
Net Weight [illegible] Location _____
Tons _____ Height _____
To Transfer _____ To Landfill _____

Company Name Reiner Const. (Diesel Dogs)
Address _____
State _____
Driver's Name _____
Vehicle License # semi 115
Vehicle Description: Model _____ Year _____
Color _____
Load Description: concrete

Source:

Demolition		New Construction	
Transfer Station	/	Industrial	
Recycle		Remodeling	

Address Where Waste Originated: Fgo

Driver's Signature [signature]

C92-1004-JM-2M-6/94 250453

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before _____ Date: 9-7-16
Weight After 65[illegible] Time: AM _____ PM _____
Net Weight [illegible] Location _____
Tons _____ Height _____
To Transfer _____ To Landfill _____

Company Name Reiner Const. (Diesel Dogs)
Address _____
State _____
Driver's Name _____
Vehicle License # _____
Vehicle Description: Model _____ Year _____
Color _____
Load Description: concrete

Source:

Demolition		New Construction	
Transfer Station	/	Industrial	
Recycle		Remodeling	

Address Where Waste Originated: Fgo

Driver's Signature [signature]

C92-1004-JM-2M-6/94 250448

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before _____ Date: 9-7-16
Weight After $65.00 Time: AM _____ PM _____
Net Weight (R) Location _____
Tons _____ Height _____
To Transfer _____ To Landfill _____

Company Name Reiner Const. (Diesel Dogs)
Address _____
State _____
Driver's Name _____
Vehicle License # semi 115
Vehicle Description: Model _____ Year _____
Color _____
Load Description: concrete

Source:

Demolition		New Construction	
Transfer Station	/	Industrial	
Recycle		Remodeling	

Address Where Waste Originated: Fgo

Driver's Signature: [signature]

C92-1004-JM-2M-6/94 250466

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before _____ Date: 9-7-16
Weight After $65.00 Time: AM _____ PM _____
Net Weight (R) Location _____
Tons _____ Height _____
To Transfer _____ To Landfill _____

Company Name Reiner Const. (Diesel Dogs)
Address _____
State _____
Driver's Name _____
Vehicle License # _____
Vehicle Description: Model _____ Year _____
Color _____
Load Description: concrete

Source:

Demolition		New Construction	
Transfer Station	/	Industrial	
Recycle		Remodeling	

Address Where Waste Originated: Fgo

Driver's Signature: [signature]

C92-1004-JM-2M-6/94 250462

CLAY DEMOLITION LANDFILL

4 Miles East of Glyndon, MN on Highway 10
Telephone: (218) 498-2430
Operated By: Disposal Services, Inc., Wahpeton, ND 58074-1142
(701) 642-1799

Weight Before _____ Date: 9-7-16
Weight After _____ #650 Time: AM _____ PM _____
Net Weight _____ Location _____
Tons _____ Height _____
To Transfer _____ To Landfill _____

Company Name Reiger Const. (Diesel Dogs)
Address _____
State _____
Driver's Name _____
Vehicle License # semi 115
Vehicle Description: Model _____ Year _____
Color _____
Load Description: concrete

Source:

Demolition _____ New Construction _____
Transfer Station / Industrial _____
Recycle _____ Remodeling _____

Address Where Waste Originated: Fgo

Driver's Signature: [signature]

C92-1004-JM-2M-6/94

250436

PO Box 13500
Grand Forks, ND 58208-3500
701.746.7491

Proposal

Proposal Submitted to Address:	Phone:	Date:
David Goulet		10/11/2016
Industrial Builders		Addendum

Strata Corporation is pleased to submit the following proposal based upon the info. we've received.

2nd street Fargo flood job

Item	Description	Qty	Unit	Price	Total
1	**Remove street lights & install new bases,pipe,wire**	1	LS	$ 4,350.00	$ 4,350.00
					$ -
				Sum	$ 4,350.00

General Notes:

Testing, Erosion Control, Permits and traffic control are not included in items. All Items Tied.

Surveying for the project is not included. Bond not included.

No power company fees

No: Cost Sharing, TERO fees or Tribal Training Fees.

This Proposal shall be included in our contract or agreement.

Proposal valid for 30 days and on approved credit. All permits are by others. Work associated with pavement marking is by others.

All material is guaranteed to be specified. All work to be completed in workmanlike manner according to standard practices. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado, and other necessary insurance. Our workers are fully covered by Workers Compensation Insurance.

Proposal By: Keith Wolter
Cell No. 701-741-0901
Office No. 701-775-4205

Authorized Signature

Acceptance of Proposal- The above prices, specifications, and conditions are satisfactory and are hereby accepted. you are authorized to do the work as specified. Payment will be made as outlined above.

Date of Acceptance: X Signature X

OPP CONSTRUCTION COMPANY

Draft Print
11/03/2016 9:22:05 PM

OppConstruction.com

Offices:
Grand Forks, ND
Fargo, ND

P.O. Box 2871 • Fargo, ND 58108 • Phone 701-281-1212 • Fax 701-277-8005

Change Order Proposal

Date: 10/10/2016

Re: **2nd St/Downtown Area - In-Town Levees**
City of Fargo, ND

Opp Construction proposes the following prices on the aforementioned project.

Item No.	Description	Quantity	Unit	Unit Price	Total
1	Regrade & reset sidewalk forms in area affected by city added light base/ lines. Located on east side of 3rd St. Just north of 1st Ave.	1.00	L.Sum	565.00	565.00
	Work inclusive of the following items and approximate quantities.				
	- Skid steer and operator - cleanup and regrade affected area	2.00	HR		
	- Laborer / carpenter - Form removal and reset.	3.00	MH		

Respectfully Submitted,

L. Strum

Lance Strum
Sr. Project Manager
Opp Construction

Draft Print

11/03/2016 9:22:06 PM

Bench Rework

		Total Hours	Regular Hours		Overtime Hours (20%)			Total
1	Project Manager	2	116	1.6	127.6	0.4	$	236.64
	9/27/16 Work Order							
1	Superintendent	2	126	1.6	139	0.4	$	257.20
1	Superintendent	2	126	1.6	139	0.4	$	257.20
1	Carpenters	7.5	69.5	6	87.15	1.5	$	547.73
	9/28/16 Work Order							
1	Superintendent	6	126	4.8	139	1.2	$	771.60
1	Superintendent	2	126	1.6	139	0.4	$	257.20
1	Foreman	2	76.2	1.6	94.4	0.4	$	159.68
1	Carpenters	5.5	69.5	4.4	87.15	1.1	$	401.67
1	Carpenters	6	69.5	4.8	87.15	1.2	$	438.18
1	Labors	2	55.95	1.6	70.55	0.4	$	117.74
	9/29/16 Work Order							
1	Superintendent	5	126	4	139	1	$	643.00
1	Superintendent	2	126	1.6	139	0.4	$	257.20
1	Foreman	5	76.2	4	94.4	1	$	399.20
1	Carpenters	6	69.5	4.8	87.15	1.2	$	438.18
1	Labors	9	55.95	7.2	70.55	1.8	$	529.83
1	Labors	4	55.95	3.2	70.55	0.8	$	235.48
	9/30/16 Work Order							
1	Superintendent	3	126	2.4	139	0.6	$	385.80
1	Superintendent	2	126	1.6	139	0.4	$	257.20
1	Foreman	8	76.2	6.4	94.4	1.6	$	638.72
1	Carpenters	7	69.5	5.6	87.15	1.4	$	511.21
1	Labors	3	55.95	2.4	70.55	0.6	$	176.61
						Total:	***$***	***7,917.26***

IBI Equipment Rates

Qty		*Hourly Rate*	*Hours*		*Total*
1	Air Compressor	$ 19.00	7.5	$	142.50
			Total IBI Equipment:	***$***	***142.50***

Concrete

Date	Loads	Units	Price	Total	
Concrete		1 LS	$ 223.82	**$**	**223.82**
				$	-
			Material Total:	**$**	**223.82**
			Mark Up	***$***	***33.57***
			Material Total	***$***	***257.39***

Total Change Order: $ 8,317.15

CONSTRUCTION WORK ORDER

Industrial Builders, Inc.

JOB NO. 15274 CONTRACT NO. _____ DATE 9/27/16

DESCRIPTION OF WORK _____

LABOR	CLASSIFICATION	HOURS WORKED		BILLING HOURS	RATE	AMOUNT
		S.T.	1½ OT			
Scott Nelson	Sup	2				
Dan McKenzie	Carp	7.5				
Gary DeRoff	Sup	2				

MATERIAL CHARGES	TOTAL INV COST		15% MARKUP		AMOUNT

EQUIPMENT, RENTAL & MISCELLANEOUS	HOURS WORKED		RATE		AMOUNT
	REG.	STD BY	REG	STD BY	
Air Comp	7.5				

APPROVED TOTAL

Authorized Representative

Superintendent

CONSTRUCTION WORK ORDER

Industrial Builders, Inc.

JOB NO. 15274 CONTRACT NO. _____ DATE 9/28/16

DESCRIPTION OF WORK _____

LABOR	CLASSIFICATION	HOURS WORKED S.T.	HOURS WORKED 1½ OT	BILLING HOURS	RATE	AMOUNT
Scott Nelson	Sup	6				
Gary Doroff	Sup	2				
Ray Goettle	Forman	2				
Dan McKenzie	Carp	5.5				
Cody Sivertson	Carp	6				
Cameron Fiebelkorn	Laborer	2				

MATERIAL CHARGES	TOTAL INV COST		15% MARKUP		AMOUNT
2 yd concrete					
½" x 6" x 10' Exp Pad					

EQUIPMENT, RENTAL & MISCELLANEOUS	HOURS WORKED REG.	HOURS WORKED STD BY	RATE REG	RATE STD BY	AMOUNT

APPROVED TOTAL

Authorized Representative

Superintendent

CONSTRUCTION WORK ORDER

Industrial Builders, Inc.

JOB NO. 15274 CONTRACT NO. _____ DATE 9/29/16

DESCRIPTION OF WORK _____

LABOR	CLASSIFICATION	HOURS WORKED S.T.	HOURS WORKED 1½ OT	BILLING HOURS	RATE	AMOUNT
Scott Nelson	Dump	5				
Gary Doruff	Dump	2				
Ray Goettle	Forman	5				
Cameron Fiebelkorn	Laborer	9				
Joe Thompson	Laborer	4				
Cody Sivertson	Carp	6				

MATERIAL CHARGES	TOTAL INV COST		15% MARKUP		AMOUNT

EQUIPMENT, RENTAL & MISCELLANEOUS	HOURS WORKED REG.	HOURS WORKED STD BY	RATE REG	RATE STD BY	AMOUNT

APPROVED TOTAL

Authorized Representative

Superintendent

CONSTRUCTION WORK ORDER

Industrial Builders, Inc.

JOB NO. 15274 CONTRACT NO. _____ DATE 9/30/16

DESCRIPTION OF WORK _____

LABOR	CLASSIFICATION	HOURS WORKED S.T.	HOURS WORKED 1½ OT	BILLING HOURS	RATE	AMOUNT
Scott Nelson	Sup	3				
Gary Doroff	Sup	2				
Ray Goettle	Foreman		8			
Cody Sivertson	Carp		7			
Joe Thompson	Laborer	3				

MATERIAL CHARGES	TOTAL INV COST		15% MARKUP		AMOUNT

EQUIPMENT, RENTAL & MISCELLANEOUS	HOURS WORKED REG.	HOURS WORKED STD BY	RATE REG	RATE STD BY	AMOUNT

APPROVED TOTAL

Authorized Representative

Superintendent

Draft Print

Sales Order

11/03/2016 9:22:06 PM

Prairie Supply Inc
PO Box 118
West Fargo, ND 58078
(701) 282-5656

Order Number: 0386875
Order Date: 9/28/2016

Salesperson: CJW
Customer Number: 01-IND101

Sold To:
Industrial Builders Inc
PO Box 406
Fargo, ND 58107-0406
Confirm To:

Ship To:
Customer Pick-up
West Fargo, ND 58078

Customer P.O.	Ship VIA	F.O.B.	Terms
34154			1% 15 days, net 30

Item Number	Unit	Ordered	Shipped	Back Order	Price	Amount
EJ1/2X6X10	EA	3.000	0.000	0.000	4.5000	13.50
Expansion 1/2 X 6" X 10'			**Whse:** 001			

Print Name _____

Signature _____

Created by: _____

Net Order:	13.50
Less Discount:	0.00
Freight:	0.00
Sales Tax:	1.02
Order Total:	14.52

Invoice

AGGREGATE INDUSTRIES

SHIP TO
INDUSTRIAL BUILDERS, INC.
Fargo 2nd St Levees
2nd St
Fargo ND 58103

1327341

Direct inquiries to:
Aggregate Industries - MWR, Inc
28098 Network Place
Chicago IL 60673-1280
Phone: 1-855-339-4900

*
INDUSTRIAL BUILDERS, INC.
P O BOX 406
FARGO ND 58107-0406

40102	09/29/2016	706495950
CUSTOMER NO.	INVOICE DATE	INVOICE NUMBER

Sales District: 3272

Ship Date	Plant	FOB FP	Bill of Lading#	Material Description	Quantity	U/M	Unit Price	Gross Amount
09/28	FARW	FP	59360519	2ND ST & 1ST AVE N., FARGO				
				PO#: 15274005				
				FLOOD2:NON-WATER CONTAINING STRUCTURES	1.000	YD3	108.20	108.20
				MINIMUM LOAD CHARGE	1.000	EA	100.00	100.00
				Sales Tax Invoiced				15.62
				Total Units	1.000	YD3		
				Total Invoice Amount Before Tax				208.20
				Tax				15.62
				Total Amount Due				223.82
				Payment Terms: Net 30 days from invoice list date				
				Finance charges will be applied on overdue accounts at the rate of 1.5% per month / 18% per annum				

Trans#_____ Posted or: (job to GL Code)

☐Job ☐Subc ☐Equip ☐OtherG/L 15274

☐Job ☐Subc ☐Equip ☐OtherG/L_____

Entered: Bv:_____

ACTIVE

P.O. # 15274005

FP=Freight Prepaid, ZFC=FOB Carrier Location, TON=US Tons, TO=Metric Tons, M3=Cubic Meters, EA=Each, YD3=Cubic Yards

Caution: Freshly mixed cement, concrete or grout may cause skin injury. Avoid prolonged contact with skin where possible and wash exposed areas promptly with water. If any cement mixture gets into eyes,rinse immediately and repeatedly with water and get prompt medical attention. KEEP OUT OF REACH OF CHILDREN

IMPORTANT: DETACH AND ENCLOSE THIS COUPON WITH YOUR PAYMENT

706495950
INVOICE NUMBER

INDUSTRIAL BUILDERS, INC.
P O BOX 406
FARGO ND 58107-0406

DEDUCTION REASONS

1. Price $ _____
2. Freight $ _____
3. Tax $ _____
4. Other $ _____

REMIT TO: Aggregate Industries - MWR, Inc
28098 Network Place
Chicago IL 60673-1280

AMOUNT REMITTED $ _____

40102	09/29/2016	223.82
CUSTOMER NO.	INVOICE DATE	INVOICE AMOUNT

AGGREGATE INDUSTRIES

PO Box 1036 • Moorhead, MN 56561
Phone 218-236-9640

819474

CAUTION: Contact with wet concrete can cause severe skin irritation.

PLANT	TIME	DATE	ACCOUNT	LOADS	TRUCK	DRIVER	TICKET
B10	12:01	09/28/2016	40102	1	1964	LINDNER, R	59360519

CUSTOMER: INDUSTRIAL BUILDERS,

DELIVERY ADDRESS: 2ND ST & 1ST AVE N., FARGO
FOOTING - LH ON 2ND

PURCHASE ORDER	JOB NO.	TAX	CREDIT	SLUMP
15274005		33		3.00 in

LOAD QTY.	PRODUCT	DESCRIPTION	ORDERED	DELIVERED	UNIT PRICE	AMOUNT
1.00	FLOOD2	4500,FLOOD2,406	1.00	1.00		

MINIMUM LOAD CHARGE

LEAVE PLANT	ARRIVE JOB SITE	START DISCHARGE	FINISH DISCHARGE	ARRIVE PLANT

DEL. CHG.	
SUBTOTAL	
DIS.	
TAX	
TOTAL	
PREVIOUS TOTAL	
GRAND TOTAL	

WATER ADDED BY DRIVER _____ gallons

WATER ADDED ON JOB AT CUSTOMER'S REQUEST _____ gallons

RECEIVED BY _____

NOTE: DISCLAIMER ON BACK

Truck	Driver	User	Disp Ticket Num	Ticket ID	Time	Date
1964	50270	user	59360519	28901	12:01	9/28/16

Load Size	Mix Code	Returned	Qty	Mix Age	Seq	Load ID
1.00 CYDS	FLOOD2				W	29431

Ingredient	Source	MCFac	AbsFac	OD	ABS	SSD	Free Mst	CYDS TARG	Target	Actual		Free Wat
CEMHOSTG	ST68LMO			423 lb	423			423	423 lb	430		
FACOAL	COCUNND			141 lb	141			141	141 lb	125		
PROCK52	MN 103081	0.026 M	0.014	599 lb	599	7.19		606	606 lb	600		7 lb
1ROCK52	MN 103081	0.011 M	0.012	1372 lb	1372	-1.37		1371	1371 lb	1360	*	-1 lb
SAND21	MN 114074	0.054 M	0.009	1194 lb	1194	53.73		1248	1248 lb	1240		53 lb
COLDCITY	COLD CITY			233.0 lb	233.0			123.4	123.4 lb	126.0	*	126.0 lb
MRX	AEUMRX			3.00 /C	.00			16.92	16.92 oz	15.00	*	
AEA92	EUAEA92			.43 /C	.00			2.43	2.43 oz	3.00	*	
HOTCITY	HOT CITY W			.0 %	.0				.0 lb	.0	*	

Actual Num Batches: 1

Load Total: 3882 lb Design W/C: 0.413 Water/Cement: 0.334 A Design Water: 233.0 lb Total Water: 185.2 lb To Add: 47.8 lb
Slump: 3.00 in # Water in Truck: 0.0 gl Adjust Water: 0.0 gl / Load Trim Water: -3.0 gl / CYDS

CERTIFICATE OF COMPLIANCE

AIR CONTENT _____ AIR TEMP. _____ WATER ADDED @ PLANT _____ gl

CONCRETE TEMP. _____ SLUMP _____ WATER ADDED @ JOBSITE _____ gl

CYLINDER NO. _____ TIME DISCHARGED _____ TOTAL ACTUAL WATER _____ lb

LOCATION / PART of STRUCTURE _____

INSPECTOR SIGNATURE _____

PRODUCER SIGNATURE _____

FARGO WET PLANT 4810

Your Logo Here

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11/03/2016 9:22:06 PM

CHANGE ORDER REQUEST

Industrial Builders, Inc.
15274- - 2nd Street Floodwall and Road Relocation

DATE: 10/18/2016
PCO#:

To:	Tyler Smith CH2M Hill Engineer's Inc 657 2nd Ave N Fargo, ND 58105-5405	**From:**	David Goulet Industrial Builders, Inc. PO Box 406 Fargo, ND 58107-0406
Phone:	701-566-5470	**Phone:**	701-356-9827
Fax:		**Fax:**	
Email:	tyler.smith@ch2m.com	**Email:**	dgoulet@industrialbuilders.com
CC:			

Below is the detail for our proposal to complete the following changes in contract work:

- **PCO: Topsoil Import**

PCO Item	Status	Change (in Days)	Quantity	UM	Unit Price	Amount
1 : Topsoil Import – Case Plaza	**Initiated**		**800**	**CY**	**28.39**	**22,712.00**
This price is in place volume for the area south of 1st Ave in the Case and MidAmerica lot.						
2 : Topsoil Import – City Parking Lot	**Initiated**			**CY**	**21.84**	
This price is loose volume delivered price, due to the additional small areas that need the black dirt an in place quantity will be challenging to survey.						

Submitted By:

10/18/2016

David Goulet — Date

Approved By:

Tyler Smith — Date
CH2M Hill Engineer's Inc

Your Logo Here

CHANGE ORDER REQUEST

Industrial Builders, Inc.
15274- - 2nd Street Floodwall and Road Relocation

DATE: 10/20/2016
PCO#:

To:	Tyler Smith CH2M Hill Engineer's Inc 657 2nd Ave N Fargo, ND 58105-5405	**From:**	David Goulet Industrial Builders, Inc. PO Box 406 Fargo, ND 58107-0406
Phone:	701-566-5470	**Phone:**	701-356-9827
Fax:		**Fax:**	
Email:	tyler.smith@ch2m.com	**Email:**	dgoulet@industrialbuilders.com
CC:			

Below is the detail for our proposal to complete the following changes in contract work:

- **PCO: Landscaping by the Library**
  - Per the meeting on site between IBI, Houston Engineering, and Pro Landscaping, the following price is to restore the NE corner of 1st and 3rd back to the original landscaping excluding additional trees.

PCO Item	Status	Change (in Days)	Quantity	UM	Unit Price	Amount
1 : Library Landscaping	**Initiated**		**1**	**LS**	**3462.80**	**3,462.80**

Breakdown:

Materials = *$1,523.50*
- including plants, rock, edging, mulch

Labor and Equipment = *$1,939.30*
- Seven workers, estimated 56 man hours
- Equipment includes bobcat and landscape truck

Submitted By:

10/20/2016
David Goulet — Date

Approved By:

Tyler Smith
CH2M Hill Engineer's Inc — Date

Your Logo Here

Draft Print

CHANGE ORDER REQUEST

11/03/2016 9:22:06 PM

Industrial Builders, Inc.
15274- - 2nd Street Floodwall and Road Relocation

DATE: 10/26/2016
PCO#:

To: Tyler Smith
CH2M Hill Engineer's Inc
657 2nd Ave N
Fargo, ND 58105-5405
Phone: 701-566-5470
Fax:
Email: tyler.smith@ch2m.com
CC:

From: David Goulet
Industrial Builders, Inc.
PO Box 406
Fargo, ND 58107-0406
Phone: 701-282-4977
Fax:
Email: dgoulet@industrialbuilders.com

Below is the detail for our proposal to complete the following changes in contract work:

- **PCO: Additional Street Light work**
  - Work performed for bridge light, and city hall parking lot lighting.

PCO Item	Status	Change (in Days)	Quantity	UM	Unit Price	Amount
1 : Strata Extra Light Work	Initiated		1	LS	6991.60	6,991.60

Submitted By:

10/26/2016
David Goulet Date

Approved By:

Tyler Smith Date
CH2M Hill Engineer's Inc

STRATA CORPORATION SINCE 1910

PO Box 13500
Grand Forks, ND 58208-3500
701.746.7491

Proposal

Proposal Submitted to Address:	Phone:	Date:
David Goulet		10/25/2016
Industrial Builders		Addendum

Strata Corporation is pleased to submit the following proposal based upon the info. we've received.

2nd street Fargo flood job

Item	Description	Qty	Unit	Price	Total
1	**Remove and rest street light on bridge for Xcell line**	1	LS	$ 1,500.00	$ 1,500.00
2	**Take down lights in parking lot on run temporary** This is for numerious trips to take down lights and run temporary to keep parking lot lite. See email	1	LS	$ 4,856.00	$ 4,856.00
					$ -
				Sum	$ 6,356.00

General Notes:

Testing, Erosion Control, Permits and traffic control are not included in items. All Items Tied.

Surveying for the project is not included. Bond not included.

No power company fees

No: Cost Sharing, TERO fees or Tribal Training Fees.

This Proposal shall be included in our contract or agreement.

Proposal valid for 30 days and on approved credit. All permits are by others. Work associated with pavement marking is by others.

All material is guaranteed to be specified. All work to be completed in workmanlike manner according to standard practices. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado, and other necessary insurance. Our workers are fully covered by Workers Compensation Insurance.

Proposal By: Keith Wolter
Cell No. 701-741-0901
Office No. 701-775-4205

Authorized Signature

Acceptance of Proposal- The above prices, specifications, and conditions are satisfactory and are hereby accepted. you are authorized to do the work as specified. Payment will be made as outlined above.

Date of Acceptance: X Signature X

From: David Goulet <david@industrialbuilders.com>
Sent: Wednesday, April 20, 2016 9:29 AM
To: Keith Wolter; John Hoppe
Subject: FW: RE: 42F.15 Fargo flood wall project-Lights

Please see below comments from the city.

Thank you,

David Goulet
Project Manager
Industrial Builders, Inc.
Office: 701-282-4977
Direct: 701-356-9827
Fax: 701-281-1409

-----Original Message-----
From: Nathan Boerboom [mailto:NBoerboom@cityoffargo.com]
Sent: Tuesday, April 19, 2016 4:10 PM
To: David Goulet; Randy Engelstad; Ty Smith; David Buck; Gary Doroff
Subject: Fwd: RE: 42F.15 Fargo flood wall project-Lights

See Dave Helland's comments on how to temporarily power the lights in the parking lot. Most likely this fall we should plan on reinstalling it in its current location. This is something we can discuss again in July or August once I'll have some more info on what this parking lot will look like post project.

Let me know if there are any questions.

Nathan

Sent from my Verizon Wireless 4G LTE Droid
---------- Forwarded message ----------
From: Dave Helland <DHelland@cityoffargo.com>
Date: Apr 19, 2016 3:42 PM
Subject: RE: 42F.15 Fargo flood wall project-Lights
To: Nathan Boerboom <NBoerboom@cityoffargo.com>
Cc:

Nathan,

I spoke to John Hoppe of Strata about what needs to be done for lighting removal and for temporary lighting. I

would like to see temporary overhead wiring from the closest City of Fargo street light to the light directly north of the light to be removed as well as overhead to the next light to the east. The overhead work shall be finished before the light needing to be removed is taken out of service. I don't want to have a dark parking lot.

I have not seen a site plan for the work being done at the lift station site so I can't comment on what will be needed after the project has been completed, other than to restore light to the parking lot – unless the parking lot no longer exists due to other construction?

Dave Helland

Street Lighting Operations Manager

City of Fargo - Engineering Dept.

Office: 701.241.1557

From: Nathan Boerboom
Sent: Tuesday, April 19, 2016 10:39 AM
To: Dave Helland <DHelland@cityoffargo.com>
Subject: FW: 42F.15 Fargo flood wall project-Lights

Dave – Has Strata reached out to you at all? See below. I know you can't answer all questions but hopefully you can answer the feeding of it.

From: David Goulet [mailto:david@industrialbuilders.com]
Sent: Tuesday, April 19, 2016 7:31 AM
To: Randy Engelstad <rengelstad@houstoneng.com<mailto:rengelstad@houstoneng.com>>; David Buck <David.Buck@ch2m.com<mailto:David.Buck@ch2m.com>>; Jacob Rick <JRick@cityoffargo.com<mailto:JRick@cityoffargo.com>>; Nathan Boerboom <NBoerboom@cityoffargo.com<mailto:NBoerboom@cityoffargo.com>>
Cc: Keith Wolter <keith.wolter@stratacorporation.com<mailto:keith.wolter@stratacorporation.com>>; Gary Doroff <gary@industrialbuilders.com<mailto:gary@industrialbuilders.com>>
Subject: Fwd: 42F.15 Fargo flood wall project-Lights

Please see the below comments on how to proceed with the parking lot light pole.

Thank you,

David Goulet

Project Manager
Industrial Builders, Inc.
cell: 701-730-2453

Begin forwarded message:

From: Keith Wolter
<Keith.Wolter@stratacorporation.com<mailto:Keith.Wolter@stratacorporation.com<mailto:Keith.Wolter@stratacorporation.com%3cmailto:Keith.Wolter@stratacorporation.com>>>
Date: April 18, 2016 at 3:42:17 PM CDT
To:
"david@industrialbuilders.com<mailto:david@industrialbuilders.com><mailto:david@industrialbuilders.com%3cmailto:david@industrialbuilders.com%3e>"
<david@industrialbuilders.com<mailto:david@industrialbuilders.com<mailto:david@industrialbuilders.com%3cmailto:david@industrialbuilders.com>>>
Cc: John Hoppe
<John.Hoppe@stratacorporation.com<mailto:John.Hoppe@stratacorporation.com<mailto:John.Hoppe@stratacorporation.com%3cmailto:John.Hoppe@stratacorporation.com>>>
Subject: 42F.15 Fargo flood wall project

We have been told that there is a street light pole in the parking lot that needs to be removed. This is not part of the original project. We are requesting a change to do this We need to know if it will need a new base, if it is going back in the same location, if we need to install new wires to feed this base and to feed the lights beyond this base, if we need to run temporary overhead wires to keep the existing lights working. Please advise strata on how this is to be handled or if the Engineer will be supplying a drawing.

Keith Wolter
Strata Corporation
Senior Manager
Phone: 701-775-4205
Cell: 701-741-0901
Email:
keith.wolter@stratacorporation.com<mailto:keith.wolter@stratacorporation.com<mailto:keith.wolter@stratacorporation.com%3cmailto:keith.wolter@stratacorporation.com>>
Web: http://www.stratacorporation.com

Disclaimer

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Draft Print

11/03/2016 9:22:07 PM

CHANGE ORDER REQUEST

Industrial Builders, Inc.
15274- - 2nd Street Floodwall and Road Relocation

DATE: 11/1/2016
PCO#:

To:	Tyler Smith CH2M Hill Engineer's Inc 657 2nd Ave N Fargo, ND 58105-5405	**From:**	David Goulet Industrial Builders, Inc. PO Box 406 Fargo, ND 58107-0406
Phone:	701-566-5470	**Phone:**	701-282-4977
Fax:		**Fax:**	
Email:	tyler.smith@ch2m.com	**Email:**	dgoulet@industrialbuilders.com
CC:			

Below is the detail for our proposal to complete the following changes in contract work:

- **PCO: Epoxy Sprayed on 3rd Street**

PCO Item	Status	Change (in Days)	Quantity	UM	Unit Price	Amount
1 : Paint Epoxy Line 24" Wide	**Initiated**		**88**	**LF**	**13.20**	**$ 1,161.60**
2 : Paint Epoxy Messages	**Initiated**		**32**	**SF**	**16.50**	**$ 528.00**

Submitted By:

11/01/2016

David Goulet — Date

Approved By:

Tyler Smith
CH2M Hill Engineer's Inc — Date

Draft Print

11/03/2016 9:22:07 PM

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

Project	Job #	Location	State	Bid Date
Flood Control, 2nd St North S of Pump Station	**0**	**Fargo**	**ND**	**7/17/15**

Northstar Safety Inc. (NSI) will supply the necessary equipment, labor, materials, and incidentals to complete the following items of work in accordance with the bid documents. If there will be a variance on an item of work from what is stated in the bid documents it will be listed in the following sentences or in the quote assumuptions towards the bottom of this quote. NSI does not warranty adhesion to fog seals or other contractors' interim pavement markings. NSI does not guarantee alignment to other contractors' interim markings. Price does not include brooming or other job site clean-up necessary to complete our portion of the contract. Our quote is based upon the completion date and/or number of working days stated in the bid documents. Suitable pavement marking weather conditions must exist in order for markings to be placed irregardless of the project completion dates. NSI does not warranty damage to pavement markings caused by other contractor's operations. Unless stated otherwise below in the assumptions all items are tied.

Item No.	Description	Unit	Quantity	Unit Price	Bid Amount
change order	Paint Epoxy Line 24" Wide	LF	88	$12.00	$1,056.00
change order	Paint Epoxy Messages	SF	32	$15.00	$480.00
				QUOTE TOTAL	$1,536.00

ASSUMPTIONS:
*-This is for the epoxy markings placed on 3rd St in front of Library on October 27th. The job originally didn't have these items in it.

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 charge. This proposal may be withdrawn if not accepted within 30 days.

Authorized Acceptance Signature _____

Print Name _____

Authorized Signature _____

Nick England
Vice President
Cell: (701) 219-1736
E-mail: nengland@northstarsafety.com

Technical Advisory Group Recommendation

Meeting Date: 11/4/2016

RECOMMENDATION FOR ACTION:

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

SUMMARY OF CONTRACTING ACTION:

The Owner's Representative has reviewed and recommends the following Contract Action(s):

List description of Contract Action(s):

Description	Budget Estimate ($)
WP-42F.1N: Industrial Builders Inc.	
Change Order #04	***9,158.00***

- **WP-42F.1N, 2nd Street North (North of Pump Station) – 8" Plaza Concrete, Additional Pull Boxes, Milestone Changes, Temporary Straw Mulch**

Summary of Contracting History and Current Contract Action:

Original Agreement or Amendment	Previous Project Cost	Budget ($) Change	Revised Project Cost	Project Start	Project Completion	Comments
Original Contract	0.00	12,969,699.05	12,969,699.05	25-Apr-16	1-Jul-17	Contract Award recommended to lowest responsive bidder, Industrial Builders, Inc.
Change Order No. 1	12,969,699.05	8,122.00	12,977,821.05	25-Apr-16	1-Jul-17	Water Main Insulation, Floodwall Caps Modification
Change Order No. 2	12,977,821.05	206,380.00	13,184,201.05	25-Apr-16	1-Jul-17	Differing Subsurface Conditions, Fire Hydrants and Vault 3A Relocation, Temporary Water for Area Businesses, Howard Johnson Foundation Removal, & BNSF Project Delay
Change Order No. 3	13,184,201.05	(22,030.50)	13,162,170.55	25-Apr-16	1-Jul 17	Plansheet Updates, Retaining Wall Column, 6" Impressioned Concrete, Additional Bridge Lighting
Change Order No. 4	13,162,170.55	9,158.00	13,171,328.55	25-Apr-16	1-Jul 17	8" Plaza Concrete, Additional Pull Boxes, Milestone Changes, Temporary Straw Mulch

DISCUSSION

Change Order No. 4 adds modifies existing scope elements to total an increase of $9,158 to the Contract Price. The Change Order consists of the following items:

1. **8" Plaza Concrete** – The plaza at the eastern end of 4th Ave and 2nd street provides the only access to the east side of the floodwall between 1st Ave and the BNSF bridge. HMG and City of Fargo personnel determined that the concrete sidewalk/plaza should be increased from 6" thick to 8" thick to provide greater resistance to vehicle traffic in this area. The total cost of this change item is $4,248.00. This change item is associated with the revisions to the plaza previously approved under Change Order 3 which resulted in a net deduct of $27,995.

2. **Additional Pull Boxes** – The plan drawings include provisions for combined signal and lighting pull boxes (combo boxes). The change item includes modifying the plans to include individual pull boxes for signals and for lights to match City of Fargo specifications. The total cost for this change item is $4,400.

3. **Milestone Changes** – This change item modifies the tasks included in the substantial completion milestone for this project and adds a new milestone (Milestone 3).

    a. ***Milestone 1 Adjustment*** – Adjust Milestone 1 to read "Milestone 1 – 2nd Street North and 4th Ave N shall be substantial complete by November 23, 2016 so that they are open to motor vehicles and pedestrian traffic. Included in this milestone are all utilities installed, traffic signals operational, signs installed, road pavement installed and temporarily striped, retaining wall construction complete and backfilled to within 12-inches of final grade - excluding retaining wall caps and railing, all sidewalk and impressioned concrete along the east side of 2nd Street North installed, all sidewalk along the west side of 2nd Street North - north of the BNSF Railroad Bridge installed including railing, all grading, topsoiling, and seeding of the Howard Johnson Hotel site completed, and all BNSF Bridgework completed."

    b. ***Add Milestone 3*** – This is a <u>no cost</u> change to the Contract Times to add Milestone 3 with a completion date of December 20, 2016. Included in this milestone are removal of all unsuitable soil and soil stockpiles and installation of retaining wall caps and retaining wall railings. The Contractor will pay liquidated damages at a rate of $1,000 per day after December 20, 2016. This milestone will incentivize the Contractor to complete the above work items.

4. **Temporary Straw Mulch** – This change item adds the option to use straw mulch for temporary cover over the winter months. Hydromulching is the intended final stabilization method required for erosion control; however, it is more expensive than straw mulch. Because this area will be disturbed with future construction activities the project team determined that straw mulch should be placed for cover during the winter months. The total cost of this change item is $510.00. HMG personnel have reviewed the cost and find it acceptable.

ATTACHMENT(S):

1. Change Order No. 3

Submitted by:

John Glatzmaier, P.E.
CH2M
Project Manager
Metro Flood Diversion Project

November 4, 2016
Date

Keith Berndt, Cass County Administrator
Concur: 4-Nov-16 *Non-Concur:*

April Walker, Fargo City Engineer
Concur: 4-Nov-16 *Non-Concur*

Mark Bittner, Fargo Director of Engineering
Concur: 4-Nov-16 *Non-Concur:*

Jason Benson, Cass County Engineer
Concur: 4-Nov-16 *Non-Concur*

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

Robert Zimmerman, Moorhead City Engineer
Concur: 4-Nov-16 *Non-Concur*

Nathan Boerboom, Diversion Authority Project Manager
Concur: 4-Nov-16 *Non-Concur:*

Change Order No. 04

Date of Issuance:	11/10/2016	Effective Date:	11/10/2016
Owner:	Metro Flood Diversion Authority	Owner's Contract No.:	WP-42F.1N
Owner's Representative:	CH2M HILL Engineers, Inc.	Owner's Representative Project No.:	435534
Contractor:	Industrial Builders, Inc.	Contractor's Project No.:	
Engineer:	Houston-Moore Group, LLC	Work Package No.:	WP-42F.1N
Project:	Fargo-Moorhead Area Diversion	Contract Name:	Flood Control, 2nd Street North, North of Pump Station

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

Description:

1. 8" PLAZA CONCRETE
    a. Add bid *item 0143 F&I Sidewalk 8" Thick Reinf Conc* for $112.20/SY to accommodate plaza revisions at 4th Ave North. Bid item 0064 will be reduced by the same amount as the 8" pavement. Additionally adjust bid items 0063 and 0143. The attached Change Order 4 Plan Sheet and Unit Price Schedule dated 11/10/2016 shows the pavement limits and price increase. There is no schedule change associated with this change item.
2. ADDITIONAL PULL BOXES
    a. Add bid *item 0144 F&I Pull Box* for $1,100.00/EA to accommodate the additional signaling and lighting pull boxes requested by the City of Fargo. The attached Change Order 4 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.
3. TEMPORARY STRAW MULCH
    a. Add bid item *0145 Temporary Straw Mulch* for $0.17/SY to accommodate installing straw mulch as temporary cover over the disturbed ground for the winter. The attached Change Order 14 Unit Price Schedule dated 11/10/2016 shows the price increase. There is no schedule change associated with this change item.
4. MILESTONE ADJUSTMENT
    a. Adjust Milestone 1 to read "Milestone 1 – 2nd Street North and 4th Ave N shall be substantial complete by November 23, 2016 so that they are open to motor vehicles and pedestrian traffic. Included in this milestone are all utilities installed, traffic signals operational, signs installed, road pavement installed and temporarily striped, retaining wall construction complete and backfilled to within 12-inches of final grade - excluding retaining wall caps and railing, all sidewalk and impressioned concrete along the east side of 2nd Street North installed, all sidewalk along the west side of 2nd Street North - north of the BNSF Railroad Bridge installed including railing, all grading, topsoiling, and seeding of the Howard Johnson Hotel site completed, and all BNSF Bridgework completed."

5. ADD MILESTONE 3

   a. Add Milestone 3 to read "All work in this Milestone shall be complete by December 23, 2016. Included in this milestone are: All unsuitable soil and soil stockpiles shall be removed from the project site and the retaining wall caps and retaining wall railings shall be installed. Liquidated damages for Milestone 3 will correspond to the liquidated damages set forth in Milestone 2 per Paragraph 4.03 A.2.

Attachments:

Change Order 4 Unit Price Schedule Dated 11/10/2016
Attached Change Order 4 Plan Sheet Dated 11/10/2016

CHANGE IN CONTRACT PRICE	CHANGE IN CONTRACT TIMES *[note changes in Milestones if applicable]*
Original Contract Price: **12,969,699.05**	Original Contract Times: Milestone 1: October 15, 2016 Milestone 2: 20 calendar days after road closure Substantial Completion: October 15, 2016 Ready for Final Payment: July 1, 2017
[Increase] [~~Decrease~~] from previously approved Change Orders No.: **192,471.50**	[Increase] [~~Decrease~~] from previously approved Change Orders No. : Milestone 1: November 23, 2016 Milestone 2: 20 calendar days after road closure Substantial Completion: November 23, 2016 Ready for Final Payment: July 1, 2016
Contract Price prior to this Change Order: **13,162,170.55**	Contract Times prior to this Change Order: Milestone 1: November 23, 2016 Milestone 2: 20 calendar days after road closure Substantial Completion: November 23, 2016 Ready for Final Payment: July 1, 2016
[Increase] [~~Decrease~~] of this Change Order: **9,158.00**	[Increase] [Decrease] of this Change Order: Milestone 1: Milestone 2: Milestone 3: December 20, 2016 Substantial Completion: Ready for Final Payment:
Contract Price incorporating this Change Order: **13,171,328.55**	Contract Times with all approved Change Orders: Milestone 1: November 23, 2016 Milestone 2: 20 calendar days after road closure Milestone 3: December 23, 2016 Substantial Completion: November 23, 2016 Ready for Final Payment: July 1, 2017

RECOMMENDED:	ACCEPTED:	ACCEPTED:
By: _____	By: _____	By: _____
Owner's Representative (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Name: Tyler Smith, P.E.	Name: Darrell Vanyo	Name: Kerry Meske
Title: Construction Manager	Title: Chairman	Title: Project Manager
Date: _____	Date: _____	Date: _____

WP-42F.1N
2nd Street/Downtown Area - In-Town Levees

Change Order 4 Unit Price Schedule
DATE: 11/10/2016

WP-42F.1N - 2nd Street/Downtown Area - In-Town Levees											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT
0001	Remove Sanitary Manhole	EA	3	$ 735.00	$ 2,205.00				3	735.00	$ 2,205.00
0002	F&I Sanitary Manhole 4' Dia Reinf Conc	EA	3	$ 7,035.00	$ 21,105.00				3	7,035.00	$ 21,105.00
0003	F&I Sanitary Manhole w/Ext Drop 4' Dia Reinf Conc	EA	1	$ 10,290.00	$ 10,290.00				1	10,290.00	$ 10,290.00
0004	Connect Sewer Service Option C	EA	1	$ 1,260.00	$ 1,260.00				1	1,260.00	$ 1,260.00
0005	F&I Sanitary Pipe w/GB SDR 26 - 6" Dia PVC	LF	119	$ 115.00	$ 13,685.00				119	115.00	$ 13,685.00
0006	F&I Sanitary Pipe w/GB SDR 26 - 12" Dia PVC	LF	243	$ 170.00	$ 41,310.00				243	170.00	$ 41,310.00
0007	F&I Sanitary Pipe w/GB SDR 35 - 12" Dia PVC	LF	304	$ 130.00	$ 39,520.00				304	130.00	$ 39,520.00
0008	F&I DI Force Main - Fittings	LB	6,280	$ 6.30	$ 39,564.00				6280	6.30	$ 39,564.00
0009	F&I Clean-out Manhole 5' Dia Reinf Conc	EA	1	$ 54,000.00	$ 54,000.00				1	54,000.00	$ 54,000.00
0010	F&I Manhole Type E Reinf Conc	EA	1	$ 65,000.00	$ 65,000.00				1	65,000.00	$ 65,000.00
0011	F&I Valve 30" Dia - Plug Valve	EA	1	$ 54,000.00	$ 54,000.00				1	54,000.00	$ 54,000.00
0012	F&I Pipe w/GB DR 25 - 30" Dia PVC	LF	1,072	$ 285.00	$ 305,520.00				1072	285.00	$ 305,520.00
0013	Remove Sanitary Pipe All Sizes All Types	LF	751	$ 11.00	$ 8,261.00				751	11.00	$ 8,261.00
0014	Plug Sanitary Pipe 8" Diameter	EA	2	$ 340.00	$ 680.00				2	340.00	$ 680.00
0015	Plug Sanitary Pipe 10" Diameter	EA	2	$ 420.00	$ 840.00				2	420.00	$ 840.00
0016	Plug Sanitary Pipe 12" Diameter	EA	2	$ 525.00	$ 1,050.00				2	525.00	$ 1,050.00
0017	F&I 5" Hydrant	EA	3	$ 8,505.00	$ 25,515.00				3	8,505.00	$ 25,515.00
0018	Remove Hydrant	EA	2	$ 767.00	$ 1,534.00				2	767.00	$ 1,534.00
0019	F&I Watermain Pipe w/GB C900 DR 18 - 6" Dia PVC	LF	71	$ 88.00	$ 6,248.00				71	88.00	$ 6,248.00
0020	F&I Watermain Pipe w/GB C900 DR 18 - 8" Dia PVC	LF	40	$ 92.00	$ 3,680.00				40	92.00	$ 3,680.00
0021	F&I Watermain Pipe w/GB C900 DR 18 - 10" Dia PVC	LF	1,386	$ 103.00	$ 142,758.00				1386	103.00	$ 142,758.00
0022	F&I Gate Valve 6" Dia	EA	5	$ 2,060.00	$ 10,300.00				5	2,060.00	$ 10,300.00
0023	F&I Gate Valve 10" Dia	EA	2	$ 4,410.00	$ 8,820.00				2	4,410.00	$ 8,820.00

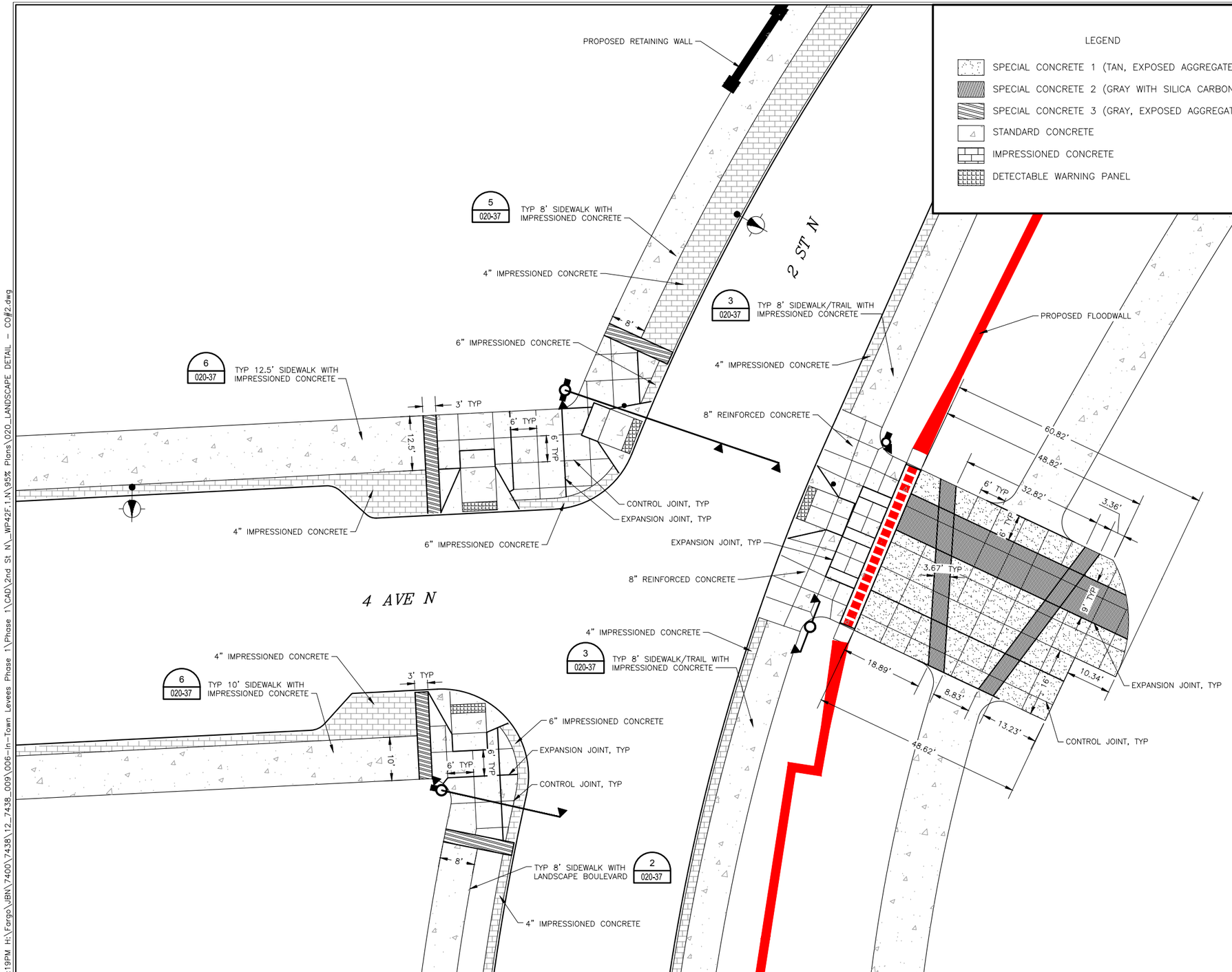
WP-42F.1N - 2nd Street/Downtown Area - In-Town Levees											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT
0024	Remove Watermain Pipe All Sizes All Types	LF	247	$ 11.00	$ 2,717.00				247	11.00	$ 2,717.00
0025	Plug Watermain Pipe 6" Diameter	EA	2	$ 1,345.00	$ 2,690.00				2	1,345.00	$ 2,690.00
0026	Transfer Water Service	LS	1	$ 1,680.00	$ 1,680.00				1	1,680.00	$ 1,680.00
0027	F&I Watermain Fittings Ductile Iron	LBS	3,230	$ 2.10	$ 6,783.00				3230	2.10	$ 6,783.00
0028	F&I Storm Manhole 4' Dia Reinf Conc	EA	4	$ 6,090.00	$ 24,360.00				4	6,090.00	$ 24,360.00
0029	F&I Storm Manhole 5' Dia Reinf Conc	EA	5	$ 7,665.00	$ 38,325.00				5	7,665.00	$ 38,325.00
0030	F&I Storm Manhole 6' Dia Reinf Conc	EA	3	$ 7,980.00	$ 23,940.00				3	7,980.00	$ 23,940.00
0031	F&I Storm Manhole 7' Dia Reinf Conc	EA	3	$ 14,000.00	$ 42,000.00				3	14,000.00	$ 42,000.00
0032	F&I Inlet - Manhole (MHI) 4' Dia Reinf Conc	EA	1	$ 3,885.00	$ 3,885.00				1	3,885.00	$ 3,885.00
0033	F&I Inlet - Single Box (SBI) Reinf Conc	EA	10	$ 3,255.00	$ 32,550.00				10	3,255.00	$ 32,550.00
0034	F&I Inlet - Double Box (DBI) Reinf Conc	EA	3	$ 5,460.00	$ 16,380.00				3	5,460.00	$ 16,380.00
0035	F&I Inlet - Round Inlet (RDI) Reinf Conc	EA	5	$ 1,890.00	$ 9,450.00				5	1,890.00	$ 9,450.00
0036	Modify East Bridge Inlet	EA	1	$ 5,670.00	$ 5,670.00				1	5,670.00	$ 5,670.00
0037	Remove Storm Manhole	EA	8	$ 756.00	$ 6,048.00				8	756.00	$ 6,048.00
0038	Remove Storm Inlet	EA	14	$ 640.00	$ 8,960.00				14	640.00	$ 8,960.00
0039	Remove Storm Pipe All Sizes All Types	LF	1,680	$ 11.00	$ 18,480.00				1680	11.00	$ 18,480.00
0040	F&I Storm Pipe 15" Dia Reinf Conc	LF	278	$ 59.00	$ 16,402.00				278	59.00	$ 16,402.00
0041	F&I Storm Pipe w/GB 15" Dia Reinf Conc	LF	351	$ 93.00	$ 32,643.00				351	93.00	$ 32,643.00
0042	F&I Storm Pipe w/GB 18" Dia Reinf Conc	LF	34	$ 98.00	$ 3,332.00				34	98.00	$ 3,332.00
0043	F&I Storm Pipe w/GB 24" Dia Reinf Conc	LF	83	$ 121.00	$ 10,043.00				83	121.00	$ 10,043.00
0044	F&I Storm Pipe w/GB 27" Dia Reinf Conc	LF	383	$ 153.00	$ 58,599.00				383	153.00	$ 58,599.00
0045	F&I Storm Pipe w/GB 36" Dia Reinf Conc	LF	214	$ 283.00	$ 60,562.00				214	283.00	$ 60,562.00
0046	F&I Storm Pipe w/GB 48" Dia Reinf Conc	LF	102	$ 410.00	$ 41,820.00				102	410.00	$ 41,820.00
0047	Remove Pavement All Thicknesses All Types	SY	13,647	$ 12.00	$ 163,764.00				13647	12.00	$ 163,764.00
0048	Remove Sidewalk All Thicknesses All Types	SY	3,528	$ 7.50	$ 26,460.00				3528	7.50	$ 26,460.00
0049	Remove Gravel Surfacing All Thicknesses All Types	SY	133	$ 8.00	$ 1,064.00				133	8.00	$ 1,064.00

WP-42F.1N - 2nd Street/Downtown Area - In-Town Levees											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT
0050	Subgrade Preparation	SY	6,649	$ 5.25	$ 34,907.25				6649	5.25	$ 34,907.25
0051	F&I Woven Geotextile	SY	7,607	$ 3.15	$ 23,962.05				7607	3.15	$ 23,962.05
0052	F&I Class 5 Agg - 6" Thick	SY	958	$ 13.65	$ 13,076.70				958	13.65	$ 13,076.70
0053	F&I Class 5 Agg - 8" Thick	SY	1,062	$ 15.75	$ 16,726.50				1062	15.75	$ 16,726.50
0054	F&I Class 5 Agg - 12" Thick	SY	5,587	$ 18.90	$ 105,594.30				5587	18.90	$ 105,594.30
0055	F&I Edge Drain 4" Dia PVC	LF	2,659	$ 9.50	$ 25,260.50				2659	9.50	$ 25,260.50
0056	F&I Curb & Gutter Standard (Type II)	LF	2,659	$ 30.00	$ 79,770.00				2659	30.00	$ 79,770.00
0057	F&I Variable Height Curb	LF	16	$ 57.00	$ 912.00				16	57.00	$ 912.00
0058	Remove Curb & Gutter	LF	2,797	$ 7.35	$ 20,557.95				2797	7.35	$ 20,557.95
0059	F&I Pavement 9" Thick Doweled Conc	SY	4,650	$ 88.00	$ 409,200.00				4650	88.00	$ 409,200.00
0060	F&I Pavement 11" Thick Doweled Conc	SY	208	$ 90.00	$ 18,720.00				208	90.00	$ 18,720.00
0061	F&I Aggregate for Asph Pavement FAA 43	TON	748	$ 92.00	$ 68,816.00				748	92.00	$ 68,816.00
0062	F&I Asphalt Cement PG 58-28	GAL	10,760	$ 2.05	$ 22,058.00				10760	2.05	$ 22,058.00
0063	F&I Sidewalk 4" Thick Reinf Conc	SY	2,426	$ 55.00	$ 133,430.00				2426	55.00	$ 133,430.00
0064	F&I Sidewalk 6" Thick Reinf Conc	SY	841	$ 65.00	$ 54,665.00	(90)	$ 65.00	$ (5,850.00)	751	65.00	$ 48,815.00
0065	Temp Construction Entrance	EA	1	$ 4,200.00	$ 4,200.00				1	4,200.00	$ 4,200.00
0066	F&I Impressioned 4" Thick Reinf Conc	SY	621	$ 218.00	$ 135,378.00				621	218.00	$ 135,378.00
0067	F&I Driveway 6" Thick Reinf Conc	SY	22	$ 105.00	$ 2,310.00				22	105.00	$ 2,310.00
0068	F&I Det Warn Panels Cast Iron	SF	123	$ 60.00	$ 7,380.00				123	60.00	$ 7,380.00
0069	Reset Sign Assembly	EA	1	$ 260.00	$ 260.00				1	260.00	$ 260.00
0070	F&I Sign Assembly	EA	19	$ 240.00	$ 4,560.00				19	240.00	$ 4,560.00
0071	F&I Engineering Grade	SF	74.5	$ 25.00	$ 1,862.50				75	25.00	$ 1,862.50
0072	F&I Diamond Grade Cubed	SF	28.6	$ 42.00	$ 1,201.20				29	42.00	$ 1,201.20
0073	F&I High Intensity Prismatic	SF	17.5	$ 37.00	$ 647.50				18	37.00	$ 647.50
0074	F&I Grooved Plastic Film Message	SF	223.5	$ 37.00	$ 8,269.50				224	37.00	$ 8,269.50
0075	F&I Grooved Plastic Film 4" Wide	LF	2,998	$ 5.70	$ 17,088.60				2998	5.70	$ 17,088.60

WP-42F.1N - 2nd Street/Downtown Area - In-Town Levees											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT
0076	F&I Grooved Plastic Film 8" Wide	LF	391	$ 12.00	$ 4,692.00				391	12.00	$ 4,692.00
0077	F&I Grooved Contrast Film 7" Wide	LF	723	$ 11.00	$ 7,953.00				723	11.00	$ 7,953.00
0078	F&I Methacrylate 6" Wide	LF	339	$ 27.00	$ 9,153.00				339	27.00	$ 9,153.00
0079	F&I Methacrylate 16" Wide	LF	79	$ 44.00	$ 3,476.00				79	44.00	$ 3,476.00
0080	Traffic Control - Type 2	LS	1	$ 65,000.00	$ 65,000.00				1	65,000.00	$ 65,000.00
0081	4" Special Concrete 1	SY	0	$ 160.00	$ -				0	160.00	$ -
0082	4" Special Concrete 3	SY	22	$ 400.00	$ 8,800.00				22	400.00	$ 8,800.00
0083	6" Special Concrete 1	SY	155	$ 165.00	$ 25,575.00				155	165.00	$ 25,575.00
0084	6" Special Concrete 2	SY	84	$ 265.00	$ 22,260.00				84	265.00	$ 22,260.00
0085	Mobilization	LS	1	$ 657,665.00	$ 657,665.00				1	657,665.00	$ 657,665.00
0086	Temp Fence - Safety	LF	1,471	$ 14.00	$ 20,594.00				1471	14.00	$ 20,594.00
0087	Remove Retaining Wall	LS	1	$ 200,000.00	$ 200,000.00				1	200,000.00	$ 200,000.00
0088	Remove Guard Rail	LF	57	$ 10.00	$ 570.00				57	10.00	$ 570.00
0089	Remove Fence All Sizes All Types	LF	579	$ 10.00	$ 5,790.00				579	10.00	$ 5,790.00
0090	F&I Chain Link Fence	LF	985	$ 16.00	$ 15,760.00				985	16.00	$ 15,760.00
0091	Temp Pumping	LS	1	$ 63,000.00	$ 63,000.00				1	63,000.00	$ 63,000.00
0092	Remove Howard Johnson Inn Pool	LS	1	$ 15,750.00	$ 15,750.00				1	15,750.00	$ 15,750.00
0093	Clear & Grub	LS	1	$ 5,040.00	$ 5,040.00				1	5,040.00	$ 5,040.00
0094	Remove Tree	EA	13	$ 840.00	$ 10,920.00				13	840.00	$ 10,920.00
0095	Remove Parking Lot Concrete Bumpers	EA	34	$ 262.00	$ 8,908.00				34	262.00	$ 8,908.00
0096	Silt Fence - Standard	LF	733	$ 2.65	$ 1,942.45				733	2.65	$ 1,942.45
0097	Sediment Control Log 10" to 15" Dia	LF	1,406	$ 3.15	$ 4,428.90				1406	3.15	$ 4,428.90
0098	F&I Erosion Control Blanket	SY	301	$ 2.10	$ 632.10				301	2.10	$ 632.10
0099	Inlet Protection - New Inlet	EA	23	$ 155.00	$ 3,565.00				23	155.00	$ 3,565.00
0100	Inlet Protection - Existing Inlet	EA	22	$ 120.00	$ 2,640.00				22	120.00	$ 2,640.00
0101	Remove Traffic Lighting	LS	1	$ 6,000.00	$ 6,000.00				1	6,000.00	$ 6,000.00

WP-42F.1N - 2nd Street/Downtown Area - In-Town Levees											
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget		
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT
0102	Street Lighting	LS	1	$ 120,000.00	$ 120,000.00				1	120,000.00	$ 120,000.00
0103	Remove Outfall Including Adjacent Concrete Structures	EA	1	$ 15,750.00	$ 15,750.00				1	15,750.00	$ 15,750.00
0104	Remove and Salvage Traffic Signal Equipment - System A (2nd St / 4th Ave N)	LS	1	$ 6,000.00	$ 6,000.00				1	6,000.00	$ 6,000.00
0105	Traffic Signal System "A" (2 St / 4th Ave N)	LS	1	$ 195,000.00	$ 195,000.00				1	195,000.00	$ 195,000.00
0106	Remove and Salvage Traffic Signal Equipment - System "B" (2nd St / 3rd Ave N)	LS	1	$ 6,000.00	$ 6,000.00				1	6,000.00	$ 6,000.00
0107	Remove and Plug BNSF Utility "Diesel Oil Line"	LS	1	$ 3,045.00	$ 3,045.00				1	3,045.00	$ 3,045.00
0108	Remove and Plug BNSF Utility "Diesel Water Line"	LS	1	$ 3,045.00	$ 3,045.00				1	3,045.00	$ 3,045.00
0109	Remove and Plug BNSF Utility "Watermain"	LS	1	$ 3,045.00	$ 3,045.00				1	3,045.00	$ 3,045.00
0110	Jersey Barrier Formed	LF	180	$ 320.00	$ 57,600.00				180	320.00	$ 57,600.00
0111	F&I Sheet Piling - Steel	SF	472	$ 50.00	$ 23,600.00				472	50.00	$ 23,600.00
0112	Topsoil - Strip	CY	365	$ 4.20	$ 1,533.00				365	4.20	$ 1,533.00
0113	Topsoil - Import	CY	1,810	$ 42.00	$ 76,020.00				1810	42.00	$ 76,020.00
0114	Topsoil - Spread	CY	365	$ 5.25	$ 1,916.25				365	5.25	$ 1,916.25
0115	Embankment	CY	2,871	$ 10.00	$ 28,710.00				2871	10.00	$ 28,710.00
0116	Embankment Import	CY	16,475	$ 17.85	$ 294,078.75				16475	17.85	$ 294,078.75
0117	Subcut	CY	500	$ 15.00	$ 7,500.00				500	15.00	$ 7,500.00
0118	Excavation	CY	2,871	$ 6.30	$ 18,087.30				2871	6.30	$ 18,087.30
0119	Mulching Type 1 - Hydro	SY	18,687	$ 0.37	$ 6,914.19				18687	0.37	$ 6,914.19
0120	Seeding Type B	SY	18,687	$ 0.32	$ 5,979.84				18687	0.32	$ 5,979.84
0121	Overseeding	SY	18,687	$ 0.09	$ 1,681.83				18687	0.09	$ 1,681.83
0122	Weed Control Type B	SY	18,687	$ 0.07	$ 1,308.09				18687	0.07	$ 1,308.09
0123	F&I Retaining Wall Reinf Bars - Steel	LB	100,899	$ 1.30	$ 131,168.70				100899	1.30	$ 131,168.70
0124	F&I Retaining Wall Reinf Bars - Epoxy Coated Steel	LB	126,896	$ 1.50	$ 190,344.00				126896	1.50	$ 190,344.00
0125	F&I Retaining Wall - Structural Conc	CY	1,062	$ 1,100.00	$ 1,168,200.00				1062	1,100.00	$ 1,168,200.00
0126	F&I Handrail/Ornamental Fence	LF	425	$ 300.00	$ 127,500.00				425	300.00	$ 127,500.00
0127	Lean Mix Backfill	CY	222	$ 300.00	$ 66,600.00				222	300.00	$ 66,600.00

WP-42F.1N - 2nd Street/Downtown Area - In-Town Levees												
ITEM	DESCRIPTION	UNIT	Current Budget			Net Change			New Budget			
			QUANTITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	QUANITY	UNIT PRICE	AMOUNT	
0128	Retaining Wall Drainage	LS	1	$ 50,000.00	$ 50,000.00				1	50,000.00	$ 50,000.00	
0129	Retaining Wall Shoring	LS	1	$ 350,000.00	$ 350,000.00				1	350,000.00	$ 350,000.00	
0130	Removable Floodwall	SF	369	$ 140.00	$ 51,660.00				369	140.00	$ 51,660.00	
0131	F&I Floodwall Reinf Bars - Steel	LB	549,137	$ 1.30	$ 713,878.10				549137	1.30	$ 713,878.10	
0132	F&I Floodwall Reinf Bars - Epoxy Coated Steel	LB	211,746	$ 1.50	$ 317,619.00				211746	1.50	$ 317,619.00	
0133	F&I Floodwall - Structural Conc	CY	4,325	$ 1,060.00	$ 4,584,500.00				4325	1,060.00	$ 4,584,500.00	
0134	Concrete Surface Stain	LS	1	$ 325,000.00	$ 325,000.00				1	325,000.00	$ 325,000.00	
0135	BNSF Bridge Modifications	LS	1	$ 85,000.00	$ 85,000.00				1	85,000.00	$ 85,000.00	
0136	F&I 4" Watermain Insulation	SY	10	$ 55.00	$ 550.00				10	55.00	$ 550.00	
0137	F&I Revised Floodwall Caps	LS	1	$ 7,572.00	$ 7,572.00				1	7,572.00	$ 7,572.00	
0138	Differing Subsurface Conditions	LS	1	$ 200,000.00	$ 200,000.00				1	200,000.00	$ 200,000.00	
0139	Temporary Water Service	LS	1	$ 1,980.00	$ 1,980.00				1	1,980.00	$ 1,980.00	
0140	Howard Johnson Foundation Removal	LS	1	$ 4,400.00	$ 4,400.00				1	4,400.00	$ 4,400.00	
0141	F&I Impressioned 6" Thick Reinf Conc	SY	25	$ 269.50	$ 6,737.50				25	269.50	$ 6,737.50	
0142	Additional Bridge Lighting	LS	1	$ 5,967.00	$ 5,967.00				1	5,967.00	$ 5,967.00	
0143	F&I Sidewalk 8" Thick Reinf Conc	SY				90	$ 112.20	$ 10,098.00	90	112.20	$ 10,098.00	
0144	F&I Pull Box	EA				4	$ 1,100.00	$ 4,400.00	4	1,100.00	$ 4,400.00	
0145	Temporary Straw Mulch	SY				3000	$ 0.17	$ 510.00	3000	0.17	$ 510.00	
WP-42F.1N - TOTAL AMOUNT			**CURRENT BUDGET**		**$ 13,162,170.55**	**NET CHANGE**		**$ 9,158.00**	**NEW BUDGET**		**$ 13,171,328.55**	



4TH AVE AND 2ND ST INTERSECTION AND PLAZA PAVING ENLARGEMENT 1 -

NOT TO SCALE

This document was originally issued and sealed by Randy G. Engelstad Registration Number PE–6676 on 11–10–16 and the original document is stored at CH2M Hill Engineering Inc., Fargo, N.D.

HMG HOUSTON - MOORE GROUP

2ND STREET/DOWNTOWN - IN-TOWN LEVEES
2ND STREET N FLOODWALL
RED RIVER OF THE NORTH RIVER BASIN
FARGO-MOORHEAD FLOOD RISK MANAGEMENT
CASS COUNTY, NORTH DAKOTA
LANDSCAPE DETAILS

DATE:	4-15-16
REVISED:	9-28-16
REVISED:	
REVISED:	
RECORD:	
FILE NAME:	
PROJECT No.	WP-42F.1.N
DRAWN BY:	JMW
CHECKED BY:	NS
PROJ. MANAGER:	CGT
PROJ. ENGINEER:	

C-020-36

COORDINATE SYSTEM (HORIZONTAL CONTROL)
NAD 83 (1986)
FARGO GROUND - US SURVEY FEET

ELEVATION DATUM (VERTICAL CONTROL)
NAVD 88
GEOID03

10/20/16 03:23:19PM H:\Fargo\JBN\7400\7438\12_7438_009\006-In-Town Levees Phase 1\Phase 1\CAD\2nd St N_WP42F.1.N\95% Plans\020_LANDSCAPE DETAIL - C0#2.dwg