

Agenda Item: 6.

MEMORANDUM

To: PPO Subcommittee
From: Amanda Grint, Water Resources Engineer
Date: April 3, 2017
Re: Amendment to Zorinsky Basin No. 2 Professional Services Contract with HDR Engineering, Inc.

In 2016, HDR Engineering, Inc. was awarded a professional services contract for the Preliminary Design (Phase 1) of the Zorinsky Basin No. 2 (ZB2) project for a not to exceed amount of \$470,200. ZB2 is the last of four planned water quality basins identified through a community planning session in 1999 to protect the water quality of Zorinsky Lake. The Phase 1 contract, now complete, included USACE 404 permitting, alternatives evaluation, geotechnical work and preliminary design plans. Anticipating a construction start this fall, an amendment to the contract has been prepared for consideration that includes Phase 2 - Final Design and Phase 3 - Construction Administration.

A summary of the major activities for Phase 2 (Final Design) is as follows:

- Project Management
- General and Site Civil Design
- Structural Design
- Contract Document and Bidding Document Development
- Survey and ROW

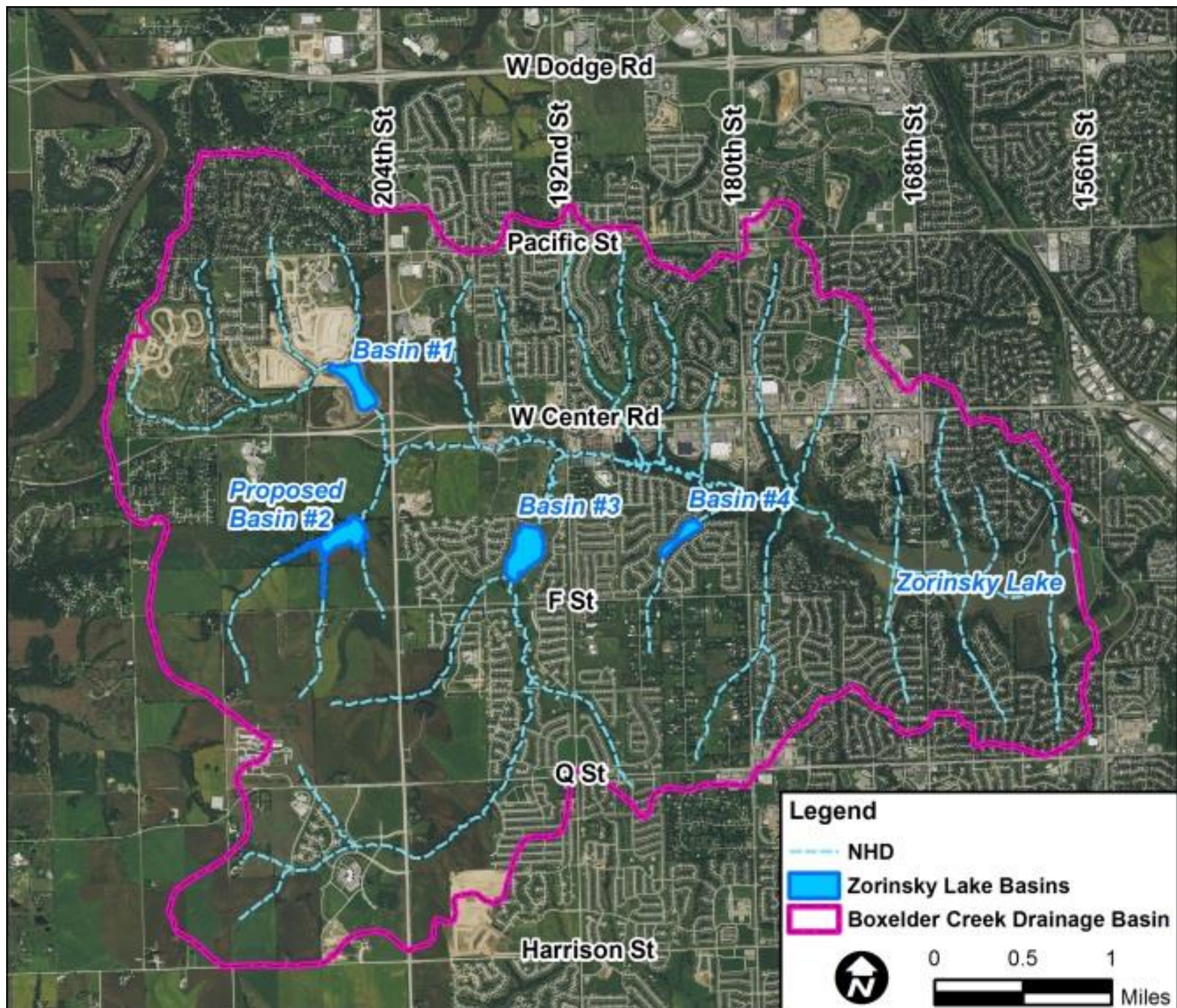
A summary of the major activities for Phase 3 (Construction Administration) is as follows:

- Construction Meetings
- Construction Administration and Observation
- Develop Operation and Maintenance Manual and Emergency Action Plan

A proposed detailed scope of work, cost estimate and schedule for this amendment are attached for review. HDR would provide the professional services for Phases 2 and 3 of the ZB2 project on an hourly basis not to exceed the amount of \$858,930.

Of the Phase 1 contract, \$49,470, was not spent due to scope changes and/or reduction in hours necessary to complete the work. Therefore, the net contract amount is \$1,279,660.

Management recommends that the Subcommittee recommend to the Board that the General Manager be authorized to execute an Amendment to the Professional Services Agreement with HDR Engineering, Inc. for the Zorinsky Water Quality Basin Number 2 project in an amount not to exceed \$858,930 bringing the total contract not to exceed amount to \$1,279,660, subject to changes deemed necessary by the General Manager and approval as to form by District Legal Counsel.





Sent Electronically on April 5, 2017

April 5, 2017

John Winkler
General Manager
Papio-Missouri River Natural Resources District
8901 S. 154th Street
Omaha, NE 68138-3621

RE: Zorinsky Water Quality Basin No 2
Phase II Final Design and Phase III Construction Administration Services Amendment No. 1

Dear John:

HDR Engineering, Inc. is pleased to submit the attached Amendment No. 1 to our Agreement to provide Phase II Final Design and Phase III Construction Administration services on the Zorinsky Water Quality Basin #2 project. The amended agreement is not to exceed \$1,279,660.

Please print two copies of the Agreement, sign both copies, retain one copy for your records and return the other signed copy for our files. Our receipt of your signed acceptance will constitute our Notice to Proceed.

We look forward to continue working with you on this very important project and continuing our working relationship with the P-MRNRD. If you have any questions, please contact me at 402.926.7110 at your convenience.

Very truly yours,
HDR ENGINEERING, INC.

John Engel, P.E.
Project Manager

Enclosures

This is **EXHIBIT K**, consisting of 2 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated April 22, 2016.

**AMENDMENT TO OWNER-ENGINEER AGREEMENT
Amendment No. 1**

The Effective Date of this Amendment is: _____.

Background Data

Effective Date of Owner-Engineer Agreement: April 22, 2016

Owner: Papio-Missouri River Natural Resources District (P-MRNRD)

Engineer: HDR Engineering, Inc. (HDR)

Project: Zorinsky Water Quality Basin No. 2

Nature of Amendment: [Check those that are applicable and delete those that are inapplicable.]

- ☒ Additional Services to be performed by Engineer
- ☒ Modifications to services of Engineer
- ☒ Modifications to responsibilities of Owner
- ☒ Modifications of payment to Engineer
- ☒ Modifications to time(s) for rendering services
- ☒ Modifications to other terms and conditions of the Agreement

Description of Modifications:

- a. The Scope of Services currently authorized to be performed by Engineer in accordance with the Agreement and previous amendments, if any, is modified as follows:
 - 1) Exhibit A, "Engineer's Services", shall be amended to include Exhibit A1, "Engineer's Services for Amendment No. 1" and Enclosure A, Subconsultants Proposals.
 - 2) Exhibit C, "Payments to Engineer for Services and Reimbursable Expenses"
 - i). Modify C2.01 as follows:
 - 1. Delete "(other than Resident Project Representative)"
 - 2. C2.01.A. delete ",except for services of Engineer's Resident Project Representative, if any,"

3. C2.01.A.1. Add the following after \$95,900 “for Phase I Preliminary Design Services, and plus Reimburable Expenses, estimated to be \$29,318, and Engineer’s Consultant’s charges, if any, estimated to be \$113,270 for Phase II Final Design and Phase III Construction Contract Administration.”
 4. C2.01.A.3 delete “470,200” and replace with “1,279,660”.
 - ii). Amend Appendix 1 to include Attachment C1, “Engineer’s Fee Estimate”.
 - 3) Include Exhibit D, Duties, Responsibilities and Limitations of Authority of Resident Project Representative.
- b. Modify Article 7 – Definitions, 7.01.A.24 Maximum Amount. Remove “four hundred seventy thousand two hundred dollars (\$470,200)” and replace with “one million two hundred seventy nine thousand six hundred sixty dollars (\$1,279,660)”.

Agreement Summary:

Original agreement amount:	\$ 470,200.00
Net change for prior amendments:	\$ 0.00
Reduction in Phase I Scope and Fees:	\$ (49,470.00)
This amendment amount:	\$ 858,930.00
Adjusted Agreement amount:	\$ 1,279,660.00

Change in time for services (days or date, as applicable): April 15, 2017 to December 31, 2018.

The foregoing Agreement Summary is for reference only and does not alter the terms of the Agreement, including those set forth in Exhibit C.

Owner and Engineer hereby agree to modify the above-referenced Agreement as set forth in this Amendment. All provisions of the Agreement not modified by this or previous Amendments remain in effect.

OWNER:

ENGINEER:

Papio-Missouri River Natural Resources District

HDR Engineering, Inc.

By: _____
 Print
 name: John Winkler

By: _____
 Print
 name: Matthew Tondl, P.E

Title: General Manager

Title: Senior Vice President

Date Signed: _____

Date Signed: _____

This is **EXHIBIT A**, consisting of **x** pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated April 22, 2016.

AMENDMENT NO. 1

Engineer's Services

PART 1 – BASIC SERVICES

A1.02 Final Design Phase, Bidding Phase and Construction Phase

**Zorinsky Water Quality Basin No. 2
for Papio-Missouri River Natural Resources District
Douglas County, NE**



ENGINEERING PROPOSAL – PHASE II FINAL DESIGN AND PHASE III CONSTRUCTION CONTRACT ADMINISTRATION SERVICES



BACKGROUND AND BASIS OF PROPOSAL

HDR Engineering, Inc. was selected by the P-MRNRD to provide planning, permitting, preliminary and final design and construction contract administration services for Zorinsky Basin No. 2 (ZB-2). ZB-2 is a proposed water quality basin to be located upstream of Zorinsky Lake on Boxelder Creek located in Douglas County and is located near 204th and F Streets in Omaha, Nebraska. The contributing drainage area at the proposed retention basin is approximately 1.44 square miles. The drainage area of ZB-2 is primarily agricultural land, but urbanization is actively surrounding the area.

To more concisely respond to project requirements, a phased approach was proposed. Phase I, which included preliminary design, is completed. Phase II generally includes preparing final design documents and providing bidding assistance while Phase III is for construction contract administration services. This scope of services is to complete Phase II and Phase III activities.

SCOPE OF SERVICES – PHASE II - FINAL DESIGN AND PHASE III – CONSTRUCTION CONTRACT ADMINISTRATION SERVICES

HDR will act as P-MRNRDs representative regarding construction contract administration of the Project elements. P-MRNRD will be kept informed of contractual matters and will make the final decision on matters that have a cost or schedule implication. HDR will furnish a full-time resident project representative (RPR), and other field staff in observing performance of Contractor's work. Duties, responsibilities, and authority of the RPR are as set forth in Exhibit D of the Agreement.

HDR will perform construction administration services. The scope of work is segmented into 11 task series:

Phase II Services

Task Series 100 – Project Management

Task Series 200 – Permitting

Task Series 300 – General and Site Civil Design
Task Series 400 – Geotechnical Design
Task Series 500 – Structural Design
Task Series 600 – Contract Document Development
Task Series 700 – Survey and Right of Way
Task Series 800 – Bidding Services

Phase III Services

Task Series 900 – Construction Meetings and Conferences
Task Series 1000 – Construction Contract Administration Services
Task Series 1100 – Operation and Maintenance Manual and Emergency Action Plan

The HDR Team proposes to provide the following professional services for Phases II and III over an anticipated 20-1/2 month project period from the time of contract authorization.

TASK SERIES 100 PROJECT MANAGEMENT

Task Objectives: Confirm that Project elements are being completed.

HDR Activities: **Task 110 Project Management.** Includes Project scheduling, administration and coordination activities on the Project. Internal HDR Project Team meetings will be conducted to discuss tasks, provide Project updates and review deliverables. Prepare monthly invoices and progress report. A project Safety, Health, and Environmental Plan will be prepared.

Task 120 Coordination Meetings. Coordination meetings will be conducted with P-MRNRD during the Project. An agenda will be prepared prior to the meeting and meeting notes prepared after the meeting.

- 120.1 **P-MRNRD Coordination Meetings.** Meet with P-MRNRD personnel to review and discuss Project progress. Assume one (1) meeting.
- 120.2 **P-MRNRD Board Meeting Presentation.** Conduct one (1) presentation to P-MRNRD Board/Subcommittee before Phase III begins to provide an overview of the design. A PowerPoint presentation will be prepared. Assume one (1) preparation meeting.

Task Deliverables:

- Monthly invoices and progress report
- Meeting agenda and notes
- PowerPoint Presentation

Key Understandings:

- The duration of the project is 20-1/2 months (begin April 14, 2017 to December 31, 2018).
- Meeting will be held at the offices of the P-MRNRD and attended by 2 HDR professionals.
- One (1) coordination meeting assumed.
- One (1) P-MRNRD Board meeting presentation assumed.

TASK SERIES 200 PERMITTING

Task Objectives: To coordinate with permitting agencies, and prepare and submit appropriate permits necessary for project construction.

HDR Activities:

Task 210 Section 404 Permit

- 210.1 USACE Coordination. Respond to comments on the joint USACE/NDEQ public notice. Coordinate with USACE relative to project timeframes for receipt of Section 404 Authorization. Address permit modifications to reflect changes in design.
- 210.2 Cultural Resources Survey and Report. Complete a comprehensive field investigation of the entire project area to identify cultural resources and evaluate each for eligibility for inclusion on the National Register of Historic Places. The field effort and background research will be detailed in a brief report with all appropriate forms and maps attached. The report will be prepared for the USACE (as the lead Federal Agency) and will be suitable for submission to the Nebraska State Historic Preservation Office (SHPO) for review under Section 106 of the National Historic Preservation Act.
- 210.3 Permit Conditions Summary. Summarize permit conditions for inclusion in bid documents for P-MRNRD and Contractor.

Task 220 NDNR Permit Preparation. Prepare documentation to complete a NDNR Application for a “Permit to Impound Water” and “Application for Approval of Plans for Dams” for the water quality basin.

- 220.1 Coordination with NDNR. Attend up to two (2) meetings with NDNR relevant to the water quality basin design. The scope/subject of these meetings is anticipated to be:
- Preliminary Design Review Meeting. Conduct meeting to review and discuss the Preliminary Design.
 - Final Design Review Meeting. Conduct meeting to review and discuss the comments on the Pre-Bidding design.
- 220.2 Plan Approval Application. Preparation of approval of dam plan permit application, including:
- Permit Drawings
 - Technical specifications
 - Design Analysis Report
 - Completed permit application
- 220.3 Impound Water. Preparation and submittal of permit to impound water.
- 220.4 Dam Breach Analysis. A dam breach analysis will be conducted to define potential inundation areas should the structure fail. The breach routing will extend from the structure downstream to a point where the flood wave water surface has been attenuated below the regulatory 100-yr water surface elevation. The current HEC-RAS model used in the preliminary design effort will be the basis for the dam breach analysis. Two dam breach scenarios will be evaluated. Inundation maps will be prepared as part of the dam breach analysis for inclusion in the Emergency Action Plan.
- 220.5 Emergency Action Plan. HDR will develop a draft emergency action plan based on the current NDNR template. Comments from NDNR will be solicited and a final emergency action plan submitted.

Task 230 NPDES Construction Activity Permit. NPDES construction activity permit and Papillion Creek Watershed Partnership grading permit.

230.1 Agency Coordination. Coordinate with city of Omaha on preparation of Papillion Creek Watershed Partnership (Partnership) Grading permit.

230.2 Permit Preparation. Prepare drawings, narrative plan, application, and NDEQ NPDES Notice of Intent (NOI) to comply with NPDES stormwater associated with construction activity.

Sheet	Section Description
Section 02-SWPPP	
ES-1	SWPPP Overall Site Plan
ES-2 to ES-3	SWPPP General Notes and Details
ES-4	SWPPP WQ Basin
ES-5	SWPPP Stream Mitigation

Task Deliverables:

- Draft and Final Cultural Resources Pedestrian Survey
- NDNR permit applications
- Papillion Creek Watershed Partnership Grading Permit and NPDES permits
- Emergency Action Plan (Draft and Final)

Key Understandings:

- P-MRNRD is responsible for permit submittal and payment of permit application fees.
- The Cultural Resources Report will be submitted to USACE for their submittal to SHPO. The USACE may direct the Owner to submit to SHPO directly.
- It is anticipated that the Cultural Resources Report will either determine that there are no cultural resources on or eligible for listing on the National Register of Historic Places (NHRP) or that there is no effect on cultural resources eligible for listing on the NHRP. USACE cannot issue a Section 404 authorization without SHPO concurrence of this finding.
- If resources that are eligible for the NHRP are found, additional survey to document resources is not included in this scope of work.
- P-MRNRD to supply an operator and equipment to disc strips to expose vegetative surfaces for cultural resources visual survey.
- SHPO has up to 30 days to review and respond to the report after submission.
- Preparation of an amendment to the Section 404 permit application to address changes in design. It is assumed the permit modification would not necessitate a public notice. The level of effort for the amendment is limited to 40 hours of senior scientist staff and 40 hours of technical support time.
- Response to public and agency comments on the Section 404 permit application is limited to 32 hours of senior scientist and 16 hours of technical support time.
- Emergency Action Plan to follow NDNR plan template.
- Water quality basin is classified as a "high" hazard structure.

TASK SERIES 300 GENERAL AND SITE CIVIL DESIGN

Task Objective: The objective of this task is the complete the general and site civil design for the project. Specific elements include storm drainage in the vicinity of the dam, general plan sheets and notes, Right-of-Way plans, site plan sheets, demolitions and removals, miscellaneous grading, wetland and stream mitigation, seeding, and fencing plan sheets.

HDR Activities: **Task 310 Task Coordination.** Coordinate site civil design tasks related to the design of the ZB-2 project. This includes coordination with the geotechnical, structural and water quality basin design tasks.

Task 320 Refine Hydrology and Hydraulics. Refine HEC-HMS model for final design conditions.

Task 330 Earthwork Modeling. Refine earthwork model to incorporate the design internal drainage system of the water quality basin.

Task 340 Upstream Face Slope Protection. Design upstream face slope protection.

Task 350 Wetland and Stream Mitigation Design.

350.1 **Stream Mitigation Development.** Develop stream mitigation design for stream channel impacted by the Project. Coordinate with P-MRNRD on the preliminary design concept of the stream mitigation. This includes coordination with P-MRNRD relative to the proposed work being proposed within the channel and on the channel banks. It is estimated that 2,800 of stream will require mitigation.

350.2 **Wetland Mitigation Development.** Develop mitigation design for forested (PFOA) and PEMA/PEMC wetlands impacted by the Project. This includes coordination with P-MRNRD relative to the potential mitigation site and the area required to satisfy the mitigation needs. It is anticipated that 14.1 acres of PEMA and 2.9 acres of PFOA mitigation will be required.

Task 360 Draft Final Drawings and Specification. Perform draft final design, drawings and specifications.

360.1 **Drawing Production.** Prepare general and civil drawings as noted below.

Sheet	Section Description
Section 01- General	
G-1	Cover Sheet, Location Map, and Index of Drawings
G-2	Reservoir Area Plan and Capacity Table
G-3	Hydrologic and Hydraulic Data
G-4	Project Boundary and Easement Map
G-5	Removals
Section 03- Water Quality Basin Dam	
D-1	Site Plan, Geometrics, and Sequencing Plan
D-2	Grading and Drainage Plan
D-3	Embankment Typical Section and Profile Along Dam Centerline
D-4	Details
Section 05- Mitigation, Seeding, and Fencing	

Sheet	Section Description
C-1	Site Plan and Geometrics
C-2 to C-3	Channel Grading Plan and Profile
C-4	Channel Typical Sections and Details
C-5 to C-7	Forested Wetland Mitigation Plan
C-8 to C-10	Seeding and Fencing Plan
C-11	Fencing Details

360.2 Technical Specifications. Prepare civil specifications for civil design features.

360.3 Opinion of Probable Construction Costs. Compute earthwork quantities and civil project features. Determine lump sum and unit prices for civil features.

Task 370 Final Drawings and Specifications. Perform final design drawings, and specifications.

370.1 Drawing Production. Complete drawing production. Incorporate review comments and finalize drawings for bidding.

370.2 Technical Specifications. Finalize technical specification for civil elements. Incorporate review comments and finalize for bidding.

Task 380 General and Site Civil Section of Design Documentation Report.

Document general and site civil design features in its respective sections.

Task 390 Quality Control. Conduct independent review of design elements using appropriate Engineer senior staff. Reviews shall be conducted on preliminary final and final drawings and specifications.

Task Deliverables:

- See Task 600 for Deliverables.

Key Understandings:

- Project improvements are limited to approved facilities as described in March 2017 Preliminary Design report.
- Mitigation design for channel assumes mitigation on-site on the stream segment upstream of the normal pool.
- Mitigation design for forested wetland assumes mitigation will be at Dam Site 15A.
- Based on recent USACE and EPA permit requirements and recognition of reservoir fringe wetlands created, it is assumed that all mitigation can be developed with the reservoir fringe of ZB-2 and of Dam Site 15A (for forested wetlands). No wetland mitigation design for locations outside of the reservoir fringes as identified in the conceptual mitigation plan (submit as part of Phase I) is included in this scope and fee.
- Any required tree mitigation will be monitored and developed by P-MRNRD.
- P-MRNRD is responsible for site access and negotiations.
- Annual mitigation monitoring is not included in this scope of work.

TASK SERIES 400 GEOTECHNICAL DESIGN

Task Objective: The objective of this task is to complete the geotechnical design for the construction of the water quality basin (90% design of completed and documented in March 2017 Preliminary Geotechnical Investigation Report) will be completed.

HDR Activities: **Task 410 Task Coordination.** Coordinate with other design tasks related to the design of the ZB-2 project. This includes coordination with structural design and civil tasks.

Task 420 Data Collection. Supplement the Preliminary Design geotechnical investigation to evaluate the subsurface conditions along the water quality basin for hydro-collapse and suitable borrow areas.

- 420.1 **Subsurface Investigation Plan.** HDR to conduct a geotechnical investigation to supplement the subsurface conditions for the water quality basin. HDR to prepare a boring plan showing the location of the borings and a laboratory testing program assigning tests to specific samples. Testing requirements include:
- Field Pocket Penetrometer. A total of 30 tests are assumed.
 - Sieve Analysis tests with hydrometer. A total of 15 are assumed.
 - Unit Weight Tests. A total of 30 tests are assumed.
 - Plasticity Index Test, Atterberg Limits (per D 4318). A total of 15 tests are assumed.
 - Standard Proctor (ASTM D 698). A total of 3 tests.
- 420.2 **Subsurface Investigation Exploration.** Thiele Geotech to conduct field drilling and sampling, conduct laboratory tests and prepare geotechnical material data report. Geotechnical data report includes boring logs and laboratory test data. E&A will survey top of boring hole elevations.
- Exploratory Drilling (hollow stem augers) – estimated 170 LF

Task 430 Geotechnical Design and Analyzes. Supplement the Preliminary Design geotechnical investigation to finalize water quality dam design.

- 430.1 **Final Geotechnical Design and Analyzes.** Final geotechnical design will be performed. The design includes:
- Refine size, and location of chimney drain, horizontal blanket drain and drain outlets, if needed
 - Refine upstream slope geometry, if needed
 - Refine labyrinth weir and baffled chute alignment, stability and settlement
 - Evaluate slope stability of embankment closure section
 - Determine drawdown joint extensibility requirements
 - Determine construction sequencing
 - Evaluate hydro-collapse
- 430.2 **Instrumentation** Prepare temporary and permanent instrumentation for the water quality basin.

- 430.3 Geotechnical Investigation and Design Documentation. Prepare final geotechnical design report documenting the results of the geotechnical investigation and design.

Task 440 Draft Final Drawings and Specifications. Perform draft final design drawings and technical specifications.

- 440.1 Drawing Production. Update site boring plan and prepare instrumentation plan and details as noted below.

Sheet	Section Description
Section 03- Water Quality Basin Dam	
D-5	Site Boring Plan
D-6	Geologic Profiles Along Dam and Spillway
D-7	Instrumentation Plan and Profile

- 440.2 Technical Specifications. Prepare earthwork and drainage technical specifications.

Task 450 Final Drawings and Specifications. Perform final design drawings and technical specifications.

- 450.1 Drawing Production. Update site boring plan and prepare instrumentation plan and details as noted below.

- 450.2 Technical Specifications. Prepare earthwork and drainage technical specifications for bidding.

Task 460 Quality Control. Conduct independent review of design elements using appropriate senior engineering staff.

Task Deliverables:

- Final Geotechnical Investigation and Design Reports
- See Task 600 for Deliverables.

Key Understandings:

- Thiele Geotech, as a subconsultant to HDR, will conduct field investigation tasks.
- Fee estimate is based on a total of 170 feet of borings drilled to non-yielding material (glacial till or bedrock). Five (5) borings anticipated.
- E&A, as a subconsultant to HDR, will survey top of boring hole elevations.
- The final geotechnical report for the water quality basin will be included in the NDNR dam safety permit application.

TASK SERIES 500 STRUCTURAL DESIGN

Task Objective:

The objective of this task is to complete the structural design for the construction of the labyrinth weir and baffled chute spillway.

HDR Activities: **Task 510 Task Coordination.** Coordinate with other design tasks related to the design of the ZB-2 project. This includes coordination of the geotechnical and water quality basin design tasks.

Task 520 Structural Analyzes and Design.

520.1 **Structural Analyzes.** Perform structural analysis for the spillway and determine the thickness, strength, and location of the concrete and the type, size, and location of reinforcing steel.

520.2 **Structural Design Documentation.** Document the structural design process in a structural section of the Design Development Report.

Task 530 Draft Final Drawings and Specifications. Perform draft final design drawings and specifications.

530.1 **Drawing Production.** Prepare structural drawings as noted below.

Sheet	Section Description
Section 04 – Labyrinth Weir and Baffled Chute Spillway	
S-1	Spillway Plan
S-2	Spillway Profile
S-3 to S-9	Spillway Sections and Details

530.2 **Technical Specifications.** Prepare technical specification for the concrete and steel reinforcement.

Task 540 Final Drawings and Specifications. Perform final design drawings and specifications.

540.1 **Drawing Production.** Complete drawing production. Incorporate review comments and finalize drawings for bidding.

540.2 **Technical Specifications.** Finalize technical specification for civil elements. Incorporate review comments and finalize for bidding.

Task 550 Quality Control. Conduct independent review of design elements using appropriate senior engineering staff.

Task Deliverables:

- See Task 600 for Deliverables.

Key Understandings:

- Water Quality Basin will be supported on shallow footings and base slabs. Pile-type foundations are not anticipated for this structure.

TASK SERIES 600 CONTRACT DOCUMENT COORDINATION

Task Objective: Coordinate construction drawings, specifications, opinion of probable construction costs, and design development report.

HDR Activities: **Task 610 Design Review Meeting.** A plan review will be conducted at approximately 60% design effort. A progress set of drawings will be reviewed. A list of technical specifications will be reviewed.

Task 620 Drawing Coordination. Coordinate construction drawings at Draft Final and Final Final Design.

620.1 Draft Final Drawings. Coordinate draft final (90%) drawings to show the design elements.

620.2 Final Bid Drawings. Coordinate final bid drawings for bidding.

Preliminary List of Drawings

Sheet	Section Description
Section 01- General	
G-1	Cover Sheet, Location Map, and Index of Drawings
G-2	Reservoir Area Plan and Capacity Table
G-3	Hydrologic and Hydraulic Data
G-4	Project Boundary and Easement Map
G-5	Removals
Section 02-SWPPP	
ES-1	SWPPP Overall Site Plan
ES-2 to ES-3	SWPPP General Notes and Details
ES-4	SWPPP WQ Basin
ES-5	SWPPP Stream Mitigation
Section 03- Water Quality Basin Dam	
D-1	Site Plan, Geometrics, and Sequencing Plan
D-2	Grading and Drainage Plan
D-3	Embankment Typical Section and Profile Along Dam Centerline
D-4	Details
D-5	Site Boring Plan
D-6	Geologic Profiles Along Dam and Spillway
D-7	Instrumentation Plan and Profile
Section 04 – Labyrinth Weir and Baffled Chute Spillway	
S-1	Spillway Plan
S-2	Spillway Profile
S-3 to S-9	Spillway Sections and Details
Section 05- Mitigation, Seeding, and Fencing	
C-1	Site Plan and Geometrics
C-2 to C-3	Channel Grading Plan and Profile
C-4	Channel Typical Sections and Details
C-5 to C-7	Forested Wetland Mitigation Plan
C-8 to C-10	Seeding and Fencing Plan
C-11	Fencing Details

Task 630 Specifications

630.1 Front-End Specifications. Prepare draft Divisions 00 and 01 of the contract documents. EJCDC bidding, contract forms, and conditions of the contract will be used.

630.2 Draft Final Specifications. Coordinate preparation of non-technical and technical specification for submittal.

630.3 Final Bid Specifications. Coordinate preparation of non-technical and technical specification for bid.

Task 640 Opinion of Probable Construction Cost. Prepare OPCC of the various elements.

640.1 **Draft Final OPCC.** Compute quantities and prepare draft final (90%) OPCC to show the design elements.

640.2 **Final Bid OPCC.** Compute final quantities and prepare final bid OPCC.

Task Deliverables:

- EJCDC bidding, contract forms, and conditions of the contract will be used.

Key Understandings:

- HDR Standard specifications will be used.
- Technical specifications preparation accounted for under each design element task.
- Drawings will be produced in AutoCAD (current version)

TASK SERIES 700 SURVEY AND RIGHT OF WAY

Task Objectives: Provide survey and right of way services in support of final design activities.

HDR Activities: **Task 710 Additional Field Survey.** Conduct additional survey to describe the stream mitigation reaches and set additional control points. This includes:

- Additional 200' of topographic survey of the downstream stream channel (extend 50' from the top of bank)
- Channel profile above the normal pool within the stream mitigation reaches (approx. 0.5 mile), approx. every 50 feet with cross section every 500 feet
- Create a surface with the topographic survey and supplement with LiDAR data.

Task 720 Boring Location Surveys Survey bore hole locations (5) for additional geological surface investigation.

Task 730 Boundary Survey of Project Lands. Boundary map of total project lands, including easements, and metes and bounds description of NRD project lands as a single parcel.

Task 740 Legal Descriptions and Documentation. Prepare legal descriptions and documentation (exhibit drawings and legal descriptions) for the following:

- Parcel acquisitions (3 Total) {2 parcels in Phase I work}
- Stream Mitigation easement from P-MRNRD to USACE
- Temporary (1) and Permanent Easements (8) legal descriptions

Task 750 Mark Proposed Acquisition Areas. Stake proposed acquisition lines in field for review and set new property corners.

Task Deliverables:

- Profile and cross section survey data for channel mitigation areas.
- Boring location survey data.
- Boundary Survey of Project Lands
- Legal exhibits and documents as outlined

Key Understandings:

- Title commitments to be provided by NRD.
- P-MRNRD to submit and pay for documentation and recordation fees.

TASK SERIES 800 BIDDING SERVICES

Task Objectives: To provide bidding assistance. For purposes of this scope development, it is assumed that one (1) bid package will be prepared.

HDR Activities: **Task 810 Prepare Documents for Distribution.** Provide electronic copy of plans and specifications to reprographic firm for reproduction as the Issuing Agency. Coordinate distribution of contract documents to Plan Houses.

Task 820 Bid Phase Assistance. Respond to technical questions from bidders.

Task 830 Addendum Preparation/Distribution. Issue addenda as appropriate to interpret, clarify or expand Contract Documents and to respond to Contractor's questions.

Task 840 Pre-bid/Site Showing. Attend pre-bid/site showing hosted by P-MRNRD. HDR to prepare agenda and record meeting notes. P-MRNRD to distribute record meeting notes.

Task 850 Bid Opening. Attend bid opening, tabulate bidder's project costs and make a recommendation of award.

Task Deliverables:

- Project description for advertising
- Addendums
- Pre-bid/Site Showing agenda, record meeting notes.
- Bid tabulation and letter of award recommendation

Key Understandings:

- P-MRNRD will coordinate and pay any fees with reprographic firm as issuing agent for contract documents and issuing addenda.
- P-MRNRD will be responsible for cost of reproduction of contract documents for plan house distribution, HDR and P-MRNRD.
- P-MRNRD will be responsible for advertising.
- P-MRNRD will be responsible for arranging pre-bid meeting room.
- Bid Phase assistance will be limited to responding to technical questions from bidders. An allowance of 24 hours has been provided for this effort. Formal responses will be communicated and coordinated by P-MRNRD.

TASK SERIES 900 – CONSTRUCTION MEETINGS AND CONFERENCES

Task Objectives: Attend and conduct periodic meetings and conferences.

HDR Activities: **Task 910 Pre-Construction Conference.** HDR will assist P-MRNRD with organizing and holding a pre-construction meeting. Representatives from HDR, P-MRNRD, Contractor, and other interested parties will attend this meeting. The main purposes of this meeting will be to establish lines of communication, discuss areas of responsibility, establish operational constraints, and to discuss and clarify items. An agenda will be prepared by HDR prior to the conference and conference notes will be prepared by HDR after the conference.

Task 920 Substantial Completion Inspection. HDR to conduct a substantial completion inspection and submit a list of observed items requiring completion or correction.

Task 930 Final Inspection. HDR to conduct a final inspection and submit a list of observed items requiring completion or correction. The Final Inspection will be attended by the HDR, RPR, and P-MRNRD. Any deficiencies noted shall be addressed by HDR. P-MRNRD will be notified when the deficiencies have been corrected. After items on list have been completed or corrected, HDR to review final payment application.

Task 940 Letter of Certification. HDR will prepare a certification letter signed by the Engineer stating the work is in compliance with the plans and specifications in the construction contract for submittal with the Nebraska Department of Natural Resources – Dam Safety Division.

Task Deliverables:

- Pre-construction conference agenda and notes
- Interim conferences agenda and conference notes
- Substantial Completion Inspection and Final Inspection Report
- Certification Letter

Key Understandings:

- Conferences will be held at the Engineer's field office established by the Contractor.
- Conference notes will be prepared by HDR after the conference. P-MRNRD will provide comments on notes.

TASK SERIES 1000 CONSTRUCTION CONTRACT ADMINISTRATIVE SERVICES

Task Objectives: To provide construction contract administration services.

HDR Activities: **Task 1010 Records and Reports.** Document construction activities.
1010.1 Records and Report Documentation. Document construction activities including the following:

- Field Book. Maintain field book as the official Construction Contract Document and readily accessible by P-MRNRD. HDR to maintain field

book to record weather conditions; daily activities; decisions; and general observations.

- **Weekly Report Summaries.** HDR will prepare a weekly report summarizing the daily activities.
- **Maintain Quantities.** HDR will estimate and record daily quantities of installed items and keep cumulative quantities in a quantity book. These quantities will be reviewed and reconciled with the construction contractor. In addition, the adequacy and quantity of materials delivered, but not installed will be verified and noted.
- **Payment Application Verification.** Contractor will prepare payment application and HDR to verify quantities. HDR will review and recommend payment. The schedule of values will be used to estimate the percentage of work completed for lump sum items.
- **Maintain QC Test Results.** Contractor documentation of all testing will be provided to the P-MRNRD. This includes, but is not limited to, testing and sampling of earth fill, concrete, and drainfill.
- **Maintain Photographic Documentation.** A photographic documentation record of construction activities will be maintained using a digital camera. A Word document will be created and a tabular format used to describe each photograph.
- **Project Filing.** HDR to maintain files of correspondence, shop drawings and samples, change orders and other project related documents.

1010.2 As-Built Drawings. HDR to prepare electronic as-built drawings corrected to reflect observed field conditions and changes made during the construction period. The Contractor will be responsible for marking up a set of drawings as changes are identified. The HDR Team will be responsible for coordinating with and reviewing the construction contractor's as-built drawings.

Task 1020 Construction Contract Support.

1020.1 Contract Document Clarification. HDR to provide clarifications and interpretations of Contract Documents requested by Contractor in the form of requests for information (RFI).

1020.2 Survey Control and Verification Checks. E&A Consulting Group, as a subconsultant to HDR, will provide survey control and verification checks for the Project. See Enclosure A for description of survey work.

1020.3 Material QA Testing. Thiele Geotech, Inc. as a subconsultant to HDR, will provide conduct Quality Assurance (QA) material testing for earthwork, drainfill, and concrete. HDR will conduct QA field moisture and density testing.

1020.4 Submittal Reviews. HDR will review and recommend approval of required submittals meeting contract document requirement including but not limited to Water Control and Diversion Plan Temporary Waterway Crossing, Material Certifications, Concrete Mix Design, Reinforced Concrete Pipe Shop Drawings, and shop drawings for substitutions of "or equivalent" items.

- 1020.5 Construction Meetings. HDR to facilitate periodic construction conferences with the Construction Contactor to discuss schedule, planned activities and other related work. It is assumed that the Engineer will attend the bi-weekly construction meetings (40 conferences are assumed) at the same time that Engineer visits the site for observations. Agenda and conference notes will be prepared.
- 1020.6 Project Tracking Collaboration System (PTCS). Utilize HDR's PTCS to communicate with Contractor and NRD for request for informations, field orders, change proposal requests and change orders.
- 1020.7 Technical Field Observation. Engineer and other technical personnel also will make periodic visits to the site to observe the construction.
- 1020.8 Instrumentation Data Interpretation. HDR to read and review the water quality dam instrumentation data and coordinate with Contractor.
- 1020.9 Design Modifications. HDR will prepare drawings, details, cost estimates and specifications needed to prepare construction contract modifications due to changes in site conditions. Design changes are to be made upon direction of P-MRNRD to HDR.

Task 1030 Permit Compliance Support.

- 1030.1 SWPPP Compliance Monitoring. Conduct minimum of weekly site visit to the site and prepare report on BMP performance. Submit on PWCP website.
- 1030.2 USACE Section 404 Compliance Baseline Monitoring and Notifications. HDR to prepare notifications to USACE for the commencement of work and for the completion of work.
- 1030.2.1 Baseline Downstream Channel Monitoring. Identify the 3 points downstream of the dam to evaluate potential erosion impacts in the channel and provide survey prior and after construction.
- 1030.2.2 Wetland Mitigation. Document paulustrine and forested wetland construction. Provide documentation to USACE on completion.
- 1030.2.3 Stream Mitigation. Provide documentation to USACE on completion.
- 1030.2.4 Stream Functional Assessment. Provide documentation to USACE on completion.
- 1030.3 Migratory Bird and Raptor Survey. Provide bird survey for tree removal within the nesting season for migratory birds (April 1 to July 15). Conduct an initial survey for raptors. A total of 10 bird surveys will be conducted.
- 1030.4 NDNR Approval to Store Water. HDR to provide documentation to NDNR for administration of State Permit to Store Water.

Task Deliverables:

- Field Book and Quantity Book
- Shop drawing review submittals
- Weekly construction reports
- Material testing reports
- Contractor Test Results

- Photographic Documentation
- Change order documentation
- As-Built drawings (1 hard copy and electronic copy)
- Construction Certification Form
- Design modifications
- SWPPP reports
- USACE reporting
- NDNR approval to store water documentation
- Construction conference agenda and notes

Key Understandings:

- Anticipated duration of construction is 12 months from approximately October 1, 2017 to October 1, 2018 with 3 months for wintershut down.
- E&A Consulting Group, as a subconsultant to HDR, will provide survey control and verification checks during and after construction. Contractor will be responsible for cost of reestablishing survey control or rechecking nonconforming elevations.
- Thiele Geotech, as a subconsultant to HDR, will conduct QA material testing by conducting random testing on earthwork (Proctor and Atterberg), concrete (air, temperature, slump, and casting and breaking cylinders), and drainfill material.
- Contractor will be responsible for construction survey and staking. Contractor will be responsible to survey final cross sections and other grading work for record drawings.
- Full-time resident project representative (RPR) will provide construction quality assurance for the Project. An RPR will be on site at all times. The level of construction observation effort included in this scope equates to 1,700 hours for the RPR commencing with start of Contractor's field activities and during the period when the Contractor is performing work requiring observation, as determined by HDR. An average of 45-hour week for 36 weeks for a RPR plus 2 weeks (80 hours) after project completion. Reasonable variations in work days and schedules are anticipated, but no protracted overtime, work stoppages or extended work schedules are assumed. At critical times, the Engineer and other technical personnel will be provided.
- HDR's RPR will not authorize any deviation from the Contract Documents.
- RPR will not exceed the limitations of ENGINEER's authority as set forth in the Agreement or the Contract Documents. RPR will not undertake any of the responsibilities of the Contractors, subcontractors, suppliers, or Contractor's superintendents.
- HDR will not supervise, direct or manage the Contractor's forces or Contractor's means and methods. HDR will not assume responsibility for health and safety of Contractor's personnel.
- The HDR Team will not assume responsibility for health and safety of contractor's personnel. If, while at the Site, Engineer or RPR observes what Engineer or RPR suspects to be an unsafe condition, Engineer or RPR will inform Contractor's Superintendent and P-MRNRD of such suspected unsafe condition, and request Contractor's safety representative respond to P-MRNRD with an assessment of the condition and, if appropriate, an

explanation of safety measures and precautions to be implemented. Upon notification to the Contractor's Superintendent, Engineer or RPR will leave the site until the Contractor's safety representative has appropriately responded to the P-MRNRD. Engineer's or RPR's failure to recognize or discover an unsafe condition will not relieve Contractor of any responsibility Contractor has for job site safety for the Project, which shall remain Contractor's sole responsibility.

- P-MRNRD will make all decisions on contractual matters and will process and take appropriate action on performance and payment bonds approval, construction subcontractor's approval, Contractor pay requests, change orders, and other administrative matters.
- Photographic documentation will be provided in digital format only.
- Administrative activities for a total of 4 change orders are assumed.
- Design changes are limited to basic changes to the original design and limited to the hours shown in the proposal. Modifications due to change in site conditions or additional work will be conducted as Additional Services.
- HDR will not conduct any inspection or material testing at the pre-cast material plant, riprap quarry, or other off-site locations. Riprap and concrete materials to be supplied from an approved NOR supplier.

Standard Administration of Construction Contract Key Understandings (EJCDC):

- General Administration of Construction Contract: Consult with Owner and act as Owner's representative as provided in the Construction Contract. The extent and limitations of the duties, responsibilities, and authority of Engineer shall be as assigned in EJCDC® C-700, Standard General Conditions of the Construction Contract (2013 Edition), prepared by the Engineers Joint Contract Documents Committee, or other construction general conditions specified in this Agreement. If Owner, or Owner and Contractor, modify the duties, responsibilities, and authority of Engineer in the Construction Contract, or modify other terms of the Construction Contract having a direct bearing on Engineer, then Owner shall compensate Engineer for any related increases in the cost to provide Construction Phase services. Engineer shall not be required to furnish or perform services contrary to Engineer's responsibilities as a licensed professional. All of Owner's instructions to Contractor will be issued through Engineer, which shall have authority to act on behalf of Owner in dealings with Contractor to the extent provided in this Agreement and the Construction Contract except as otherwise provided in writing.
- Resident Project Representative (RPR): Provide the services of an RPR at the Site to assist the Engineer and to provide more extensive observation of Contractor's work. Duties, responsibilities, and authority of the RPR are as set forth in Exhibit D. The furnishing of such RPR's services will not limit, extend, or modify Engineer's responsibilities or authority except as expressly set forth in Exhibit D.
- Pre-Construction Conference: Participate in a pre-construction conference prior to commencement of Work at the Site.

- **Electronic Transmittal Protocols:** If the Construction Contract Documents do not specify protocols for the transmittal of Project-related correspondence, documents, text, data, drawings, information, and graphics, in electronic media or digital format, either directly, or through access to a secure Project website, then together with Owner and Contractor jointly develop such protocols for transmittals between and among Owner, Contractor, and Engineer during the Construction Phase and Post-Construction Phase.
- **Original Documents:** If requested by Owner to do so, maintain and safeguard during the Construction Phase at least one original printed record version of the Construction Contract Documents, including Drawings and Specifications signed and sealed by Engineer and other design professionals in accordance with applicable Laws and Regulations. Throughout the Construction Phase, make such original printed record version of the Construction Contract Documents available to Contractor and Owner for review.
- **Schedules:** Receive, review, and determine the acceptability of any and all schedules that Contractor is required to submit to Engineer, including the Progress Schedule, Schedule of Submittals, and Schedule of Values.
- **Baselines and Benchmarks:** As appropriate, establish baselines and benchmarks for locating the Work which in Engineer's judgment are necessary to enable Contractor to proceed.
- **Visits to Site and Observation of Construction:** In connection with observations of Contractor's Work while it is in progress:
 - Make visits to the Site at intervals appropriate to the various stages of construction, as Engineer deems necessary, to observe as an experienced and qualified design professional the progress of Contractor's executed Work. Such visits and observations by Engineer, and the Resident Project Representative, if any, are not intended to be exhaustive or to extend to every aspect of the Work or to involve detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement and the Construction Contract Documents, but rather are to be limited to spot checking, selective sampling, and similar methods of general observation of the Work based on Engineer's exercise of professional judgment, as assisted by the Resident Project Representative, if any. Based on information obtained during such visits and observations, Engineer will determine in general if the Work is proceeding in accordance with the Construction Contract Documents, and Engineer shall keep Owner informed of the progress of the Work.
 - The purpose of Engineer's visits to the Site, and representation by the Resident Project Representative, if any, at the Site, will be to enable Engineer to better carry out the duties and responsibilities assigned to and undertaken by Engineer during the Construction Phase, and, in addition, by the exercise of Engineer's efforts as an experienced and qualified design professional, to provide for Owner a greater degree of confidence that the completed Work will conform in general to the Construction Contract Documents and that Contractor has implemented and maintained the integrity of the design concept of the completed Project as a functioning whole as indicated in the Construction Contract Documents. Engineer shall not, during such visits or as a result of such

observations of the Work, supervise, direct, or have control over the Work, nor shall Engineer have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, for security or safety at the Site, for safety precautions and programs incident to any Constructor's work in progress, for the coordination of the Constructors' work or schedules, nor for any failure of any Constructor to comply with Laws and Regulations applicable to furnishing and performing of its work. Accordingly, Engineer neither guarantees the performance of any Constructor nor assumes responsibility for any Constructor's failure to furnish or perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents.

- **Defective Work:** Reject Work if, on the basis of Engineer's observations, Engineer believes that such Work is defective under the terms and standards set forth in the Construction Contract Documents. Provide recommendations to Owner regarding whether Contractor should correct such Work or remove and replace such Work, or whether Owner should consider accepting such Work as provided in the Construction Contract Documents. However, neither Engineer's authority to reject Work nor Engineer's decision to exercise or not exercise such authority shall give rise to a duty or responsibility of the Engineer to Contractors, Subcontractors, material and equipment suppliers, their agents or employees, or any other person(s) or entities performing any of the Work, including but not limited to any duty or responsibility for Contractors' or Subcontractors' safety precautions and programs incident to the Work.
- **Compatibility with Design Concept:** If Engineer has express knowledge that a specific part of the Work that is not defective under the terms and standards set forth in the Construction Contract Documents is nonetheless not compatible with the design concept of the completed Project as a functioning whole, then inform Owner of such incompatibility, and provide recommendations for addressing such Work.
- **Clarifications and Interpretations:** Accept from Contractor and Owner submittal of all matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Construction Contract Documents. With reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Construction Contract Documents.
- **Non-reviewable Matters:** If a submitted matter in question concerns the Engineer's performance of its duties and obligations, or terms and conditions of the Construction Contract Documents that do not involve (1) the performance or acceptability of the Work under the Construction Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly give written notice to Owner and Contractor that Engineer will not provide a decision or interpretation.

- Field Orders: Subject to any limitations in the Construction Contract Documents, Engineer may prepare and issue Field Orders requiring minor changes in the Work.
- Change Proposals, Change Orders and Work Change Directives: Recommend Change Proposals, Change Orders and Work Change Directives to Owner, as appropriate, and prepare Change Orders and Work Change Directives as required.
- Differing Site Conditions: Respond to any notice from Contractor of differing site conditions, including conditions relating to underground facilities such as utilities, and hazardous environmental conditions. Promptly conduct reviews and prepare findings, conclusions, and recommendations for Owner's use.
- Shop Drawings, Samples, and Other Submittals: Review and approve or take other appropriate action with respect to Shop Drawings, Samples, and other required Contractor submittals, but only for conformance with the information given in the Construction Contract Documents and compatibility with the design concept of the completed Project as a functioning whole as indicated by the Construction Contract Documents. Such reviews and approvals or other action will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto. Engineer shall meet any Contractor's submittal schedule that Engineer has accepted.
- Substitutes and "Or-equal": Evaluate and determine the acceptability of substitute or "or-equal" materials and equipment proposed by Contractor, but subject to the provisions of Paragraph A2.02.A.2. of this Exhibit A.
- Inspections and Tests:
 - Receive and review all certificates of inspections, tests, and approvals required by Laws and Regulations or the Construction Contract Documents. Engineer's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the Construction Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Construction Contract Documents. Engineer shall be entitled to rely on the results of such inspections and tests.
 - As deemed reasonably necessary, request that Contractor uncover Work that is to be inspected, tested, or approved.
 - Pursuant to the terms of the Construction Contract, require special inspections or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- Change Proposals and Claims: (a) Review and respond to Change Proposals. Review each duly submitted Change Proposal from Contractor and, within 30 days after receipt of the Contractor's supporting data, either deny the Change Proposal in whole, approve it in whole, or deny it in part and approve it in part. Such actions shall be in writing, with a copy provided to Owner and Contractor. If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties that the Engineer will not resolve the Change Proposal. (b) Provide

information or data to Owner regarding engineering or technical matters pertaining to Claims.

- Applications for Payment: Based on Engineer's observations as an experienced and qualified design professional and on review of Applications for Payment and accompanying supporting documentation:
- Determine the amounts that Engineer recommends Contractor be paid. Recommend reductions in payment (set-offs) based on the provisions for set-offs stated in the Construction Contract. Such recommendations of payment will be in writing and will constitute Engineer's representation to Owner, based on such observations and review, that, to the best of Engineer's knowledge, information and belief, Contractor's Work has progressed to the point indicated, the Work is generally in accordance with the Construction Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, to the results of any subsequent tests called for in the Construction Contract Documents, and to any other qualifications stated in the recommendation), and the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work. In the case of unit price Work, Engineer's recommendations of payment will include final determinations of quantities and classifications of the Work (subject to any subsequent adjustments allowed by the Construction Contract Documents).
- By recommending payment, Engineer shall not thereby be deemed to have represented that observations made by Engineer to check the quality or quantity of Contractor's Work as it is performed and furnished have been exhaustive, extended to every aspect of Contractor's Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in this Agreement. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment including final payment will impose on Engineer responsibility to supervise, direct, or control the Work, or for the means, methods, techniques, sequences, or procedures of construction or safety precautions or programs incident thereto, or Contractor's compliance with Laws and Regulations applicable to Contractor's furnishing and performing the Work. It will also not impose responsibility on Engineer to make any examination to ascertain how or for what purposes Contractor has used the money paid to Contractor by Owner; to determine that title to any portion of the Work, including materials or equipment, has passed to Owner free and clear of any liens, claims, security interests, or encumbrances; or that there may not be other matters at issue between Owner and Contractor that might affect the amount that should be paid.
- Contractor's Completion Documents: Receive from Contractor, review, and transmit to Owner maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance required by the Construction Contract Documents, certificates of inspection, tests and approvals, and Shop Drawings, Samples, and other data approved as provided under Paragraph A1.05.A.17. Receive from Contractor, review, and transmit to Owner the annotated record documents which are to be assembled by Contractor in accordance with the Construction Contract Documents to

obtain final payment. The extent of Engineer's review of record documents shall be to check that Contractor has submitted all pages.

- **Substantial Completion:** Promptly after notice from Contractor that Contractor considers the entire Work ready for its intended use, in company with Owner and Contractor, visit the Site to review the Work and determine the status of completion. Follow the procedures in the Construction Contract regarding the preliminary certificate of Substantial Completion, punch list of items to be completed, Owner's objections, notice to Contractor, and issuance of a final certificate of Substantial Completion. Assist Owner regarding any remaining engineering or technical matters affecting Owner's use or occupancy of the Work following Substantial Completion.
- **Final Notice of Acceptability of the Work:** Conduct a final visit to the Project to determine if the Work is complete and acceptable so that Engineer may recommend, in writing, final payment to Contractor. Accompanying the recommendation for final payment, Engineer shall also provide a notice to Owner and Contractor in the form attached hereto as Exhibit E ("Notice of Acceptability of Work") that the Work is acceptable (subject to the provisions of the Notice and Paragraph A1.05.A.21.b) to the best of Engineer's knowledge, information, and belief, and based on the extent of the services provided by Engineer under this Agreement.
- **Standards for Certain Construction-Phase Decisions:** Engineer will render decisions regarding the requirements of the Construction Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth in the Construction Contract for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.
- **Duration of Construction Phase:** The Construction Phase will commence with the execution of the first Construction Contract for the Project or any part thereof and will terminate upon written recommendation by Engineer for final payment to Contractors. If the Project involves more than one prime contract as indicated in Paragraph A1.03.D, then Construction Phase services may be rendered at different times in respect to the separate contracts. Subject to the provisions of Article 3, Engineer shall be entitled to an equitable increase in compensation if Construction Phase services (including Resident Project Representative services, if any) are required after the original date for completion and readiness for final payment of Contractor as set forth in the Construction Contract.

TASK SERIES 1100 OPERATION AND MAINTENANCE MANUAL AND EMERGENCY ACTION PLAN

An Operation and Maintenance (O&M) Manual containing information regarding the operation and maintenance of equipment will be prepared. In addition, instructions related to the emergency action plan will be prepared.

Task Objectives: To prepare documentation on equipment.

HDR Activities: **Task 1110 Operation and Maintenance Manual.** HDR will prepare an O&M Manual documenting the equipment purchased, agreements, permitting, and other general O&M activities.

Task 1120 Emergency Action Plan. HDR will update the emergency action plan created during the design phase. Edits will be made to incorporate current contact information and NDNR updates.

Task Deliverables:

- Operation and Maintenance Manual
- Emergency Action Plan

Key Understandings:

- Two (2) hard copies and an electronic copy of the O&M Manual will be provided.
- EAP plan will be provided electronically.

PHASE I MODIFICATIONS

Task 530 Subsurface Exploration Plan – remove remaining subsurface investigation services authorized in original agreement from contract.

Task 930 NE Water Sustainability Fund Grant – remove task 930 scope from contract.

ENCLOSURE A

Nebraska State Historical Society
Bozell, Rob <rob.bozell@nebraska.gov>

Description of Subconsultant's Services

Task 100 **Field Investigation.** Complete a comprehensive field investigation of the entire project area to identify all cultural resources and evaluate each for eligibility for inclusion on the National Register of Historic Places.

Task 200 **Cultural Resources Survey Report.** The field effort and background research will be detailed in a brief report with all appropriate forms and maps attached. The report will be suitable for submission to the Nebraska State Historic Preservation Office (SHPO) for review under Section 106 of the National Historic Preservation Act.

Notes: SHPO has up to 30 days to review and respond to the report after submission.

Time of Performance

The period of performance shall begin on the Execution Date of this agreement and shall continue until four (4) weeks from 'notice to proceed with fieldwork' from HDR to the Subconsultant. Fee shall not exceed cost estimate.

Fee Schedule

Fee shall not exceed cost estimate.

Project Archeologist (\$ 44/hour)	\$1,408
2 days of fieldwork and 2 days of report preparation	
2 Archeological Technicians (at \$18/hour each)	\$576
2 days of fieldwork	
Mileage (Lincoln-Omaha-Lincoln x 2)	\$108
(200 mi @0.54 /mi)	
Subtotal	\$2,092
ADMINISTRATIVE OVERHEAD (10%)	\$209
TOTAL COST ESTIMATE	\$2,301



E & A CONSULTING GROUP, INC.

Engineering Answers

10909 Mill Valley Road, Suite 100 • Omaha, NE 68154-3950
P 402.895.4700 • F 402.895.3599
www.eacg.com

March 30, 2017

Laurie Carrette, c/o Papio NRD
HDR Inc.
1120 N. 103rd Plaza
Omaha NE. 68114

RE: Proposal for Professional Services
Survey Services – Dam Site ZB-2, Phase II and III
E&A Project Number #P2016.177.002

Dear Laurie,

Thank you for providing E & A Consulting Group, Inc. ("E&A") the opportunity to provide you a proposal for land surveying services. E&A will conduct all of the required office and field work to provide surveying services to you for the Dam Site ZB-2 project per the following scope:

Phase II – Final Design

TASK SERIES 700 SURVEY AND RIGHT OF WAY

Task Objectives: Provide survey and right of way services in support of final design activities.

Task 710 Additional Field Survey. Conduct additional survey to describe the stream mitigation reaches and set additional control points. This includes:

- Additional 200' of topographic survey of the downstream stream channel (extend 50' from the top of bank)
- Channel profile above the normal pool within the stream mitigation reaches (approx. 0.5 mile), approx. every 50 feet with cross section every 500 feet (see attached map)

Create a surface with the topographic survey and supplement with LiDAR data.

Task 720 Boring Location Surveys Survey bore hole locations (5) for additional geological surface investigation.

Task 730 Boundary Survey of Project Lands. Boundary map of total project lands, including easements, and metes and bounds description of NRD project lands as a single parcel.

Task 740 Legal Descriptions and Documentation. Prepare legal descriptions and documentation (exhibit drawings and legal descriptions) for the following:

- Parcel acquisitions (3 Total) {2 parcels in Phase I work}
- Stream Mitigation easement from P-MRNRD to USACE
- Temporary (1) and Permanent Easements (8) legal descriptions

Task 750 Mark Proposed Acquisition Areas. Stake proposed acquisition lines in field for review and set new property corners.

Task Deliverables:

- Profile and cross section survey data for channel mitigation areas.
- Boring location survey data.
- Boundary Survey of Project Lands
- Legal exhibits and documents as outlined above

Key Understandings:

- Title commitments to be provided by NRD.
- P-MRNRD to submit and pay for documentation and recordation fees.

Our cost based on our hourly rates to complete the above phase II services is **\$17,650.00**. Any additional requests will be charged at our normal hourly rates

Phase III – Construction Administration Services

Task 1020 Construction Contract Support.

1020.2 Survey Control and Verification Checks. E&A Consulting Group, as a subconsultant to HDR, will provide survey control and verification checks for the Project.

Survey Control

- Set control points at dam, auxiliary spillway and stream mitigation area. Points will be 5/8" x 24" rebar on same data as plans. For the dam and auxiliary spillway said rebar will be set in concrete or on a permanent structure.
- Remark all property corners and set points on line to illustrate the new areas owned by the NRD.

Verification Survey

- Dam and Auxiliary Spillway – verify and provide an as-built drawing of the entire structure including the labyrinth weir and baffled chute, top of dam elevations and toe and tops of earth fills and excavations required to complete the project.
- Instrumentation Survey - piezometers (4), settlement plates (4), and monitoring wells (2). Survey at installation, after completion, monitoring and closure (10 trips).
- On-call survey during construction – six ½ day trips to aid field inspector or miscellaneous verifications.

Our cost based on our hourly rates to complete the above Phase III services is **\$22,420.00**. Any additional requests will be charged at our normal hourly rates.

Sincerely,

E & A Consulting Group, Inc.

Jason Headley, RLS 604
Project Manager



I have received and read the above proposal for professional services. By signing, this proposal for professional services becomes the agreement and is executed.

Date: _____

Signature: _____

Name: _____

Client: _____

Address: _____

City, State, ZIP: _____

Phone: _____



13478 Chandler Road
Omaha, Nebraska 68138-3716
402.556.2171 Fax 402.556.7831
www.thielegeotech.com

April 5, 2017

Ms. Laurie Carrette Zook, P.E.
HDR Engineering, Inc.
8404 Indian Hills Drive
Omaha, NE 68114

**RE: GEOTECHNICAL EXPLORATION & Q/A MATERIAL TESTING PROPOSAL
ZORINSKY BASIN NUMBER 2, 204TH ST. & W. CENTER RD., DOUGLAS COUNTY, NE**

Dear Ms. Carrette Zook:

Enclosed is our proposal for additional geotechnical exploration and construction phase quality assurance material testing related to the Zorinsky Basin Number 2 project to be located near the intersection of 204th Street and West Center Road in Douglas County, Nebraska. The accompanying proposal describes our approach and proposed scope of services, the estimated cost of the study, and the contract terms.

Thiele Geotech is a service oriented firm offering geotechnical, material, and environmental engineering. Our focus is on providing quality engineering solutions based on each individual client's needs. Our professional staff has extensive experience with similar projects, and we have the equipment and resources available to complete this study.

Thiele Geotech is an accredited laboratory as required by virtually all governing agencies and specifications. Thiele Geotech participates in the AASHTO Materials Reference Laboratory (AMRL) program and the Cement and Concrete Reference Laboratory (CCRL) program. Our laboratory accreditation covers numerous test methods for the analysis of soils, aggregates, concrete, masonry and asphalt testing. Thiele Geotech has nationwide approval (validation) by the Department of the Army Corps of Engineers to provide construction materials testing.

We look forward to working with you and your design team on this project. If you have any questions, please call. If the accompanying proposal is acceptable, please return an executed copy to our office.

Respectfully,
Thiele Geotech, Inc.

A handwritten signature in blue ink that reads 'Cody Kimball'.

Cody Kimball, E.I.

Enclosures

R:\ZORINSKY BASIN NUMBER 2 GEOTECHNICAL-MATERIAL.DOCX

**Geotechnical/Material Proposal
Zorinsky Bain Number 2
204th Street & West Center
Road Douglas County, Nebraska
April 5, 2017**

Thiele Geotech, Inc. is pleased to submit our proposal for geotechnical exploration and construction phase quality assurance material testing related to the referenced project. The following sections detail our understanding of the project, our proposed scope of services, and the cost of the study. The Cost Estimate is attached in Exhibit A. This proposal will be held open for a period of 45 days from the above date.

PROJECT DESCRIPTION

Our understanding of the project is based upon information provided by HDR Engineering, Inc.

The project consists of a new dam to be constructed across Boxelder Creek south of Center Street and west of 204th Street in Douglas County, Nebraska. The dam will be constructed of compacted earth, and the principal spillway (if constructed) will be cut into the north abutment. Water impoundment will extend south of the dam.

Based on previous experience in the area, the soils on the site are expected to consist of Peoria loess deposits overlying older loess and till deposits.

SCOPE OF SERVICES

Our proposed geotechnical drilling and testing will consist of test borings to obtain geologic information and samples of the site soils, laboratory tests to determine the relevant engineering properties of the various soil strata, and a report of the boring logs and laboratory test data.

We understand that the current test boring scope is as follows.

- All borings will be drilled into glacial till.
- 170 feet of auger drilling/sampling is estimated.
- Access to be provided by the Papio MRNRD
- Assume access may be difficult and that ATV will be needed.
- All borings will be backfilled with cement bentonite grout slurry.

The borings will be sampled at intervals of 2.5 feet in the top 10 feet and every 5 feet thereafter. All Shelby tube samples will be left in the tubes, sealed in the field, and properly transported to the lab. Samples will be extruded immediately before testing. Pocket penetrometer readings will be taken on each cohesive sample in the field. Split-spoon samples shall be obtained in sands, materials too stiff to push tubes, where tube sample recovery is less than 6 inches, or where push tubes encounter sand. The automatic hammer is to have been calibrated within the last 12 months.

Based on the results of the test borings, a laboratory testing program will be established to evaluate the engineering properties of the various soil strata. We understand that laboratory testing may include the following tests and quantities.

- 15 Atterberg limits
- 15 grain size with hydrometer analysis

- 30 moisture/density
- 3 Standard Proctors

A data report including all typed logs and lab test data will be provided upon completion of the lab testing. No engineering analysis is included in our scope of work.

The proposed scope of services does not include an evaluation of potential contamination on or near the site. If the environmental condition of the property is a concern, an environmental site assessment can be provided as an additional service.

SCOPE OF SERVICES - MATERIAL TESTING

Material testing on this project will consist of the following services:

1. Compaction tests on structural fill and backfill
2. Test concrete materials and make cylinders
3. Appurtenant laboratory tests on soil and concrete materials
4. Instrumentation installation and equipment for settlement gauges, piezometers, and monitoring wells.
5. Engineering consultation, reports, and project management

Test procedures and requirements will be as set forth in the plans and specifications. The frequency and locations of tests will be in accordance with the contract documents or as directed by the Engineer or field representative. Testing will be conducted on an "on-call" basis.

ESTIMATED COST & SCHEDULE

Professional services for geotechnical exploration will be billed at the unit rates listed in Exhibit A. Based on the indicated work scope, the total cost for this work is estimated at \$12,544.00. This amount will not be exceeded for the study unless additional work is authorized. Approximately 3 to 4 weeks from your notice to proceed will be required to complete the report. The schedule is somewhat dependent on weather, site access conditions, and other factors including the actual subsurface conditions identified in the test borings. If this proposed schedule does not meet your project requirements, we would be happy to discuss alternate schedules.

Material testing services will be billed at the unit rates listed in Exhibit A. Any tests not listed will be billed at our normal fee schedule rates in effect at the time of the test. Based on the number of tests in Exhibit A, the total cost for testing services is estimated at \$48,396.00 to \$55,656.00. This cost estimate is not intended as a not-to-exceed or lump-sum cost. The number of tests performed is highly dependent upon numerous factors beyond our control, including weather conditions, the contractor's schedule and performance, and the amount of discretionary testing requested. Consequently, the actual cost may be higher or lower than the estimated cost. We will bill only for the tests actually performed, and not on any lump sum or minimum cost basis.

ADDITIONAL SERVICES

Subsequent to completion of the geotechnical exploration report, additional services are often required that are not included in the above estimate. These include consultation with the design team and review of the final plans and specifications. In addition, construction phase quality control testing is an additional service

not included in the above estimate. An environmental assessment, if required, can also be performed as an additional service. If we are requested to provide additional services including, but not limited to the above, you will be billed in accordance with our normal fee schedule. We would be happy to provide cost estimates for any additional services at your request.

EXHIBITS

Exhibit A - Cost Estimate

THIELE GEOTECH, INC.

By: 

Robert K. Lapke

13478 Chandler Road

Omaha, Nebraska 68138-3716

402/556-2171 Fax 402/556-783

Cost Estimate

Exhibit A

Zorinsky Basin Number 2
204th Street & West Center Road, Douglas County, NE

4/5/2017

Description	Estimated Quantity	Unit Rate	Estimated Cost
<u>PHASE II: ADDITIONAL GEOTECHNICAL EXPLOARTION</u>			
Drilling			
Mobilization (Zone 1)	1.0	500.00	500.00
Exploratory Drilling (hollow stem augers) (/ft.)	170.0	15.50	2,635.00
Grouting Boreholes (/ft.)	170.0	7.00	1,190.00
Crop Damage	1.0	1,500.00	1,500.00
Trip Charge - Zone 1 (/trip) support truck	2.0	57.00	114.00
Staff Engineer (/hr.) utilities, field coordination	5.0	90.00	450.00
Laboratory Analysis			
Atterberg Limits (/set)	15.0	80.00	1,200.00
Hydrometer Analysis (ea.) with sieve	15.0	110.00	1,650.00
Sieve Analysis (ea.)	15.0	75.00	1,125.00
Unit Weight Test (ea.)	30.0	20.00	600.00
Moisture Content (ea.)	30.0	7.00	210.00
Standard Proctor (ea.)	3.0	160.00	480.00
Project Management			
Data Report Preparation (/hr)	5.0	90.00	450.00
Staff Engineer (/hr.) Health and Safety Plan	3.0	90.00	270.00
Senior Engineer (/hr.)	1.0	170.00	170.00
		Total	12,544.00
<u>PHASE III: Q/A MATERIALS TESTING</u>			
Earthwork			
Standard Proctor (ea.)	8.0	162.00	1,296.00
Atterberg Limits (/set)	8.0	82.00	656.00
Sieve Analysis of Aggregate (ea.)	4.0	75.00	300.00
Relative Density Test (ea.)	2.0	205.00	410.00
Compaction Test (ea.)	60.0	35.00	2,100.00
Trip Charge - Zone 1 (/trip)	30.0	58.00	1,740.00
Concrete			
Concrete Test Set (slump/air/temp/cast 4-4"x8" OR 3-6"x12" cyl	5.0	79.00	395.00
Compressive Strength of Cylinder (ea.)	20.0	16.00	320.00
Cast Additional Cylinder (ea.)	5.0	9.00	45.00
Hold Cylinder (strip & cure) (ea.)	5.0	12.00	60.00
Trip Charge - Zone 1 (/trip)	10.0	58.00	580.00
Piezometers			
Piezometer Installation (ea.)	6.0	1,500.00	9,000.00
Piezometer Extension Supplies (lump sum)	1.0	1,900.00	1,900.00
Piezometer Surface Completion (ea.)	4.0	600.00	2,400.00
Piezometer Decommissioning (ea.)	2.0	350.00	700.00
Trip Charge - Zone 1 (/trip)	8.0	58.00	464.00

Settlement Gauges

Settlement Gauge Installation (ea.)	4.0	2,500.00	10,000.00
Settlement Gauge Extension Supplies (lump sum)	1.0	1,200.00	1,200.00
Settlement Gauge Surface Completion (ea.)	4.0	600.00	2,400.00
Settlement Gauge Decommissioning (ea.)	2.0	350.00	700.00
Trip Charge - Zone 1 (/trip)	6.0	58.00	348.00

Monitoring Wells

Monitoring Well Installation (ea.)	3.0	1,700.00	5,100.00
Monitoring Well Extension Supplies (lump sum)	1.0	1,100.00	1,100.00
Monitoring Well Surface Completion (ea.)	3.0	600.00	1,800.00
Monitoring Well Decommissioning (ea.)	-	350.00	-
Trip Charge - Zone 1 (/trip)	4.0	58.00	232.00

Miscellaneous

Senior Engineer (/hr.)	5.0	174.00	870.00
Project Engineer (/hr.)	20.0	114.00	2,280.00

Subtotal 48,396.00

Contingency

discretionary tests, retests, and other tests not listed	15%	7,260.00
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Total 55,656.00

ATTACHMENT 2 PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT PHASE II: FINAL DESIGN AND PHASE III: CONSTRUCTION CONTRACT ADMINISTRATION OF ZORINSKY WATER QUALITY BASIN NO. 2 FEE ESTIMATE - APRIL 5, 2017																						
HDR Engineering, Inc. Estimated Hours/Costs											Expenses					HDR Totals	Sub-Consultant Estimated Costs					Est. Total Cost
TASKS	Project Manager	Specialist	Principal Staff	Senior Staff	Technical Staff	Tech Support	Admin/ Clerical	Total Hours	Total Labor Cost	Tech. Fee	Printing	Travel	Misc.	Total Expenses	NE Historical Society		E&A	Thiele Geotech	R. Donovan	Total Sub- Consult.		
TASK SERIES 100 PROJECT MANAGEMENT																						
Task 110	Project Management	84	20				40	144	\$27,700	\$833			\$200	\$733	\$28,433					\$0	\$28,433	
Task 120	Coordination Meeting																					
Subtask 120.1	P-MRNRD Coordination Meeting	4		4	4		2	14	\$2,650	\$52		\$50		\$102	\$2,752					\$0	\$2,752	
Subtask 120.2	Board/Subcommittee Presentation	4			2		2	8	\$1,430	\$30		\$20		\$50	\$1,480					\$0	\$1,480	
Estimated Task Hours Subtotal		92	20	4	6	0	0	44	166													
Estimated Task Cost Subtotal		\$20,700	\$5,000	\$880	\$1,020	\$0	\$0	\$4,180	\$31,780	\$31,780	\$614	\$0	\$70	\$200	\$884	\$32,664	\$0	\$0	\$0	\$0	\$0	\$32,664
TASK SERIES 200 PERMITTING																						
Task 210	Section 404 Permit																					
Subtask 210.1	USACE Coordination	2			72	56		130	\$19,410	\$481				\$481	\$19,891					\$0	\$19,891	
Subtask 210.2	Cultural Resources Survey and Report			1	8			9	\$1,580	\$33	\$10			\$43	\$1,623	\$3,000				\$3,000	\$4,623	
Subtask 210.3	Permit Conditions Summary			1	2	4	2	9	\$1,230	\$33				\$33	\$1,263					\$0	\$1,263	
Task 220	NDNR Permit Preparation																					
Subtask 220.1	Coordinate with NDNR	4						4	\$900	\$15				\$15	\$915					\$0	\$915	
Subtask 220.2	Plan Approval Application			2			2	8	\$1,390	\$44	\$10			\$54	\$1,444					\$0	\$1,444	
Subtask 220.3	Impound Water			2			1	3	\$535	\$11				\$11	\$546					\$0	\$546	
Subtask 220.4	Dam Breach Analysis			4		12	4	22	\$2,890	\$81				\$81	\$2,971					\$0	\$2,971	
Subtask 220.5	Emergency Action Plan			2		12	2	20	\$2,450	\$74				\$74	\$2,524					\$0	\$2,524	
Task 230	NPDES Construction Activity Permit																					
Subtask 230.1	Agency Coordination	2			4			6	\$1,130	\$22				\$22	\$1,152					\$0	\$1,152	
Subtask 230.2	Permit/Plan Preparation			4	32	4	40	88	\$11,360	\$326				\$326	\$11,686					\$0	\$11,686	
Estimated Task Hours Subtotal		8	0	16	118	88	48	25	303													
Estimated Task Cost Subtotal		\$1,800	\$0	\$3,520	\$20,060	\$10,560	\$4,560	\$2,375	\$42,875	\$42,875	\$1,121	\$20	\$0	\$0	\$1,141	\$44,016	\$3,000	\$0	\$0	\$0	\$3,000	\$47,016
TASK SERIES 300 GENERAL AND SITE CIVIL DESIGN																						
Task 310	Task Coordination	2			16	32		50	\$7,010	\$185				\$185	\$7,195					\$0	\$7,195	
Task 320	Refine Hydrology and Hydraulics			4	4	24	4	36	\$4,820	\$133				\$133	\$4,953					\$0	\$4,953	
Task 330	Earthwork Modeling				32	4	4	40	\$6,300	\$148				\$148	\$6,448					\$0	\$6,448	
Task 340	Upstream Face Slope Protection					6	2	8	\$910	\$30				\$30	\$940					\$0	\$940	
Task 350	Wetland and Stream Mitigation Design																					
Subtask 350.1	Stream Mitigation Development			8	4	20	16	48	\$6,360	\$178				\$178	\$6,538					\$0	\$6,538	
Subtask 350.2	Wetland Mitigation Development				4	8	8	20	\$2,400	\$74				\$74	\$2,474					\$0	\$2,474	
Task 360	Draft Final Drawings and Specifications																					
Subtask 360.1	Drawing Production			16	20	20	60	116	\$15,020	\$429	\$100			\$529	\$15,549					\$0	\$15,549	
Subtask 360.2	Technical Specifications			8	16		8	32	\$5,240	\$118	\$50			\$168	\$5,408					\$0	\$5,408	
Task 370	Final Drawings and Specifications																					
Subtask 370.1	Drawing Production			16	16	16	20	68	\$10,060	\$252	\$100			\$352	\$10,412					\$0	\$10,412	
Subtask 370.2	Technical Specifications			2	4		2	8	\$1,310	\$30	\$50			\$80	\$1,390					\$0	\$1,390	
Task 380	General and Site Civil Section of Design Documentation Report				8		2	10	\$1,550	\$37				\$37	\$1,587					\$0	\$1,587	
Task 390	Quality Control	2		10	8		8	34	\$0,090	\$120				\$120	\$0,210					\$0	\$0,210	
Estimated Task Hours Subtotal		4	0	70	132	130	122	12	470													
Estimated Task Cost Subtotal		\$900	\$0	\$15,400	\$22,440	\$15,600	\$11,590	\$1,140	\$67,070	\$67,070	\$1,739	\$300	\$0	\$0	\$2,039	\$69,109	\$0	\$0	\$0	\$0	\$0	\$69,109
TASK SERIES 400 GEOTECHNICAL DESIGN																						
Task 410	Task Coordination	2				4		6	\$930	\$22				\$22	\$952					\$0	\$952	
Task 420	Data Collection																					
Subtask 420.1	Subsurface Investigation Plan					1	1	2	\$215	\$7				\$7	\$222					\$0	\$222	
Subtask 420.2	Subsurface Investigation Exploration			2		4		6	\$980	\$22				\$22	\$1,002			\$12,544		\$12,544	\$13,546	
Task 430	Geotechnical Design and Analyzes																					
Subtask 430.1	Final Geotechnical Design and Analyzes			16		16		92	\$13,920	\$340				\$340	\$14,260					\$0	\$14,260	
Subtask 430.2	Instrumentation			4		16		24	\$3,600	\$89				\$89	\$3,689					\$0	\$3,689	
Subtask 430.3	Geotechnical Investigation and Evaluation Documentation			4		8	8	48	\$6,280	\$178	\$50			\$228	\$6,508					\$0	\$6,508	
Task 440	Draft Final Drawings and Specifications																					
Subtask 440.1	Drawing Production			4		3	14	37	\$4,710	\$137	\$50			\$187	\$4,897					\$0	\$4,897	
Subtask 440.2	Technical Specifications			7		7	14	30	\$4,810	\$111	\$10			\$121	\$4,931					\$0	\$4,931	
Task 450	Final Drawings and Specifications																					
Subtask 450.1	Drawing Production			1		1	2	12	\$1,420	\$44	\$50			\$94	\$1,514					\$0	\$1,514	
Subtask 450.2	Technical Specifications			1		4	6	12	\$1,745	\$44	\$10			\$54	\$1,799					\$0	\$1,799	
Task 460	Quality Control	2				2		4	\$690	\$15				\$15	\$705				\$2,000	\$2,000	\$2,705	
Estimated Task Hours Subtotal		4	39	0	43	143	33	11	273													
Estimated Task Cost Subtotal		\$900	\$9,750	\$0	\$7,310	\$17,160	\$3,135	\$1,045	\$39,300	\$39,300	\$1,010	\$170	\$0	\$0	\$1,180	\$40,480	\$0	\$0	\$12,544	\$2,000	\$14,544	\$55,024

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PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT																						
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FEE ESTIMATE - APRIL 5, 2017																						
HDR Engineering, Inc. Estimated Hours/Costs											Expenses					HDR Totals	Sub-Consultant Estimated Costs					Est. Total Cost
TASKS	Project Manager	Specialist	Principal Staff	Senior Staff	Technical Staff	Tech Support	Admin/ Clerical	Total Hours	Total Labor Cost	Tech. Fee	Printing	Travel	Misc.	Total Expenses	NE Historical Society		E&A	Thiele Geotech	R. Donovan	Total Sub- Consult.		
TASK SERIES 500 STRUCTURAL DESIGN																						
Task 510	Task Coordination	2			4			6	\$1,130	\$22				\$22	\$1,152					\$0	\$1,152	
Task 520	Structural Analyzes and Design																					
Subtask 520.1	Structural Analyses		18		50	8		76	\$13,960	\$281				\$281	\$14,241					\$0	\$14,241	
Subtask 520.2	Structural Design Documentation		12		12		4	34	\$5,990	\$126				\$126	\$6,116					\$0	\$6,116	
Task 530	Draft Final Drawings and Specifications																					
Subtask 530.1	Drawing Production		24		50		80	154	\$22,100	\$570	\$200			\$770	\$22,870					\$0	\$22,870	
Subtask 530.2	Technical Specifications		4		10		4	18	\$3,080	\$67	\$20			\$87	\$3,167					\$0	\$3,167	
Task 540	Final Drawings and Specifications																					
Subtask 540.1	Drawing Production				20		20	40	\$5,300	\$148	\$200			\$348	\$5,648					\$0	\$5,648	
Subtask 540.2	Technical Specifications				2		2	4	\$530	\$15	\$20			\$35	\$565					\$0	\$565	
Task 550	Quality Control	2	40		8			50	\$11,810	\$185				\$185	\$11,995					\$0	\$11,995	
Estimated Task Hours Subtotal		4	98	0	156	8	106	382														
Estimated Task Cost Subtotal		\$900	\$24,500	\$0	\$26,520	\$960	\$10,070	\$950	\$63,900	\$63,900	\$1,413	\$440	\$0	\$0	\$1,853	\$65,753	\$0	\$0	\$0	\$0	\$0	\$65,753
TASK SERIES 600 CONTRACT DOCUMENT COORDINATION																						
Task 610	Design Review Meeting	4		6	6		4	20	\$3,620	\$74				\$74	\$3,694					\$0	\$3,694	
Task 620	Drawing Coordination																					
Subtask 620.1	Draft Final Drawings				2			2	\$340	\$7	\$200			\$207	\$547					\$0	\$547	
Subtask 620.2	Final Bid Drawings				2			2	\$340	\$7	\$200			\$207	\$547					\$0	\$547	
Task 630	Specifications																					
Subtask 630.1	Front-End Specifications	1		16			8	25	\$4,505	\$93	\$25			\$118	\$4,623					\$0	\$4,623	
Subtask 630.2	Draft Final Specifications	1		16			8	25	\$4,505	\$93	\$50			\$143	\$4,648					\$0	\$4,648	
Subtask 630.3	Final Bid Specifications	1		12			4	17	\$3,245	\$63	\$50			\$113	\$3,358					\$0	\$3,358	
Task 640	Opinion of Probable Construction Cost																					
Subtask 640.1	Draft Final OPCC	1		2	12		8	23	\$3,465	\$85				\$85	\$3,550					\$0	\$3,550	
Subtask 640.2	Final OPCC	1		2	6			9	\$1,685	\$33				\$33	\$1,718					\$0	\$1,718	
Estimated Task Hours Subtotal		9	0	54	28	0	12	20	123													
Estimated Task Cost Subtotal		\$2,025	\$0	\$11,880	\$4,760	\$0	\$1,140	\$1,900	\$21,705	\$21,705	\$455	\$525	\$0	\$0	\$980	\$22,685	\$0	\$0	\$0	\$0	\$0	\$22,685
TASK SERIES 700 SURVEY AND RIGHT OF WAY																						
Task 710	Additional Field Survey				4		8	12	\$1,440	\$44				\$44	\$1,484		\$17,650			\$17,650	\$19,134	
Task 720	Boring Location Surveys (E&A work included in Task 710)				2			2	\$340	\$7				\$7	\$347					\$0	\$347	
Task 730	Boundary Survey of Project Lands (E&A work included in Task 710)				4			4	\$680	\$15				\$15	\$695					\$0	\$695	
Task 740	Legal Descriptions and Documentation (E&A work included in Task 710)				4			4	\$680	\$15				\$15	\$695					\$0	\$695	
Task 750	Mark Proposed Acquisition Areas (E&A work included in Task 710)				2			2	\$340	\$7				\$7	\$347					\$0	\$347	
Estimated Task Hours Subtotal		0	0	0	16	0	8	0	24													
Estimated Task Cost Subtotal		\$0	\$0	\$0	\$2,720	\$0	\$760	\$0	\$3,480	\$3,480	\$89	\$0	\$0	\$0	\$89	\$3,569	\$0	\$17,650	\$0	\$0	\$17,650	\$21,219
TASK SERIES 800 BIDDING SERVICES																						
Task 810	Prepare Documents for Distribution			8		8	4	20	\$2,900	\$74				\$74	\$2,974					\$0	\$2,974	
Task 820	Bid Phase Assistance			4	4	4		12	\$2,040	\$44				\$44	\$2,084					\$0	\$2,084	
Task 830	Addendum Preparation/Distribution	2			20		16	40	\$5,560	\$148	\$50			\$198	\$5,758					\$0	\$5,758	
Task 840	Pre-bid/Site Showing	4		8	8			20	\$4,020	\$74		\$100	\$100	\$274	\$4,294					\$0	\$4,294	
Task 850	Bid Opening			2			1	3	\$535	\$11		\$20		\$31	\$566					\$0	\$566	
Estimated Task Hours Subtotal		6	0	22	32	4	24	7	95													
Estimated Task Cost Subtotal		\$1,350	\$0	\$4,840	\$5,440	\$480	\$2,280	\$665	\$15,055	\$15,055	\$352	\$50	\$120	\$100	\$622	\$15,677	\$0	\$0	\$0	\$0	\$0	\$15,677
TASK SERIES 900 CONSTRUCTION MEETINGS AND CONFERENCES																						
Task 910	Pre-Construction Conference			8	4	4	4	20	\$3,380	\$74	\$20	\$20	\$100	\$214	\$3,594					\$0	\$3,594	
Task 920	Substantial Completion Inspection		4	8	8	8		28	\$5,220	\$104		\$100		\$204	\$5,424					\$0	\$5,424	
Task 930	Final Inspection		2	4	2			8	\$1,760	\$30		\$50		\$80	\$1,840					\$0	\$1,840	
Task 940	Letter of Certification			2			1	3	\$545	\$11				\$11	\$556					\$0	\$556	
Estimated Task Hours Subtotal		0	6	22	14	12	0	5	59													
Estimated Task Cost Subtotal		\$0	\$1,530	\$4,950	\$2,450	\$1,500	\$0	\$475	\$10,905	\$10,905	\$218	\$20	\$170	\$100	\$508	\$11,413	\$0	\$0	\$0	\$0	\$0	\$11,413

ATTACHMENT 2 PAPIO-MISSOURI RIVER NATURAL RESOURCES DISTRICT PHASE II: FINAL DESIGN AND PHASE III: CONSTRUCTION CONTRACT ADMINISTRATION OF ZORINSKY WATER QUALITY BASIN NO. 2 FEE ESTIMATE - APRIL 5, 2017																						
HDR Engineering, Inc. Estimated Hours/Costs										Expenses					HDR Totals	Sub-Consultant Estimated Costs					Est. Total Cost	
TASKS	Project Manager	Specialist	Principal Staff	Senior Staff	Technical Staff	Tech Support	Admin/ Clerical	Total Hours	Total Labor Cost	Tech. Fee	Printing	Travel	Misc.	Total Expenses		NE Historical Society	E&A	Thiele Geotech	R. Donovan	Total Sub- Consult.		
TASK 1000 CONSTRUCTION CONTRACT ADMINISTRATIVE SERVICES																						
Task 1010	Records and Reports																					
Subtask 1010.1	Records and Report Documentation	4			1700			1704	\$213,420	\$6,305		\$4,500	\$2,000	\$12,805	\$226,225					\$0	\$226,225	
Subtask 1010.2	As-Built Drawings	4		16	74		148	242	\$32,270	\$895	\$100			\$995	\$33,265					\$0	\$33,265	
Task 1020	Construction Contract Support																					
Subtask 1020.1	Contract Documentation Clarification				16			16	\$2,800	\$59				\$59	\$2,859					\$0	\$2,859	
Subtask 1020.2	Survey Control and Verification Checks				16			16	\$2,800	\$59				\$59	\$2,859		\$22,420			\$22,420	\$25,279	
Subtask 1020.3	Material QA Testing	4		8			20	32	\$4,620	\$118				\$118	\$4,738			\$55,656		\$55,656	\$60,394	
Subtask 1020.4	Submittal Reviews		4	20	80		20	124	\$21,420	\$459				\$459	\$21,879					\$0	\$21,879	
Subtask 1020.5	Construction Meetings			88	33		22	143	\$27,665	\$529		\$520		\$1,049	\$28,714					\$0	\$28,714	
Subtask 1020.6	Project Tracking Collaboration System			16	8		4	28	\$5,380	\$104				\$104	\$5,484					\$0	\$5,484	
Subtask 1020.7	Technical Field Observations		16	16	32	24		88	\$16,280	\$326				\$326	\$16,606					\$0	\$16,606	
Subtask 1020.8	Instrumentation Data Interpretation		4		40			44	\$6,020	\$163				\$163	\$6,183					\$0	\$6,183	
Subtask 1020.9	Design Modifications			40	40		20	108	\$18,760	\$400				\$400	\$19,160					\$0	\$19,160	
Task 1030	Permit Compliance Support																					
Subtask 1030.1	SWPP Compliance Monitoring				24		224	248	\$26,600	\$918		\$1,120		\$2,038	\$28,638					\$0	\$28,638	
Subtask 1030.2	USACE Section 404 Baseline Monitoring and Notification																					
Subtask 1030.2.1	Baseline Downstream Channel Monitoring				4		24	30	\$3,290	\$111		\$20		\$131	\$3,421					\$0	\$3,421	
Subtask 1030.2.2	Wetland Mitigation				4		20	26	\$2,890	\$96		\$20		\$116	\$3,006					\$0	\$3,006	
Subtask 1030.2.3	Stream Mitigation				4		20	26	\$2,890	\$96		\$20		\$116	\$3,006					\$0	\$3,006	
Subtask 1030.2.4	Stream Functional Assessment				4		20	26	\$2,890	\$96		\$20		\$116	\$3,006					\$0	\$3,006	
Subtask 1030.3	Migratory Bird and Raptor Survey					24	24	48	\$5,400	\$178		\$220		\$398	\$5,798					\$0	\$5,798	
Subtask 1030.4	NDNR Approval to Store Water	2		4	16		16	38	\$5,760	\$141				\$141	\$5,901					\$0	\$5,901	
Estimated Task Hours Subtotal		14	24	208	355	1788	82	2987														
Estimated Task Cost Subtotal		\$3,220	\$6,120	\$46,800	\$62,125	\$223,500	\$51,600	\$7,790	\$401,155	\$401,155	\$11,052	\$100	\$6,440	\$2,000	\$19,592	\$420,747	\$0	\$22,420	\$55,656	\$0	\$78,076	\$498,823
TASK 1100 OPERATION AND MAINTENANCE MANUAL AND EMERGENCY ACTION PLAN																						
Task 1110	Operation and Maintenance Manual																					
Task 1120	Emergency Action Plan																					
Estimated Task Hours Subtotal		4	0	42	16	24	20	116						\$400	\$18,380					\$0	\$18,380	
Estimated Task Cost Subtotal		\$920	\$0	\$9,450	\$2,800	\$3,000	\$2,000	\$950	\$19,120	\$19,120	\$429	\$0	\$0	\$0	\$429	\$19,549	\$0	\$0	\$0	\$0	\$0	\$19,549
TOTAL HOURS		145	187	438	916	2,197	889	226	4,998													
TOTAL COST (ROUNDED)		\$ 32,715	\$ 46,900	\$ 97,720	\$ 157,645	\$ 272,760	\$ 87,135	\$ 21,470	\$ 716,345	\$ 716,345	\$ 18,493	\$ 1,625	\$ 6,800	\$ 2,400	\$ 29,318	\$ 745,663	\$ 3,000	\$ 40,070	\$ 68,200	\$ 2,000	\$ 113,270	\$ 858,933

Total Phase II and Phase III Services\$ 858,933

Phase I Task Series 500 Credit\$ (13,000.00)

Phase I Task 900 Credit\$ (36,470.00)

This is **EXHIBIT D**, consisting of 5 pages, referred to in and part of the **Agreement between Owner and Engineer for Professional Services** dated January 14, 2010.

Duties, Responsibilities, and Limitations of Authority of Resident Project Representative

Article 1 of the Agreement is supplemented to include the following agreement of the parties:

ARTICLE 1 - SERVICES OF ENGINEER

D1.01 *Resident Project Representative*

- A. Engineer shall furnish a Resident Project Representative ("RPR") to assist Engineer in observing progress and quality of the Work. The RPR may provide full time representation or may provide representation to a lesser degree. RPR is Engineer's representative at the Site, will act as directed by and under the supervision of Engineer, and will confer with Engineer regarding RPR's actions.
- B. Through RPR's observations of the Work, including field checks of materials and installed equipment, Engineer shall endeavor to provide further protection for Owner against defects and deficiencies in the Work. However, Engineer shall not, as a result of such RPR observations of the Work, supervise, direct, or have control over the Work, nor shall Engineer (including the RPR) have authority over or responsibility for the means, methods, techniques, sequences, or procedures of construction selected or used by any Constructor, for security or safety at the Site, for safety precautions and programs incident to the Work or any Constructor's work in progress, for the coordination of the Constructors' work or schedules, or for any failure of any Constructor to comply with Laws and Regulations applicable to the performing and furnishing of its work. The Engineer (including RPR) neither guarantees the performances of any Constructor nor assumes responsibility for any Constructor's failure to furnish and perform the Work, or any portion of the Work, in accordance with the Construction Contract Documents. In addition, the specific terms set forth in Exhibit A, Paragraph A1.05, of this Agreement are applicable.
- C. The duties and responsibilities of the RPR are as follows:
 - 1. *General:* RPR's dealings in matters pertaining to the Work in general shall be with Engineer and Contractor. RPR's dealings with Subcontractors shall only be through or with the full knowledge and approval of Contractor. RPR shall generally communicate with Owner only with the knowledge of and under the direction of Engineer.
 - 2. *Schedules:* Review the progress schedule, schedule of Shop Drawing and Sample submittals, schedule of values, and other schedules prepared by Contractor and consult with Engineer concerning acceptability of such schedules.
 - 3. *Conferences and Meetings:* Attend meetings with Contractor, such as preconstruction conferences, progress meetings, job conferences, and other Project-related meetings (but not including Contractor's safety meetings), and as appropriate prepare and circulate copies of notes thereof.

4. *Safety Compliance:* Comply with Site safety programs, as they apply to RPR, and if required to do so by such safety programs, receive safety training specifically related to RPR's own personal safety while at the Site.
5. *Liaison:*
 - a. Serve as Engineer's liaison with Contractor. Working principally through Contractor's authorized representative or designee, assist in providing information regarding the provisions and intent of the Construction Contract Documents.
 - b. Assist Engineer in serving as Owner's liaison with Contractor when Contractor's operations affect Owner's on-Site operations.
 - c. Assist in obtaining from Owner additional details or information, when required for proper execution of the Work.
6. *Clarifications and Interpretations:* Receive from Contractor submittal of any matters in question concerning the requirements of the Construction Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Construction Contract Documents. Report to Engineer regarding such RFIs. Report to Engineer when clarifications and interpretations of the Construction Contract Documents are needed, whether as the result of a Contractor RFI or otherwise. Transmit Engineer's clarifications, interpretations, and decisions to Contractor. ,
7. *Shop Drawings and Samples:*
 - a. Record date of receipt of Samples and Contractor-approved Shop Drawings.
 - b. Receive Samples that are furnished at the Site by Contractor, and notify Engineer of availability of Samples for examination.
 - c. Advise Engineer and Contractor of the commencement of any portion of the Work requiring a Shop Drawing or Sample submittal, if RPR believes that the submittal has not been received from Contractor, or has not been approved by Contractor or Engineer.
8. *Proposed Modifications:* Consider and evaluate Contractor's suggestions for modifications to the Drawings or Specifications, and report such suggestions, together with RPR's recommendations, if any, to Engineer. Transmit Engineer's response (if any) to such suggestions to Contractor.
9. *Review of Work; Defective Work:*
 - a. Report to Engineer whenever RPR believes that any part of the Work is defective under the terms and standards set forth in the Construction Contract Documents, and provide recommendations as to whether such Work should be corrected, removed and replaced, or accepted as provided in the Construction Contract Documents.

- b. Inform Engineer of any Work that RPR believes is not defective under the terms and standards set forth in the Construction Contract Documents, but is nonetheless not compatible with the design concept of the completed Project as a functioning whole, and provide recommendations to Engineer for addressing such Work. ; and
- c. Advise Engineer of that part of the Work that RPR believes should be uncovered for observation, or requires special testing, inspection, or approval.

10. *Inspections, Tests, and System Start-ups:*

- a. Consult with Engineer in advance of scheduled inspections, tests, and systems start-ups.
- b. Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Owner's personnel, and that Contractor maintains adequate records thereof.
- c. Observe, record, and report to Engineer appropriate details relative to the test procedures and systems start-ups.
- d. Observe whether Contractor has arranged for inspections required by Laws and Regulations, including but not limited to those to be performed by public or other agencies having jurisdiction over the Work.
- e. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work, record the results of these inspections, and report to Engineer.

11. *Records:*

- a. Maintain at the Site orderly files for correspondence, reports of job conferences, copies of Construction Contract Documents including all Change Proposals, Change Orders, Field Orders, Work Change Directives, Addenda, additional Drawings issued subsequent to the execution of the Construction Contract, RFIs, Engineer's clarifications and interpretations of the Construction Contract Documents, progress reports, approved Shop Drawing and Sample submittals, and other Project-related documents.
- b. Prepare a daily report or keep a diary or log book, recording Contractor's hours on the Site, Subcontractors present at the Site, weather conditions, data relative to questions of Change Proposals, Change Orders, Field Orders, Work Change Directives, or changed conditions, Site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures; and send copies to Engineer.
- c. Upon request from Owner to Engineer, photograph or video Work in progress or Site conditions.
- d. Record and maintain accurate, up-to-date lists of the names, addresses, fax numbers, e-mail addresses, websites, and telephone numbers (including mobile

numbers) of all Contractors, Subcontractors, and major Suppliers of materials and equipment.

- e. Maintain records for use in preparing Project documentation.
- f. Upon completion of the Work, furnish original set of all RPR Project documentation to Engineer.

12. *Reports:*

- a. Furnish to Engineer periodic reports as required of progress of the Work and of Contractor's compliance with the progress schedule and schedule of Shop Drawing and Sample submittals.
- b. Draft and /or recommend to Engineer ~~proposed~~ Change Proposals, Change Orders, Work Change Directives, and Field Orders. Obtain backup material from Contractor.
- c. Furnish to Engineer and Owner copies of all inspection, test, and system start-up reports.
- d. Immediately inform Engineer of the occurrence of any Site accidents, emergencies, acts of God endangering the Work, possible force majeure or delay events, damage to property by fire or other causes, or the discovery of any potential differing site condition or Constituent of Concern.

13. *Payment Requests:* Review applications for payment with Contractor for compliance with the established procedure for their submission and forward with recommendations to Engineer, noting particularly the relationship of the payment requested to the schedule of values, Work completed, and materials and equipment delivered at the Site but not incorporated in the Work.

14. *Certificates, Operation and Maintenance Manuals:* During the course of the Work, verify that materials and equipment certificates, operation and maintenance manuals and other data required by the Contract Documents to be assembled and furnished by Contractor are applicable to the items actually installed and in accordance with the Contract Documents, and have these documents delivered to Engineer for review and forwarding to Owner prior to payment for that part of the Work.

15. *Completion:*

- a. Participate in Engineer's visits to the Site regarding Substantial Completion, assist in the determination of Substantial Completion, and prior to the issuance of a Certificate of Substantial Completion submit a punch list of observed items requiring completion or correction.
- b. Participate in Engineer's visit to the Site in the company of Owner and Contractor, to determine completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.

- c. Observe whether all items on the final punch list have been completed or corrected, and make recommendations to Engineer concerning acceptance and issuance of the Notice of Acceptability of the Work (Exhibit E).

D. Resident Project Representative shall not:

1. Authorize any deviation from the Construction Contract Documents or substitution of materials or equipment (including “or-equal” items).
2. Exceed limitations of Engineer’s authority as set forth in this Agreement.
3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers, or any Constructor.
4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of the Work, by Contractor or any other Constructor.
5. Advise on, issue directions regarding, or assume control over security or safety practices, precautions, and programs in connection with the activities or operations of Owner or Contractor.
6. Participate in specialized field or laboratory tests or inspections conducted off-site by others except as specifically authorized by Engineer.
7. Accept Shop Drawing or Sample submittals from anyone other than Contractor.
8. Authorize Owner to occupy the Project in whole or in part.