

# PROJECT MANUAL FOR CHEYENNE BOULEVARD & WEST GATE ROAD SANITARY SEWER MAIN EXTENSION BOX ELDER, SD

Prepared for:  
City of Box Elder Engineering Services  
420 N. Villa Drive  
Box Elder, SD 57719  
Mr. Scott Lange, PE



I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.



Michael Towey, PE

Date

Reg. No. 9254

Expiration Date: 8/31/2025

TDG Project Number: 24-006

Towey Design Group, Inc.  
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Box Elder, SD 57719  
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**CHEYENNE BOULEVARD AND WESTGATE ROAD**

**TRUNK SANITARY SEWER MAIN EXTENSION**

**BOX ELDER, SD**

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**ADVERTISEMENT FOR BIDS  
CITY OF BOX ELDER  
BOX ELDER, SOUTH DAKOTA  
CHEYENNE BOULEVARD & WESTGATE ROAD  
TRUNK SANITARY SEWER MAIN EXTENSION**

**General Notice**

The City of Box Elder (Owner) is requesting Bids for the construction of the following Project:

**CHEYENNE BOULEVARD AND WESTGATE ROAD  
TRUNK SANITARY SEWER MAIN EXTENSION  
City 23.003.00 / TDG 24-006**

Bids for the construction of the Project will be received at the **City of Box Elder Finance Office** located at **420 N. Villa Drive, Box Elder, SD**, until **Tuesday, April 29<sup>th</sup>** at **2:00 pm** local time. At that time the Bids received will be publicly opened and read.

The Project includes the following Work:

Constructing over 18,500 lf of new trunk sanitary sewer main. This includes approximately 960 lf of 27-inch, 930 lf of 24-inch, 2,125 lf of 18-inch, 1,080 lf of 15-inch, 2,000 lf of 12-inch, 2,800 lf of 10-inch, 8,770 lf of 8-inch sanitary sewer main, and associated manholes and other appurtenances. The work will also include four utility bores for project, one under the eastbound lane of Highway 1416, two under the railroad right-of-way and the last under Box Elder Creek. Also, the project requires the relocation of approximately 1,150 lf of 16" PVC water main, grading of future rights-of-ways, developing a graveled path along the new trunk sewer main, and improvements to local drainage crossing along the sewer route.

Bids are requested for the following Contract:

**CITY OF BOX ELDER  
CHEYENNE BOULEVARD AND WEST GATE ROAD  
TRUNK SANITARY SEWER MAIN EXTENSION  
City 23.003.00 / TDG 24-006**

**Project Schedule**

For design and construction purposes, the project has been laid out in 8 Segments. The project will be bid in four distinct schedules. Bid Schedule I will include all work associated with Design Segment 1, approximately half of the Westgate Road Sewer Main. Bid Schedule II will include all work associated with Design Segment 2, the balance of the Westgate Road Sewer Main. Bid Schedule III will include all work associated with Design Segments 3 and 5, Sewer in Cheyenne Boulevard east of the Westgate Road / Cheyenne Boulevard intersection. Bid Schedule IV will include all work associated with design Segments 4, 6, 7 & 8. Schedule I must be completed and ready for final acceptance on later than November 30<sup>th</sup>, 2025. The balance of the work Schedules II, III, and IV must be completed and ready for final acceptance no later the November 30<sup>th</sup>, 2026, if awarded.

**Obtaining the Bidding Documents**

The Issuing Office for the Bidding Documents is:

**Towey Design Group, Inc.**  
**PO Box 67 | 147 Chisholm Drive**  
**Box Elder, SD 57719**

Prospective Bidders may obtain or examine the Bidding Documents at the Issuing Office on Monday through Friday between the hours of **8:00 am to 4:00 pm, local time** and may obtain copies of the Bidding Documents from the Issuing Office as described below. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including addenda, if any, obtained from sources other than the Issuing Office.

Printed copies of the Bidding Documents may be obtained from the Issuing Office, during the hours indicated above, upon payment of a deposit of **\$50.00** for each set. If shipping is requested, the Issuing Office will transmit the Bidding Documents via delivery service free of charge to the prospective Bidder. The date that the Bidding Documents are transmitted by the Issuing Office will be considered the Bidder's date of receipt of the Bidding Documents. Partial sets of Bidding Documents will not be available from the Issuing Office. Neither Owner nor Engineer will be responsible for full or partial sets of Bidding Documents, including Addenda if any, obtained from sources other than the Issuing Office. Bidders must have access to a current set of City of Box Elder Standard Construction Specifications, which can be found on the City's website at <https://www.boxelder.us/citydepartments/engineering/>.

All public improvements are required to conform to these specifications and bid prices must reflect these specifications.

A pre-bid conference for the Project will be held on **Tuesday, February 18th at 2:00 pm at The Box Elder City Hall, 420 N. Villa Drive, Box Elder, SD 57719**. Attendance at the pre-bid conference is encouraged but not required.

- Bidders on this work will be required to comply with Title 40 CFR 33 and Executive Order 12138. The requirements for bidders and contractors under this regulation which concerns utilization of Disadvantaged/Minority Business Enterprises (DBE/MBE) and Women's Business Enterprises (WBE) are explained in the specifications. The DBE/MBE and WBE goals for participation in this contract in terms of percentage of contract value are as follows: MBE 1.0 percent; WBE 4.0 percent. A current directory of DBE firms can be found at the SD DOT Compliance Office (605) 773-4906 or at <http://www.sddot.com/business/contractors/docs/DBEDirectory.pdf>.
- Bidders on this work will be required to comply with the President's Executive Order Nos. 11246 (Equal Employment) as amended, 11518 (Small Business Concerns), and 11625 (MBE) as amended. The requirements for bidders and contractors under these orders are explained in the specifications.
- The low responsive bidder will be required to certify to compliance with the American Iron and Steel provision of the Consolidated Appropriations Act of 2014. This certification form may be found on page AIS-21 of the State Revolving Fund (SRF) General Conditions and must be included in the bid proposal.
- Please be advised that waivers or exemptions from the American Iron and Steel provision that cite International Trade Agreements DO NOT comply with the Consolidated Appropriations Act of 2014 as it applies to the SRF programs. Claims from suppliers that the American Iron and Steel provision does not apply to certain products based on the International Trade Agreement exemptions of the Consolidated Appropriations Act of 2014 will not be accepted.
- Davis Bacon and Related Acts wages apply to this project. All provisions relative to those acts must be met.

- The low responsive bidder must assure compliance with the requirements of Public Law 115-232, Section 889, Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment. Contractors must assure that telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities), and video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities) **WILL NOT** be supplied for the project.
- This project may be partially funded using American Rescue Plan Act (ARPA) funds. Refer to the Instructions to bidders' section of the specifications for ARPA requirements.

The Owner and Contractor hereby acknowledges that time is of the essence for the project and that the work shall be completed in accordance with the schedule shown above, complete and ready in all phases for final payment and acceptance no later than **November 6th, 2026**.

\_\_\_\_\_  
Renee Baker

Interim City Financial Officer

\_\_\_\_\_  
Larry Larson,

Mayor

Published two (2) times at the total approximated cost of \$\_\_\_\_\_.

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## ARTICLE 1—DEFINED TERMS

- 1.01 Terms used in these Instructions to Bidders have the meanings indicated in the General Conditions and Supplementary Conditions. Additional terms used in these Instructions to Bidders have the meanings indicated below:
- A. *Issuing Office*—The office from which the Bidding Documents are to be issued, and which registers plan holders.
  - B. *Bidder*—One who submits a Bid directly to Owner, as distinct from a sub-bidder, who submits a bid to a Bidder.
  - C. *Engineer*—Shall mean Towey Design Group, Box Elder, South Dakota.
  - D. *Issuing Office*—The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.
  - E. *Owner*—Shall mean City of Box Elder.
  - F. *Successful Bidder*—The lowest responsible Bidder submitting a responsive Bid to whom Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.
  - G. Other terms used in the bidding documents and not defined elsewhere have the following meanings, which are applicable to both singular and plural thereof:
    - 1. Base Bid: Is the sum stated in the Bid for which the Bidder offers to perform work described in the Bidding Documents as Base, to which work may be added or from which work may be deleted for sums stated in alternate Bids.
    - 2. Alternate Bid: (Or alternate) is amount stated in Bid to be added or deducted from amount of Base Bid if corresponding change in work, as described in Bidding Documents, is accepted.

## ARTICLE 2—BIDDING DOCUMENTS

- 2.01 Bidder shall obtain a complete set of Bidding Requirements and proposed Contract Documents (together, the Bidding Documents). See the Agreement for a list of the Contract Documents. It is Bidder's responsibility to determine that it is using a complete set of documents in the preparation of a Bid. Bidder assumes sole responsibility for errors or misinterpretations resulting from the use of incomplete documents, by Bidder itself or by its prospective Subcontractors and Suppliers.
- 2.02 Bidding Documents are made available for the sole purpose of obtaining Bids for completion of the Project and permission to download or distribution of the Bidding Documents does not confer a license or grant permission or authorization for any other use. Authorization to download documents, or other distribution, includes the right for plan holders to print documents solely for their use, and the use of their prospective Subcontractors and Suppliers, provided the plan holder pays all costs associated with printing or reproduction. Printed documents may not be re-sold under any circumstances.
- 2.03 **DELETED**
- 2.04 Bidder may register as a plan holder and obtain complete sets of Bidding Documents, in the number and format stated in the Advertisement or invitation to bid, from the Issuing Office.

Bidders may rely that sets of Bidding Documents obtained from the Issuing Office are complete, unless an omission is blatant. Registered plan holders will receive Addenda issued by Owner.

- 2.05 Plan rooms (including construction information subscription services, and electronic and virtual plan rooms) may distribute the Bidding Documents, or make them available for examination. Those prospective bidders that obtain an electronic (digital) copy of the Bidding Documents from a plan room are encouraged to register as plan holders from the Bidding Documents Website or Issuing Office. Owner is not responsible for omissions in Bidding Documents or other documents obtained from plan rooms, or for a Bidder's failure to obtain Addenda from a plan room.

2.06 *Electronic Documents*

- A. When the Bidding Requirements indicate that electronic (digital) copies of the Bidding Documents are available, such documents will be made available to the Bidders as Electronic Documents in the manner specified.
1. Bidding Documents will be provided in Adobe PDF (Portable Document Format) (.pdf) that is readable by Adobe Acrobat Reader Version **DC 64-bit** or later. It is the intent of the Engineer and Owner that such Electronic Documents are to be exactly representative of the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of Electronic Documents nor the Contractor's means of reproduction of such documents, the Owner and Engineer cannot and do not guarantee that Electronic Documents and reproductions prepared from those versions are identical in every manner to the paper copies.
- B. Unless otherwise stated in the Bidding Documents, the Bidder may use and rely upon complete sets of Electronic Documents of the Bidding Documents, described in Paragraph 2.06.A above. However, Bidder assumes all risks associated with differences arising from transmission/receipt of Electronic Documents versions of Bidding Documents and reproductions prepared from those versions and, further, assumes all risks, costs, and responsibility associated with use of the Electronic Documents versions to derive information that is not explicitly contained in printed paper versions of the documents, and for Bidder's reliance upon such derived information.
- C. **DELETED**

### ARTICLE 3—QUALIFICATIONS OF BIDDERS

- 3.01 To demonstrate Bidder's qualifications to perform the Work, after submitting its Bid and within **5** days of Owner's request, Bidder must submit the following information:
- A. Written evidence establishing its qualifications such as financial data, previous experience, and present commitments.
- B. A written statement that Bidder is authorized to do business in the state where the Project is located, or a written certification that Bidder will obtain such authority prior to the Effective Date of the Contract.
- C. Bidder's state or other contractor license number, if applicable.
- D. Subcontractor and Supplier qualification information.
- E. Other required information regarding qualifications.

- 3.02 **DELETED**
- 3.03 **DELETED**
- 3.04 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.
- 3.05 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.
- 3.06
- A. Bidders on this work will be required to comply with Title 40 CFR 33 and Executive Order 12138. The requirements for bidders and contractors under this regulation which concerns utilization of Disadvantaged/Minority Business Enterprises (DBE/MBE) and Women's Business Enterprises (WBE) are explained in the specifications. The DBE/MBE and WBE goals for participation in this contract in terms of percentage of contract value are as follows: MBE 1.0 percent; WBE 4.0 percent. A current directory of DBE firms can be found at the SD DOT Compliance Office (605)773-4906 or at <http://www.sddot.com/business/contractors/docs/DBEDirectory.pdf>. Your special attention is invited to the attached DBE Subcontractor Solicitation Information form, DBE Subcontractor Performance Form, DBE Subcontractor Utilization Form, Certification Regarding Debarment, Suspension and Other Responsibility Matters (Debar) form, American Iron and Steel Certification. These forms must be completed and submitted with your bid proposal. Failure to submit these forms may be cause for the bid to be rejected. Please be advised that good-faith efforts will be subjected to close scrutiny and if the good-faith effort submission is unacceptable, your bid will be rejected.
- B. This project may be partially funded using American Rescue Plan Act (ARPA) funds. As a condition of the ARPA funding guidelines, the Contractor shall meet the following minimum requirements:
1. Based on the "Build America, Buy America" provisions of the Infrastructure Investment and Jobs Act (IIJA) and E.O. 14005 which provide that, as appropriate and to the extent consistent with law, a preference will be provided to Contractors for the purchase, acquisition, or use of goods, products, or materials produced in the United States (Including but not limited to iron, aluminum, steel, cement, and other manufactured products.) The Contractor shall provide documentation of their efforts to meet the provisions of "Build America, Buy America" upon request.
- 3.07 The low responsive bidder will be required to certify to compliance with the American Iron and Steel provision of the Consolidated Appropriations Act of 2014. This certification form may be found on page AIS-21 of the State Revolving Fund (SRF) General Conditions and must be included in the bid proposal. Please be advised that waivers or exemptions from the American Iron and Steel provision that cite International Trade Agreements DO NOT comply with the Consolidated Appropriations Act of 2014 as it applies to the SRF programs. Claims from suppliers that the American Iron and Steel provision does not apply to certain products based on the International Trade Agreement exemptions of the Consolidated Appropriations Act of 2014 will not be accepted.
- 3.08 Davis Bacon and Related Acts wages apply to this project. All provisions relative to those acts must be met.
- 3.09 The low responsive bidder must assure compliance with the requirements of Public Law 115-232, Section 889, Prohibition on Certain Telecommunications and Video Surveillance Services or



Equipment. Contractors must assure that telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities), and video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities) WILL NOT be supplied for the project.

#### **ARTICLE 4—PRE-BID CONFERENCE**

4.01 **DELETED**

4.02 A non-mandatory pre-bid conference will be held at the time and location indicated in the Advertisement or invitation to bid. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference; however, attendance at this conference is not required to submit a Bid.

4.03 **DELETED**

4.04 Information presented at the pre-bid conference does not alter the Contract Documents. Owner will issue Addenda to make any changes to the Contract Documents that result from discussions at the pre-bid conference. Information presented, and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an Addendum.

#### **ARTICLE 5—SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE**

5.01 *Site and Other Areas*

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

5.02 *Existing Site Conditions*

A. *Subsurface and Physical Conditions; Hazardous Environmental Conditions*

1. The Supplementary Conditions identify the following regarding existing conditions at or adjacent to the Site:
  - a. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data.
  - b. Those drawings known to Owner of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data.
  - c. Reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.
  - d. Technical Data contained in such reports and drawings.
2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents,

but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.
4. *Geotechnical Baseline Report/Geotechnical Data Report*: The Bidding Documents contain a Geotechnical Baseline Report (GBR) and Geotechnical Data Report (GDR).
  - a. As set forth in the Supplementary Conditions, the GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations ("Baseline Conditions"). The GBR is a Contract Document.
  - b. The Baseline Conditions in the GBR are intended to reduce uncertainty and the degree of contingency in submitted Bids. However, Bidders cannot rely solely on the Baseline Conditions. Bids should be based on a comprehensive approach that includes an independent review and analysis of the GBR, all other Contract Documents, Technical Data, other available information, and observable surface conditions. Not all potential subsurface conditions are baselined.
  - c. Nothing in the GBR is intended to relieve Bidders of the responsibility to make their own determinations regarding construction costs, bidding strategies, and Bid prices, nor of the responsibility to select and be responsible for the means, methods, techniques, sequences, and procedures of construction, and for safety precautions and programs incident thereto.
  - d. As set forth in the Supplementary Conditions, the GDR is a Contract Document containing data prepared by or for the Owner in support of the GBR.
- B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05 of the General Conditions, and not in the drawings referred to in Paragraph 5.02.A of these Instructions to Bidders. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

#### 5.03 *Other Site-related Documents*

- A. **DELETED**
- B. **DELETED**
- C. **DELETED**
- D. **DELETED**
- E. No other Site-related documents are available.

#### 5.04 *Site Visit and Testing by Bidders*

- A. Bidder is required to visit the Site and conduct a thorough visual examination of the Site and adjacent areas. During the visit the Bidder must not disturb any ongoing operations at the Site.

- B. **DELETED**
- C. **DELETED**
- D. Bidders visiting the Site are required to arrange their own transportation to the Site.
- E. **DELETED**
- F. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.
- G. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder general access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site. Bidder is responsible for establishing access needed to reach specific selected test sites.
- H. Bidder must comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.
- I. Bidder must fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

5.05 *Owner's Safety Program*

- A. Site visits and work at the Site may be governed by an Owner safety program. If an Owner safety program exists, it will be noted in the Supplementary Conditions.

5.06 *Other Work at the Site*

- A. Reference is made to Article 8 of the Supplementary Conditions for the identification of the general nature of other work of which Owner is aware (if any) that is to be performed at the Site by Owner or others (such as utilities and other prime contractors) and relates to the Work contemplated by these Bidding Documents. If Owner is party to a written contract for such other work, then on request, Owner will provide to each Bidder access to examine such contracts (other than portions thereof related to price and other confidential matters), if any.

## **ARTICLE 6—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS**

6.01 *Express Representations and Certifications in Bid Form, Agreement*

- A. The Bid Form that each Bidder will submit contains express representations regarding the Bidder's examination of Project documentation, Site visit, and preparation of the Bid, and certifications regarding lack of collusion or fraud in connection with the Bid. Bidder should review these representations and certifications, and assure that Bidder can make the representations and certifications in good faith, before executing and submitting its Bid.
- B. If Bidder is awarded the Contract, Bidder (as Contractor) will make similar express representations and certifications when it executes the Agreement.

## ARTICLE 7—INTERPRETATIONS AND ADDENDA

- 7.01 Owner on its own initiative may issue Addenda to clarify, correct, supplement, or change the Bidding Documents.
- 7.02 Bidder shall submit all questions about the meaning or intent of the Bidding Documents to Engineer in writing. Contact information and submittal procedures for such questions are as follows:
- A. **Questions shall be submitted to Michael Towey, PE, [mtowey@toweydesigngroup.com](mailto:mtowey@toweydesigngroup.com)**
- 7.03 Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all registered plan holders. Questions received less than seven days prior to the date for opening of Bids may not be answered.
- 7.04 Only responses set forth in an Addendum will be binding. Oral and other interpretations or clarifications will be without legal effect. Responses to questions are not part of the Contract Documents unless set forth in an Addendum that expressly modifies or supplements the Contract Documents.

## ARTICLE 8—BID SECURITY

- 8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of **(10% for Bid Bond or 5% for Certified Check)** of Bidder's maximum Bid price (determined by adding the base bid and all alternates) and in the form of a Bid bond issued by a surety meeting the requirements of Paragraph 6.01 of the General Conditions. Such Bid bond will be issued in the form included in the Bidding Documents. **Bid security must be at least 10% for a Bid Bond or 5% for a Certified Check, using the Bidder's maximum Bid price.**
- 8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract, furnished the required Contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract and furnish the required Contract security within 15 days after the Notice of Award, Owner may consider Bidder to be in default, annul the Notice of Award, and the Bid security of that Bidder will be forfeited, in whole in the case of a penal sum bid bond, and to the extent of Owner's damages in the case of a damages-form bond. Such forfeiture will be Owner's exclusive remedy if Bidder defaults.
- 8.03 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within 7 days after the Bid opening.

## ARTICLE 9—CONTRACT TIMES

- 9.01 The number of days within which, or the dates by which, the Work is to be (a) substantially completed and (b) ready for final payment, and (c) Milestones (if any) are to be achieved, are set forth in the Agreement.

## ARTICLE 10—SUBSTITUTE AND "OR EQUAL" ITEMS

- 10.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents, and those "or-equal" or substitute or materials and

equipment subsequently approved by Engineer prior to the submittal of Bids and identified by Addendum. No item of material or equipment will be considered by Engineer as an “or-equal” or substitute unless written request for approval has been submitted by Bidder and has been received by Engineer within 10 days of the issuance of the Advertisement for Bids or invitation to Bidders. Each such request must comply with the requirements of Paragraphs 7.05 and 7.06 of the General Conditions, and the review of the request will be governed by the principles in those paragraphs. **Refer to the Manufacturer’s Certification form provided in these construction Contract Documents.** The burden of proof of the merit of the proposed item is upon Bidder. Engineer’s decision of approval or disapproval of a proposed item will be final. If Engineer approves any such proposed item, such approval will be set forth in an Addendum issued to all registered Bidders. Bidders cannot rely upon approvals made in any other manner. **Substitute and “or-equal” materials and equipment may be proposed by Contractor in accordance with Paragraphs 7.05 and 7.06 of the General Conditions after the Effective Date of the Contract. Refer to Manufacturer’s Certification Letter provided in these Contract Documents.**

- 11.02 All prices that Bidder sets forth in its Bid will be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of “or-equal” or substitution requests are made at Bidder’s sole risk.

#### **ARTICLE 11—SUBCONTRACTORS, SUPPLIERS, AND OTHERS**

11.01 **DELETED**

- 11.02 The apparent Successful Bidder, and any other Bidder so requested, must submit to Owner a list of the Subcontractors or Suppliers proposed for the following portions of the Work within five days after Bid opening:

- A. **Subcontractors: Boring Contractor, Traffic Control, Erosion Control, Seeding, etc.**
- B. **Suppliers: Pipe, Fittings, Manholes, Casing Pipe, Gravel, Seeding, etc.**

- 11.03 If requested by Owner, such list must be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor or Supplier. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor or Supplier, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder will submit a substitute, ~~Bidder’s Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.~~

- 11.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors and Suppliers. ~~Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder.~~ Any Subcontractor or Supplier, so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in Paragraph 7.07 of the General Conditions.

- 11.05 **The Contractor shall not award work to Subcontractor(s) in excess of the limits stated in SC 7.07A.**

## **ARTICLE 12—PREPARATION OF BID**

- 12.01 The Bid Form is included with the Bidding Documents.
- A. All blanks on the Bid Form must be completed in ink and the Bid Form signed in ink. Erasures or alterations must be initialed in ink by the person signing the Bid Form. A Bid price must be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.
  - B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”
- 12.02 If Bidder has obtained the Bidding Documents as Electronic Documents, then Bidder shall prepare its Bid on a paper copy of the Bid Form printed from the Electronic Documents version of the Bidding Documents. The printed copy of the Bid Form must be clearly legible, printed on 8½ inch by 11-inch paper and as closely identical in appearance to the Electronic Document version of the Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the original paper version of the Bid Form, providing that all required information and submittals are included with the Bid.
- 12.03 A Bid by a corporation must be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation must be shown.
- 12.04 A Bid by a partnership must be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The official address of the partnership must be shown.
- 12.05 A Bid by a limited liability company must be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the official address of the firm must be shown.
- 12.06 A Bid by an individual must show the Bidder’s name and official address.
- 12.07 A Bid by a joint venture must be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture must have been formally established prior to submittal of a Bid, and the official address of the joint venture must be shown.
- 12.08 All names must be printed in ink below the signatures.
- 12.09 The Bid must contain an acknowledgment of receipt of all Addenda, the numbers of which must be filled in on the Bid Form.
- 12.10 Postal and e-mail addresses and telephone number for communications regarding the Bid must be shown.
- 12.11 The Bid must contain evidence of Bidder’s authority to do business in the state where the Project is located, or Bidder must certify in writing that it will obtain such authority within the time for acceptance of Bids and attach such certification to the Bid.

- 12.12 If Bidder is required to be licensed to submit a Bid or perform the Work in the state where the Project is located, the Bid must contain evidence of Bidder's licensure, or Bidder must certify in writing that it will obtain such licensure within the time for acceptance of Bids and attach such certification to the Bid. Bidder's state contractor license number, if any, must also be shown on the Bid Form.

#### **ARTICLE 13—BASIS OF BID**

13.01 *Lump Sum*

- A. **DELETED.**

13.02 *Base Bid with Alternates*

- A. **DELETED.**

13.03 *Sectional Bids*

- A. **DELETED.**

13.04 *Cost-Plus-Fee Bids*

- A. **DELETED.**

13.05 *Unit Price*

- A. Bidders must submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.
- B. The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity," which Owner or its representative has set forth in the Bid Form, for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes. The final quantities and Contract Price will be determined in accordance with Paragraph 13.03 of the General Conditions.
- C. Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.

13.06 *Allowances*

- A. **DELETED.**

13.07 *Price-Plus-Time Bids*

- A. **DELETED.**

#### **ARTICLE 14—SUBMITTAL OF BID**

- 14.01 The Bidding Documents include one separate unbound copy of the Bid Form, and, if required, the Bid Bond Form. The unbound copy of the Bid Form is to be completed and submitted with the Bid security and the other documents required to be submitted under the terms of Article 2 of the Bid Form.
- 14.02 A Bid must be received no later than the date and time prescribed and at the place indicated in the Advertisement or invitation to bid and must be enclosed in a plainly marked package with the



Project title, and, if applicable, the designated portion of the Project for which the Bid is submitted, the name and address of Bidder, and must be accompanied by the Bid security and other required documents. If a Bid is sent by mail or other delivery system, the sealed envelope containing the Bid must be enclosed in a separate package plainly marked on the outside with the notation "BID ENCLOSED." A mailed Bid must be addressed to the location designated in the Advertisement.

- 14.03 Bids received after the date and time prescribed for the opening of bids, or not submitted at the correct location or in the designated manner, will not be accepted and will be returned to the Bidder unopened.

#### **ARTICLE 15—MODIFICATION AND WITHDRAWAL OF BID**

- 15.01 An unopened Bid may be withdrawn by an appropriate document duly executed in the same manner that a Bid must be executed and delivered to the place where Bids are to be submitted prior to the date and time for the opening of Bids. Upon receipt of such notice, the unopened Bid will be returned to the Bidder.
- 15.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 15.01 and submit a new Bid prior to the date and time for the opening of Bids.
- 15.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, the Bidder may withdraw its Bid, and the Bid security will be returned. ~~Thereafter, if the Work is rebid, the Bidder will be disqualified from further bidding on the Work.~~

#### **ARTICLE 16—OPENING OF BIDS**

- 16.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the opening of Bids.
- 16.02 **DELETED.**

#### **ARTICLE 17—BIDS TO REMAIN SUBJECT TO ACCEPTANCE**

- 17.01 All Bids will remain subject to acceptance for the period of time stated in the Bid Form, but Owner may, in its sole discretion, release any Bid and return the Bid security prior to the end of this period.

#### **ARTICLE 18—EVALUATION OF BIDS AND AWARD OF CONTRACT**

- 18.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner also reserves the right to waive all minor Bid informalities not involving price, time, or changes in the Work.
- 18.02 Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible.



- 18.03 If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or attempts to alter the contents of the Contract Documents for purposes of the Bid, whether in the Bid itself or in a separate communication to Owner or Engineer, then Owner will reject the Bid as nonresponsive.
- 18.04 If Owner awards the contract for the Work, such award will be to the responsible Bidder submitting the lowest responsive Bid.
- 18.05 *Evaluation of Bids*
- A. In evaluating Bids, Owner will consider whether the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.
  - B. In the comparison of Bids, alternates will be applied in the same order of priority as listed in the Bid Form. To determine the Bid prices for purposes of comparison, Owner will announce to all bidders a “Base Bid plus alternates” budget after receiving all Bids, but prior to opening them. For comparison purposes alternates will be accepted, following the order of priority established in the Bid Form, until doing so would cause the budget to be exceeded. After determination of the Successful Bidder based on this comparative process and on the responsiveness, responsibility, and other factors set forth in these Instructions, the award may be made to said Successful Bidder on its base Bid and any combination of its additive alternate Bids for which Owner determines funds will be available at the time of award.
  - C. For determination of the apparent low Bidder(s) when sectional bids are submitted, Bids will be compared on the basis of the aggregate of the Bids for separate sections and the Bids for combined sections that result in the lowest total amount for all of the Work.
  - D. For the determination of the apparent low Bidder when unit price bids are submitted, Bids will be compared on the basis of the total of the products of the estimated quantity of each item and unit price Bid for that item, together with any lump sum items.
  - E. **DELETED.**
  - F. **DELETED.**
- 18.06 In evaluating whether a Bidder is responsible, Owner will consider the qualifications of the Bidder and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.
- 18.07 Owner may conduct such investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of Bidders and any proposed Subcontractors or Suppliers.

## **ARTICLE 19—BONDS AND INSURANCE**

- 19.01 Article 6 of the General Conditions, as may be modified by the Supplementary Conditions, sets forth Owner’s requirements as to performance and payment bonds, other required bonds (if any), and insurance. When the Successful Bidder delivers the executed Agreement to Owner, it must be accompanied by required bonds and insurance documentation.

- 19.02 Article 8, Bid Security, of these Instructions, addresses any requirements for providing bid bonds as part of the bidding process.

#### **ARTICLE 20—SIGNING OF AGREEMENT**

- 20.01 When Owner issues a Notice of Award to the Successful Bidder, it will be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder must execute and deliver the required number of counterparts of the Agreement and any bonds and insurance documentation required to be delivered by the Contract Documents to Owner. Within 10 days thereafter, Owner will deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in Paragraph 2.02 of the General Conditions.

#### **ARTICLE 21—SALES AND USE TAXES**

- 21.01 The unit prices for construction units in this Proposal shall be deemed to include provisions for the payment of all moneys which will be payable by the Bidder or the Owner in connection with the construction of the project on account of taxes imposed by any taxing authority upon the sale, purchase or use of materials, supplies, labor, and equipment to be incorporated in the project as part of such construction units. The Bidder shall furnish to the appropriate taxing authorities, all required information and reports pertaining to materials and services used in the construction of the project.

The Contractor shall pay sales and use taxes to the State of South Dakota, for all materials incorporated in the work. The Contractor shall, at the conclusion of the project, furnish the Owner with a complete and accurate schedule of all purchases of equipment used in the project, along with the associated taxes paid on this equipment. See SC-7.09.A.1 for additional requirements.

Construction services in South Dakota are also subject to excise tax under SDCL 10-46A. Contractors shall include the applicable tax in their bid price for each item of work.

Direct Tax questions to the South Dakota Department of Revenue at (800) 829-9188.

#### **ARTICLE 22—GOALS FOR DBE/MBE AND WBE**

- 22.01 Bidders on this work will be required to comply with Title 40 CFR 33 and Executive Order 12138. The requirements for bidders and contractors under this regulation which concerns utilization of Disadvantaged/Minority Business Enterprises (DBE/MBE) and Women's Business Enterprises (WBE) are explained in the specifications. The DBE/MBE and WBE goals for participation in this contract in terms of percentage of contract value are as follows: MBE 1.0 percent; WBE 4.0 percent. A current directory of DBE firms can be found at the SD DOT Compliance Office (605) 773-4906 or at <http://www.sddot.com/business/contractors/docs/DBEDirectory.pdf>
- 22.02 Bidders on this work will be required to comply with the President's Executive Order Nos. 11246 (Equal Employment) as amended, 11518 (Small Business Concerns), and 11625 (MBE) as amended. The requirements for bidders and contractors under these orders are explained in the specifications.

## **ARTICLE 23—AMERICAN IRON AND STEEL**

- 23.01 The low responsive bidder will be required to certify to compliance with the American Iron and Steel provision of the Consolidated Appropriations Act of 2014. This certification form may be found on page AIS-21 of the State Revolving Fund (SRF) General Conditions and must be included in the bid proposal. Please be advised that waivers or exemptions from the American Iron and Steel provision that cite International Trade Agreements DO NOT comply with the Consolidated Appropriations Act of 2014 as it applies to the SRF programs. Claims from suppliers that the American Iron and Steel provision does not apply to certain products based on the International Trade Agreement exemptions of the Consolidated Appropriations Act of 2014 will not be accepted.

## **ARTICLE 24—DAVIS BACON AND RELATED ACTS**

- 24.01 Davis Bacon and Related Acts wages apply to this project. All provisions relative to those acts must be met.

## **ARTICLE 25—PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE**

- 25.01 The low responsive bidder must assure compliance with the requirements of Public Law 115-232, Section 889, Prohibition on Certain Telecommunications and Video Surveillance Services or Equipment. Contractors must assure that telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities), and video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities) WILL NOT be supplied for the project.

## **ARTICLE 26—AMERICAN RESCUE PLAN ACT**

- 26.01 This project may be partially funded using American Rescue Plan Act (ARPA) funds. As a condition of the ARPA funding guidelines, the Contractor shall meet the following minimum requirements:
- A. Based on the “Build America, Buy America” provisions of the Infrastructure Investment and Jobs Act (IIJA) and E.O. 14005 which provide that, as appropriate and to the extent consistent with law, a preference will be provided to Contractors for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including but not limited to iron, aluminum, steel, cement, and other manufactured products.) The Contractor shall provide documentation of their efforts to meet the provisions of “Build America, Buy America” upon request.
  - B. A copy of the ARPA funding guidance that outlines the requirements associated with projects that utilize this funding can be found at the following link: <https://home.treasury.gov/policy-issues/coronavirus/assistance-for-state-local-and-tribal-governments/state-and-local-fiscal-recovery-funds/>



## BID FORM FOR CONSTRUCTION CONTRACT

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

### ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

**The City of Box Elder  
420 Villa Drive  
Box Elder, South Dakota, 57719**

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

### ARTICLE 2—ATTACHMENTS TO THIS BID

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

- A. Required Bid security;
- B. List of Proposed Subcontractors;
- C. List of Proposed Suppliers;
- D. Evidence of authority to do business in the state of the Project; or a written covenant to obtain such authority within the time for acceptance of Bids;
- E. Contractor's license number as evidence of Bidder's State Contractor's License or a covenant by Bidder to obtain said license within the time for acceptance of Bids;
- F. Required Bidder Qualification Statement with supporting data; and
- G. **Bidders Activity Report.**
- H. **DBE Subcontractor Solicitation Information Form.** **DBE – 6**
- I. **DBE Subcontractor Participation Form (Form 6100-2).** **DBE – 7**
- J. **DBE Subcontractor Performance Form (Form 6100-3).** **DBE – 8**
- K. **DBE Subcontractor Utilization Form (Form 6100-4).** **DBE – 9**
- L. **Certification Regarding Disbarment.** **Debar – 1 & 2**
- M. **American Iron and Steel** **AIS – 1**
- N. Certification of Prohibited Entity Status **SDCL 5-18A-51**

### ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

3.01 *Unit Price Bids*

- A. Bidder will perform the following Work at the indicated unit prices:

### BID SCHEDULE 1

| Line Item             | Description of Item                          | Quantity | Unit | Unit Cost | Total Cost |
|-----------------------|----------------------------------------------|----------|------|-----------|------------|
| <b>General</b>        |                                              |          |      |           |            |
| 100                   | Mobilization                                 | 1        | LS   |           |            |
| 101                   | Incidental Work                              | 1        | LS   |           |            |
| 102                   | Material Testing                             | 1        | LS   |           |            |
| 103                   | Construction Staking                         | 1        | LS   |           |            |
| 104                   | Erosion Control                              | 1        | LS   |           |            |
| 105                   | Dewatering                                   | 1        | LS   |           |            |
| 106                   | Traffic Control                              | 1        | LS   |           |            |
| 107                   | Railroad Insurance                           | 1        | LS   |           |            |
| <b>Removals</b>       |                                              |          |      |           |            |
| 201                   | Remove Cap                                   | 1        | EA   |           |            |
| <b>Excavation</b>     |                                              |          |      |           |            |
| 300                   | Topsoil, Remove and Replace                  | 4,607    | CY   |           |            |
| 301                   | Unclassified Excavation                      | 28,961   | CY   |           |            |
| 304                   | Type III Foundation Material                 | 100      | T    |           |            |
| 305                   | Type IV Foundation Material                  | 100      | T    |           |            |
| 306                   | Bore Pit Excavation/ Replace                 | 2,464    | CY   |           |            |
| <b>Sanitary Sewer</b> |                                              |          |      |           |            |
| 400                   | 8" PVC Sewer Main (SDR 35)                   | 220      | LF   |           |            |
| 402                   | 12" PVC Sewer Main (SDR 35)                  | 20       | LF   |           |            |
| 403                   | 15" PVC Sewer Main (SDR 35)                  | 60       | LF   |           |            |
| 404                   | 18" PVC Sewer Main (SDR 35)                  | 1,160    | LF   |           |            |
| 405                   | 24" PVC Sewer Main (SDR 35)                  | 990      | LF   |           |            |
| 406                   | 27" PVC Sewer Main (SDR 35)                  | 856      | LF   |           |            |
| 407                   | 8" Cap                                       | 11       | EA   |           |            |
| 409                   | 12" Cap                                      | 1        | EA   |           |            |
| 410                   | 15" Cap                                      | 3        | EA   |           |            |
| 411                   | 18" Cap                                      | 1        | EA   |           |            |
| 412                   | Bore and Jack 36" Steel Casing (0.531" Wall) | 270      | LF   |           |            |
| 413                   | 48" Manhole (0' - 8')                        | 11       | EA   |           |            |
| 415                   | Extra Depth Manhole (48")                    | 92       | vft  |           |            |
| 418                   | Connect to Existing                          | 1        | EA   |           |            |
| 419                   | 27" X 27" Tee                                | 3        | EA   |           |            |
| <b>Water</b>          |                                              |          |      |           |            |
| 504                   | Bore and Jack 24" Steel Casing (0.375" Wall) | 104      | LF   |           |            |
| <b>Surfacing</b>      |                                              |          |      |           |            |
| 700                   | Permanent Gravel Surfacing (6" Depth)        | 2,257    | T    |           |            |

EJCDC® C-410, Bid Form for Construction Contract.

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|                        |                                  |       |    |  |  |
|------------------------|----------------------------------|-------|----|--|--|
| 701                    | Geogrid Reinforcement            | 6,688 | SY |  |  |
| 702                    | Seeding, Fertilizing, & Mulching | 1.1   | AC |  |  |
| <b>Erosion Control</b> |                                  |       |    |  |  |
| 800                    | Silt Fence                       | 1,481 | LF |  |  |
| 803                    | Concrete Washout Area            | 1     | EA |  |  |
| <b>Miscellaneous</b>   |                                  |       |    |  |  |
| 900                    | SDDOT Type 2 Fencing             | 3,316 | LF |  |  |
| 901                    | Access Gates                     | 5     | EA |  |  |

**Total Bid**

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words

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figures

**BID SCHEDULE 2**

| Line Item             | Description of Item            | Quantity | Unit | Unit Cost | Total Cost |
|-----------------------|--------------------------------|----------|------|-----------|------------|
| <b>General</b>        |                                |          |      |           |            |
| 100                   | Mobilization                   | 1        | LS   |           |            |
| 101                   | Incidental Work                | 1        | LS   |           |            |
| 102                   | Material Testing               | 1        | LS   |           |            |
| 103                   | Construction Staking           | 1        | LS   |           |            |
| 104                   | Erosion Control                | 1        | LS   |           |            |
| 105                   | Dewatering                     | 1        | LS   |           |            |
| <b>Removals</b>       |                                |          |      |           |            |
| 201                   | Remove Cap                     | 1        | EA   |           |            |
| 205                   | Remove Fence                   | 85       | LF   |           |            |
| <b>Excavation</b>     |                                |          |      |           |            |
| 300                   | Topsoil, Remove and Replace    | 8,057    | CY   |           |            |
| 302                   | Unclassified Excavation Borrow | 20,467   | CY   |           |            |
| 304                   | Type III Foundation Material   | 100      | T    |           |            |
| 305                   | Type IV Foundation Material    | 100      | T    |           |            |
| <b>Sanitary Sewer</b> |                                |          |      |           |            |
| 400                   | 8" PVC Sewer Main (SDR 35)     | 280      | LF   |           |            |
| 401                   | 10" PVC Sewer Main (SDR 35)    | 40       | LF   |           |            |
| 402                   | 12" PVC Sewer Main (SDR 35)    | 20       | LF   |           |            |
| 403                   | 15" PVC Sewer Main (SDR 35)    | 1,675    | LF   |           |            |
| 404                   | 18" PVC Sewer Main (SDR 35)    | 1,094    | LF   |           |            |
| 407                   | 8" Cap                         | 15       | EA   |           |            |
| 408                   | 10" Cap                        | 2        | EA   |           |            |

|                        |                                              |       |     |  |  |
|------------------------|----------------------------------------------|-------|-----|--|--|
| 413                    | 48" Manhole (0' - 8')                        | 11    | EA  |  |  |
| 415                    | Extra Depth Manhole (48")                    | 48.7  | vft |  |  |
| 418                    | Connect to Existing                          | 1     | EA  |  |  |
| <b>Water</b>           |                                              |       |     |  |  |
| 504                    | Bore and Jack 24" Steel Casing (0.375" Wall) | 104   | LF  |  |  |
| <b>Drainage</b>        |                                              |       |     |  |  |
| 602                    | 36" Storm Pipe                               | 280   | LF  |  |  |
| 609                    | 36" Flared End Section                       | 4     | EA  |  |  |
| <b>Surfacing</b>       |                                              |       |     |  |  |
| 700                    | Permanent Gravel Surfacing (6" Depth)        | 1,741 | T   |  |  |
| 701                    | Geogrid Reinforcement                        | 5,157 | SY  |  |  |
| 702                    | Seeding, Fertilizing, & Mulching             | 4     | AC  |  |  |
| <b>Erosion Control</b> |                                              |       |     |  |  |
| 800                    | Silt Fence                                   | 1,155 | LF  |  |  |
| 801                    | Straw or compost wattles                     | 921   | LF  |  |  |
| 802                    | Class III RipRap                             | 39    | T   |  |  |
| 804                    | Inlet/ Outlet Protection                     | 4     | EA  |  |  |
| <b>Miscellaneous</b>   |                                              |       |     |  |  |
| 900                    | SDDOT Type 2 Fencing                         | 7,250 | LF  |  |  |
| 901                    | Access Gates                                 | 2     | EA  |  |  |

**Total Bid**

\_\_\_\_\_ words

\_\_\_\_\_ figures

**BID SCHEDULE 3**

| Line Item       | Description of Item  | Quantity | Unit | Unit Cost | Total Cost |
|-----------------|----------------------|----------|------|-----------|------------|
| <b>General</b>  |                      |          |      |           |            |
| 100             | Mobilization         | 1        | LS   |           |            |
| 101             | Incidental Work      | 1        | LS   |           |            |
| 102             | Material Testing     | 1        | LS   |           |            |
| 103             | Construction Staking | 1        | LS   |           |            |
| 104             | Erosion Control      | 1        | LS   |           |            |
| 105             | Dewatering           | 1        | LS   |           |            |
| <b>Removals</b> |                      |          |      |           |            |
| 201             | Remove Cap           | 2        | EA   |           |            |
| 202             | Remove Water Main    | 110      | LF   |           |            |



|                        |                                         |        |     |  |  |
|------------------------|-----------------------------------------|--------|-----|--|--|
| 203                    | Abandon Water Main (in place)           | 20     | EA  |  |  |
| 204                    | Remove Storm Pipe                       | 90     | LF  |  |  |
| 205                    | Remove Fence                            | 1,780  | LF  |  |  |
| 206                    | Remove and Replace Existing Gravel      | 148    | SY  |  |  |
| <b>Excavation</b>      |                                         |        |     |  |  |
| 300                    | Topsoil, Remove and Replace             | 7,325  | CY  |  |  |
| 302                    | Unclassified Excavation Borrow          | 57,906 | CY  |  |  |
| 304                    | Type III Foundation Material            | 100    | T   |  |  |
| 305                    | Type IV Foundation Material             | 100    | T   |  |  |
| <b>Sanitary Sewer</b>  |                                         |        |     |  |  |
| 400                    | 8" PVC Sewer Main (SDR 35)              | 2,192  | LF  |  |  |
| 401                    | 10" PVC Sewer Main (SDR 35)             | 1,631  | LF  |  |  |
| 402                    | 12" PVC Sewer Main (SDR 35)             | 344    | LF  |  |  |
| 407                    | 8" Cap                                  | 14     | EA  |  |  |
| 413                    | 48" Manhole (0' - 8')                   | 12     | EA  |  |  |
| 415                    | Extra Depth Manhole (48")               | 48.8   | vft |  |  |
| 418                    | Connect to Existing                     | 1      | EA  |  |  |
| <b>Water</b>           |                                         |        |     |  |  |
| 500                    | 16" PVC Water Main C900 DR-18           | 163    | LF  |  |  |
| 501                    | 16" 11.25 Bends                         | 4      | EA  |  |  |
| 502                    | Insulation Material                     | 978    | SF  |  |  |
| 503                    | Connect to Existing Water Main          | 2      | EA  |  |  |
| 505                    | Adjust Existing Fire Hydrant            | 1      | EA  |  |  |
| 506                    | Adjust Existing Gate Valve              | 3      | EA  |  |  |
| <b>Drainage</b>        |                                         |        |     |  |  |
| 601                    | 30" Storm Pipe                          | 100    | LF  |  |  |
| 602                    | 36" Storm Pipe                          | 408    | LF  |  |  |
| 603                    | 42" Storm Pipe                          | 520    | LF  |  |  |
| 606                    | Remove and Reset 36" Flared End Section | 7      | EA  |  |  |
| 608                    | 30" Flared End Section                  | 2.0    | EA  |  |  |
| 610                    | 42" Flared End Section                  | 6      | EA  |  |  |
| <b>Surfacing</b>       |                                         |        |     |  |  |
| 700                    | Permanent Gravel Surfacing (6" Depth)   | 1,673  | T   |  |  |
| 701                    | Geogrid Reinforcement                   | 4,956  | SY  |  |  |
| 702                    | Seeding, Fertilizing, & Mulching        | 3.2    | AC  |  |  |
| <b>Erosion Control</b> |                                         |        |     |  |  |
| 801                    | Straw or compost wattles                | 2,704  | LF  |  |  |
| 802                    | Class III RipRap                        | 663    | T   |  |  |
| 803                    | Concrete Washout Area                   | 1      | EA  |  |  |
| 804                    | Inlet/ Outlet Protection                | 20     | EA  |  |  |
| <b>Miscellaneous</b>   |                                         |        |     |  |  |

|     |                      |       |    |  |  |
|-----|----------------------|-------|----|--|--|
| 900 | SDDOT Type 2 Fencing | 7,092 | LF |  |  |
| 901 | Access Gates         | 6     | EA |  |  |

**Total Bid**

- - - -

words

- - - -

figures

**BID SCHEDULE 4**

| Line Item             | Description of Item               | Quantity | Unit | Unit Cost | Total Cost |
|-----------------------|-----------------------------------|----------|------|-----------|------------|
| <b>General</b>        |                                   |          |      |           |            |
| 100                   | Mobilization                      | 1        | LS   |           |            |
| 101                   | Incidental Work                   | 1        | LS   |           |            |
| 102                   | Material Testing                  | 1        | LS   |           |            |
| 103                   | Construction Staking              | 1        | LS   |           |            |
| 104                   | Erosion Control                   | 1        | LS   |           |            |
| 105                   | Dewatering                        | 1        | LS   |           |            |
| 106                   | Traffic Control                   | 1        | LS   |           |            |
| <b>Removals</b>       |                                   |          |      |           |            |
| 201                   | Remove Cap                        | 5        | EA   |           |            |
| 202                   | Remove Water Main                 | 199      | LF   |           |            |
| 203                   | Abandon Water Main (in place)     | 3        | EA   |           |            |
| 204                   | Remove Storm Pipe                 | 188      | LF   |           |            |
| 205                   | Remove Fence                      | 614      | LF   |           |            |
| 207                   | Saw Cut and Remove Asphalt Paving | 1,038    | SF   |           |            |
| <b>Excavation</b>     |                                   |          |      |           |            |
| 300                   | Topsoil, Remove and Replace       | 9,255    | CY   |           |            |
| 301                   | Unclassified Excavation           | 16,704   | CY   |           |            |
| 302                   | Unclassified Excavation Borrow    | 33,337   | CY   |           |            |
| 304                   | Type III Foundation Material      | 250      | T    |           |            |
| 305                   | Type IV Foundation Material       | 250      | T    |           |            |
| <b>Sanitary Sewer</b> |                                   |          |      |           |            |
| 400                   | 8" PVC Sewer Main (SDR 35)        | 4,922    | LF   |           |            |
| 401                   | 10" PVC Sewer Main (SDR 35)       | 577      | LF   |           |            |
| 407                   | 8" Cap                            | 19       | EA   |           |            |
| 413                   | 48" Manhole (0' - 8')             | 19       | EA   |           |            |
| 415                   | Extra Depth Manhole (48")         | 100      | vft  |           |            |
| 418                   | Connect to Existing               | 3        | EA   |           |            |
| <b>Water</b>          |                                   |          |      |           |            |

|                        |                                       |       |    |  |  |
|------------------------|---------------------------------------|-------|----|--|--|
| 500                    | 16" PVC Water Main C900 DR-18         | 808   | LF |  |  |
| 501                    | 16" 11.25 Bends                       | 15    | EA |  |  |
| 502                    | Insulation Material                   | 1,676 | SF |  |  |
| 503                    | Connect to Existing Water Main        | 6     | EA |  |  |
| 505                    | Adjust Existing Fire Hydrant          | 2     | EA |  |  |
| 506                    | Adjust Existing Gate Valve            | 4     | EA |  |  |
| <b>Drainage</b>        |                                       |       |    |  |  |
| 603                    | 42" Storm Pipe                        | 428   | LF |  |  |
| 604                    | 48" Storm Pipe                        | 705   | LF |  |  |
| 610                    | 42" Flared End Section                | 6     | EA |  |  |
| 611                    | 48" Flared End Section                | 8     | EA |  |  |
| <b>Surfacing</b>       |                                       |       |    |  |  |
| 700                    | Permanent Gravel Surfacing (6" Depth) | 2,442 | T  |  |  |
| 701                    | Geogrid Reinforcement                 | 7,234 | SY |  |  |
| 702                    | Seeding, Fertilizing, & Mulching      | 4.3   | AC |  |  |
| <b>Erosion Control</b> |                                       |       |    |  |  |
| 800                    | Silt Fence                            | 927   | LF |  |  |
| 801                    | Straw or compost wattles              | 4,060 | LF |  |  |
| 802                    | Class III Rip Rap                     | 529   | T  |  |  |
| 803                    | Concrete Washout Area                 | 1     | EA |  |  |
| 804                    | Inlet/ Outlet Protection              | 13    | EA |  |  |
| 805                    | Rock Construction Entrance            | 1     | EA |  |  |
| <b>Miscellaneous</b>   |                                       |       |    |  |  |
| 900                    | SDDOT Type 2 Fencing                  | 7,173 | LF |  |  |
| 901                    | Access Gates                          | 9     | EA |  |  |

**Total Bid**

\_\_\_\_\_ words

\_\_\_\_\_ figures

B. Bidder acknowledges that:

1. each Bid Unit Price includes an amount considered by Bidder to be adequate to cover Contractor's overhead and profit for each separately identified item, and
2. estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Work will be based on actual quantities, determined as provided in the Contract Documents.
3. **Bids shall include sales tax and all other applicable taxes and fees.**

**ARTICLE 4—DELETED**

**ARTICLE 5—DELETED**

**ARTICLE 6—TIME OF COMPLETION**

- 6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.
- 6.02 **DELETED.**
- 6.03 **DELETED.**
- 6.04 Bidder accepts the provisions of the Agreement as to liquidated damages.

**ARTICLE 7—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA**

7.01 *Bid Acceptance Period*

- A. This Bid will remain subject to acceptance for 60 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

- A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 *Receipt of Addenda*

- A. Bidder hereby acknowledges receipt of the following Addenda:

| Addendum Number | Addendum Date |
|-----------------|---------------|
|                 |               |
|                 |               |
|                 |               |
|                 |               |
|                 |               |

## ARTICLE 8—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

### 8.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work, **including all American Iron and Steel requirements.**
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

## 8.02 Bidder's Certifications

### A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
  - a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
  - b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
  - c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
  - d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

|                                                                                                             |                                                |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------------|
|                                                                                                             | _____                                          |
|                                                                                                             | <i>(typed or printed name of organization)</i> |
| By:                                                                                                         | _____                                          |
|                                                                                                             | <i>(individual's signature)</i>                |
| Name:                                                                                                       | _____                                          |
|                                                                                                             | <i>(typed or printed)</i>                      |
| Title:                                                                                                      | _____                                          |
|                                                                                                             | <i>(typed or printed)</i>                      |
| Date:                                                                                                       | _____                                          |
|                                                                                                             | <i>(typed or printed)</i>                      |
| <i>If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.</i> |                                                |
| Attest:                                                                                                     | _____                                          |
|                                                                                                             | <i>(individual's signature)</i>                |
| Name:                                                                                                       | _____                                          |
|                                                                                                             | <i>(typed or printed)</i>                      |
| Title:                                                                                                      | _____                                          |
|                                                                                                             | <i>(typed or printed)</i>                      |

Date: \_\_\_\_\_  
(typed or printed)

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_

Bidder's Contact:

Name: \_\_\_\_\_  
(typed or printed)

Title: \_\_\_\_\_  
(typed or printed)

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Bidder's Contractor License No.: (if applicable) \_\_\_\_\_





## BID BOND (PENAL SUM FORM)

|                                                                                                                                                                                                               |                                                                                                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bidder</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                      | <b>Surety</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                     |
| <b>Owner</b><br>Name: <b>City of Box Elder</b><br>Address <i>(principal place of business)</i> :<br><b>420 Villa Drive</b><br><b>Box Elder, SD 57719</b>                                                      | <b>Bid</b><br>Project <i>(name and location)</i> :<br><b>Cheyenne Boulevard &amp; Westgate Road Trunk</b><br><b>Sanitary Sewer Main Extension</b><br><br>Bid Due Date: <b>April 29, 2025</b> |
| <b>Bond</b><br>Penal Sum:<br>Date of Bond:                                                                                                                                                                    |                                                                                                                                                                                              |
| Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative. |                                                                                                                                                                                              |
| Bidder                                                                                                                                                                                                        | Surety                                                                                                                                                                                       |
| _____<br><i>(Full formal name of Bidder)</i>                                                                                                                                                                  | _____<br><i>(Full formal name of Surety) (corporate seal)</i>                                                                                                                                |
| By: _____<br><i>(Signature)</i>                                                                                                                                                                               | By: _____<br><i>(Signature) (Attach Power of Attorney)</i>                                                                                                                                   |
| Name: _____<br><i>(Printed or typed)</i>                                                                                                                                                                      | Name: _____<br><i>(Printed or typed)</i>                                                                                                                                                     |
| Title: _____                                                                                                                                                                                                  | Title: _____                                                                                                                                                                                 |
| Attest: _____<br><i>(Signature)</i>                                                                                                                                                                           | Attest: _____<br><i>(Signature)</i>                                                                                                                                                          |
| Name: _____<br><i>(Printed or typed)</i>                                                                                                                                                                      | Name: _____<br><i>(Printed or typed)</i>                                                                                                                                                     |
| Title: _____                                                                                                                                                                                                  | Title: _____                                                                                                                                                                                 |
| <i>Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.</i>                                      |                                                                                                                                                                                              |

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation will be null and void if:
  - 3.1. Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
  - 3.2. All Bids are rejected by Owner, or
  - 3.3. Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

## ARTICLE 1—GENERAL INFORMATION

### 1.01 Provide contact information for the Business:

|                                       |  |                |  |
|---------------------------------------|--|----------------|--|
| Legal Name of Business:               |  |                |  |
| Corporate Office                      |  |                |  |
| Name:                                 |  | Phone number:  |  |
| Title:                                |  | Email address: |  |
| Business address of corporate office: |  |                |  |
|                                       |  |                |  |
|                                       |  |                |  |
| Local Office                          |  |                |  |
| Name:                                 |  | Phone number:  |  |
| Title:                                |  | Email address: |  |
| Business address of local office:     |  |                |  |
|                                       |  |                |  |
|                                       |  |                |  |

### 1.02 Provide information on the Business's organizational structure:

|                                                                                                                                 |                                                                                                                        |                                                                                           |  |
|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--|
| Form of Business:                                                                                                               | <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Corporation |                                                                                           |  |
| <input type="checkbox"/> Limited Liability Company <input type="checkbox"/> Joint Venture comprised of the following companies: |                                                                                                                        |                                                                                           |  |
| 1.                                                                                                                              |                                                                                                                        |                                                                                           |  |
| 2.                                                                                                                              |                                                                                                                        |                                                                                           |  |
| 3.                                                                                                                              |                                                                                                                        |                                                                                           |  |
| Provide a separate Qualification Statement for each Joint Venturer.                                                             |                                                                                                                        |                                                                                           |  |
| Date Business was formed:                                                                                                       |                                                                                                                        | State in which Business was formed:                                                       |  |
| Is this Business authorized to operate in the Project location?                                                                 |                                                                                                                        | <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Pending |  |

### 1.03 Identify all businesses that own Business in whole or in part (25% or greater), or that are wholly or partly (25% or greater) owned by Business:

|                   |  |              |  |
|-------------------|--|--------------|--|
| Name of business: |  | Affiliation: |  |
| Address:          |  |              |  |
| Name of business: |  | Affiliation: |  |
| Address:          |  |              |  |
| Name of business: |  | Affiliation: |  |
| Address:          |  |              |  |

- 1.04 Provide information regarding the Business's officers, partners, and limits of authority.

|                               |                                                          |                     |    |
|-------------------------------|----------------------------------------------------------|---------------------|----|
| Name:                         |                                                          | Title:              |    |
| Authorized to sign contracts: | <input type="checkbox"/> Yes <input type="checkbox"/> No | Limit of Authority: | \$ |
| Name:                         |                                                          | Title:              |    |
| Authorized to sign contracts: | <input type="checkbox"/> Yes <input type="checkbox"/> No | Limit of Authority: | \$ |
| Name:                         |                                                          | Title:              |    |
| Authorized to sign contracts: | <input type="checkbox"/> Yes <input type="checkbox"/> No | Limit of Authority: | \$ |
| Name:                         |                                                          | Title:              |    |

## ARTICLE 2—LICENSING

- 2.01 Provide information regarding licensure for Business:

|                   |  |                  |  |
|-------------------|--|------------------|--|
| Name of License:  |  |                  |  |
| Licensing Agency: |  |                  |  |
| License No:       |  | Expiration Date: |  |
| Name of License:  |  |                  |  |
| Licensing Agency: |  |                  |  |
| License No:       |  | Expiration Date: |  |

## ARTICLE 3—DIVERSE BUSINESS CERTIFICATIONS

- 3.01 Provide information regarding Business's Diverse Business Certification, if any. Provide evidence of current certification.

| Certification                                                                   | Certifying Agency | Certification Date |
|---------------------------------------------------------------------------------|-------------------|--------------------|
| <input type="checkbox"/> Disadvantaged Business Enterprise                      |                   |                    |
| <input type="checkbox"/> Minority Business Enterprise                           |                   |                    |
| <input type="checkbox"/> Woman-Owned Business Enterprise                        |                   |                    |
| <input type="checkbox"/> Small Business Enterprise                              |                   |                    |
| <input type="checkbox"/> Disabled Business Enterprise                           |                   |                    |
| <input type="checkbox"/> Veteran-Owned Business Enterprise                      |                   |                    |
| <input type="checkbox"/> Service-Disabled Veteran-Owned Business                |                   |                    |
| <input type="checkbox"/> HUBZone Business (Historically Underutilized) Business |                   |                    |
| <input type="checkbox"/> Other                                                  |                   |                    |
| <input type="checkbox"/> None                                                   |                   |                    |

## ARTICLE 4—SAFETY

- 4.01 Provide information regarding Business's safety organization and safety performance.

|                                    |                |            |
|------------------------------------|----------------|------------|
| Name of Business's Safety Officer: |                |            |
| Safety Certifications              |                |            |
| Certification Name                 | Issuing Agency | Expiration |
|                                    |                |            |
|                                    |                |            |

- 4.02 Provide Worker's Compensation Insurance Experience Modification Rate (EMR), Total Recordable Frequency Rate (TRFR) for incidents, and Total Number of Recorded Manhours (MH) for the last 3 years and the EMR, TRFR, and MH history for the last 3 years of any proposed Subcontractor(s) that will provide Work valued at 10% or more of the Contract Price. Provide documentation of the EMR history for Business and Subcontractor(s).

| Year    |     |      |    |     |      |    |     |      |    |
|---------|-----|------|----|-----|------|----|-----|------|----|
| Company | EMR | TRFR | MH | EMR | TRFR | MH | EMR | TRFR | MH |
|         |     |      |    |     |      |    |     |      |    |
|         |     |      |    |     |      |    |     |      |    |

## ARTICLE 5—FINANCIAL

- 5.01 Provide information regarding the Business's financial stability. Provide the most recent audited financial statement, and if such audited financial statement is not current, also provide the most current financial statement.

|                                                                                                                             |  |                                   |
|-----------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------|
| Financial Institution:                                                                                                      |  |                                   |
| Business address:                                                                                                           |  |                                   |
| Date of Business's most recent financial statement:                                                                         |  | <input type="checkbox"/> Attached |
| Date of Business's most recent audited financial statement:                                                                 |  | <input type="checkbox"/> Attached |
| Financial indicators from the most recent financial statement                                                               |  |                                   |
| Contractor's Current Ratio (Current Assets ÷ Current Liabilities)                                                           |  |                                   |
| Contractor's Quick Ratio ((Cash and Cash Equivalents + Accounts Receivable + Short Term Investments) ÷ Current Liabilities) |  |                                   |

## ARTICLE 6—SURETY INFORMATION

- 6.01 Provide information regarding the surety company that will issue required bonds on behalf of the Business, including but not limited to performance and payment bonds.

|                                                                                                                                                                                                                                                                                                                                      |                                                          |                 |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-----------------|--|
| Surety Name:                                                                                                                                                                                                                                                                                                                         |                                                          |                 |  |
| Surety is a corporation organized and existing under the laws of the state of:                                                                                                                                                                                                                                                       |                                                          |                 |  |
| Is surety authorized to provide surety bonds in the Project location?                                                                                                                                                                                                                                                                | <input type="checkbox"/> Yes <input type="checkbox"/> No |                 |  |
| Is surety listed in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" published in Department Circular 570 (as amended) by the Bureau of the Fiscal Service, U.S. Department of the Treasury?<br><input type="checkbox"/> Yes <input type="checkbox"/> No |                                                          |                 |  |
| Mailing Address<br>(principal place of business):                                                                                                                                                                                                                                                                                    |                                                          |                 |  |
|                                                                                                                                                                                                                                                                                                                                      |                                                          |                 |  |
|                                                                                                                                                                                                                                                                                                                                      |                                                          |                 |  |
| Physical Address<br>(principal place of business):                                                                                                                                                                                                                                                                                   |                                                          |                 |  |
|                                                                                                                                                                                                                                                                                                                                      |                                                          |                 |  |
|                                                                                                                                                                                                                                                                                                                                      |                                                          |                 |  |
| Phone (main):                                                                                                                                                                                                                                                                                                                        |                                                          | Phone (claims): |  |

## ARTICLE 7—INSURANCE

- 7.01 Provide information regarding Business's insurance company(s), including but not limited to its Commercial General Liability carrier. Provide information for each provider.

|                                                                                 |  |                                                          |  |
|---------------------------------------------------------------------------------|--|----------------------------------------------------------|--|
| Name of insurance provider, and type of policy (CLE, auto, etc.):               |  |                                                          |  |
| Insurance Provider                                                              |  | Type of Policy (Coverage Provided)                       |  |
|                                                                                 |  |                                                          |  |
|                                                                                 |  |                                                          |  |
|                                                                                 |  |                                                          |  |
|                                                                                 |  |                                                          |  |
| Are providers licensed or authorized to issue policies in the Project location? |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| Does provider have an A.M. Best Rating of A-VII or better?                      |  | <input type="checkbox"/> Yes <input type="checkbox"/> No |  |
| Mailing Address<br>(principal place of business):                               |  |                                                          |  |
|                                                                                 |  |                                                          |  |
|                                                                                 |  |                                                          |  |
| Physical Address<br>(principal place of business):                              |  |                                                          |  |
|                                                                                 |  |                                                          |  |
|                                                                                 |  |                                                          |  |
| Phone (main):                                                                   |  | Phone (claims):                                          |  |

## ARTICLE 8—CONSTRUCTION EXPERIENCE

8.01 Provide information that will identify the overall size and capacity of the Business.

|                                                |  |
|------------------------------------------------|--|
| Average number of current full-time employees: |  |
| Estimate of revenue for the current year:      |  |
| Estimate of revenue for the previous year:     |  |

8.02 Provide information regarding the Business's previous contracting experience.

|                                                                                                                                                                       |  |                      |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------|--|--|
| Years of experience with projects like the proposed project:                                                                                                          |  |                      |  |  |
| As a general contractor:                                                                                                                                              |  | As a joint venturer: |  |  |
| Has Business, or a predecessor in interest, or an affiliate identified in Paragraph 1.03:                                                                             |  |                      |  |  |
| Been disqualified as a bidder by any local, state, or federal agency within the last 5 years?<br><input type="checkbox"/> Yes <input type="checkbox"/> No             |  |                      |  |  |
| Been barred from contracting by any local, state, or federal agency within the last 5 years?<br><input type="checkbox"/> Yes <input type="checkbox"/> No              |  |                      |  |  |
| Been released from a bid in the past 5 years? <input type="checkbox"/> Yes <input type="checkbox"/> No                                                                |  |                      |  |  |
| Defaulted on a project or failed to complete any contract awarded to it? <input type="checkbox"/> Yes <input type="checkbox"/> No                                     |  |                      |  |  |
| Refused to construct or refused to provide materials defined in the contract documents or in a change order? <input type="checkbox"/> Yes <input type="checkbox"/> No |  |                      |  |  |
| Been a party to any currently pending litigation or arbitration? <input type="checkbox"/> Yes <input type="checkbox"/> No                                             |  |                      |  |  |
| Provide full details in a separate attachment if the response to any of these questions is Yes.                                                                       |  |                      |  |  |

8.03 List all projects currently under contract in Schedule A and provide indicated information.

8.04 List a minimum of three and a maximum of six projects completed in the last 5 years in Schedule B and provide indicated information to demonstrate the Business's experience with projects similar in type and cost of construction.

8.05 In Schedule C, provide information on key individuals whom Business intends to assign to the Project. Provide resumes for those individuals included in Schedule C. Key individuals include the Project Manager, Project Superintendent, Quality Manager, and Safety Manager. Resumes may be provided for Business's key leaders as well.

## ARTICLE 9—REQUIRED ATTACHMENTS

9.01 Provide the following information with the Statement of Qualifications:

- A. If Business is a Joint Venture, separate Qualifications Statements for each Joint Venturer, as required in Paragraph 1.02.
- B. Diverse Business Certifications if required by Paragraph 3.01.
- C. Certification of Business's safety performance if required by Paragraph 4.02.
- D. Financial statements as required by Paragraph 5.01.

- E. Attachments providing additional information as required by Paragraph 8.02.
- F. Schedule A (Current Projects) as required by Paragraph 8.03.
- G. Schedule B (Previous Experience with Similar Projects) as required by Paragraph 8.04.
- H. Schedule C (Key Individuals) and resumes for the key individuals listed, as required by Paragraph 8.05.
- I. Additional items as pertinent.



This Statement of Qualifications is offered by:

Business:

\_\_\_\_\_  
*(typed or printed name of organization)*

By:

\_\_\_\_\_  
*(individual's signature)*

Name:

\_\_\_\_\_  
*(typed or printed)*

Title:

\_\_\_\_\_  
*(typed or printed)*

Date:

\_\_\_\_\_  
*(date signed)*

*(If Business is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)*

Attest:

\_\_\_\_\_  
*(individual's signature)*

Name:

\_\_\_\_\_  
*(typed or printed)*

Title:

\_\_\_\_\_  
*(typed or printed)*

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Designated Representative:

Name:

\_\_\_\_\_  
*(typed or printed)*

Title:

\_\_\_\_\_  
*(typed or printed)*

Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone:

\_\_\_\_\_

Email:

\_\_\_\_\_



**Schedule A—Current Projects**

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Name of Organization                                                                                                |                 |                        |                |                         |       |
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |

**Schedule B—Previous Experience with Similar Projects**

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Name of Organization                                                                                                |                 |                        |                |                         |       |
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |

**Schedule B—Previous Experience with Similar Projects**

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Name of Organization                                                                                                |                 |                        |                |                         |       |
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |

|                                                                                                                     |                 |                        |                |                         |       |
|---------------------------------------------------------------------------------------------------------------------|-----------------|------------------------|----------------|-------------------------|-------|
| Project Owner                                                                                                       |                 |                        | Project Name   |                         |       |
| General Description of Project                                                                                      |                 |                        |                |                         |       |
| Project Cost                                                                                                        |                 |                        | Date Project   |                         |       |
| Key Project Personnel                                                                                               | Project Manager | Project Superintendent | Safety Manager | Quality Control Manager |       |
| Name                                                                                                                |                 |                        |                |                         |       |
| Reference Contact Information (listing names indicates approval to contacting the names individuals as a reference) |                 |                        |                |                         |       |
|                                                                                                                     | Name            | Title/Position         | Organization   | Telephone               | Email |
| Owner                                                                                                               |                 |                        |                |                         |       |
| Designer                                                                                                            |                 |                        |                |                         |       |
| Construction Manager                                                                                                |                 |                        |                |                         |       |



**Schedule C—Key Individuals**

|                                                                                                              |  |                                       |                                   |
|--------------------------------------------------------------------------------------------------------------|--|---------------------------------------|-----------------------------------|
| <b>Project Manager</b>                                                                                       |  |                                       |                                   |
| Name of individual                                                                                           |  |                                       |                                   |
| Years of experience as project manager                                                                       |  |                                       |                                   |
| Years of experience with this organization                                                                   |  |                                       |                                   |
| Number of similar projects as project manager                                                                |  |                                       |                                   |
| Number of similar projects in other positions                                                                |  |                                       |                                   |
| Current Project Assignments                                                                                  |  |                                       |                                   |
| Name of assignment                                                                                           |  | Percent of time used for this project | Estimated project completion date |
|                                                                                                              |  |                                       |                                   |
|                                                                                                              |  |                                       |                                   |
|                                                                                                              |  |                                       |                                   |
| Reference Contact Information (listing names indicates approval to contact named individuals as a reference) |  |                                       |                                   |
| Name                                                                                                         |  | Name                                  |                                   |
| Title/Position                                                                                               |  | Title/Position                        |                                   |
| Organization                                                                                                 |  | Organization                          |                                   |
| Telephone                                                                                                    |  | Telephone                             |                                   |
| Email                                                                                                        |  | Email                                 |                                   |
| Project                                                                                                      |  | Project                               |                                   |
| Candidate's role on project                                                                                  |  | Candidate's role on project           |                                   |
| <b>Project Superintendent</b>                                                                                |  |                                       |                                   |
| Name of individual                                                                                           |  |                                       |                                   |
| Years of experience as project superintendent                                                                |  |                                       |                                   |
| Years of experience with this organization                                                                   |  |                                       |                                   |
| Number of similar projects as project superintendent                                                         |  |                                       |                                   |
| Number of similar projects in other positions                                                                |  |                                       |                                   |
| Current Project Assignments                                                                                  |  |                                       |                                   |
| Name of assignment                                                                                           |  | Percent of time used for this project | Estimated project completion date |
|                                                                                                              |  |                                       |                                   |
|                                                                                                              |  |                                       |                                   |
|                                                                                                              |  |                                       |                                   |
| Reference Contact Information (listing names indicates approval to contact named individuals as a reference) |  |                                       |                                   |
| Name                                                                                                         |  | Name                                  |                                   |
| Title/Position                                                                                               |  | Title/Position                        |                                   |
| Organization                                                                                                 |  | Organization                          |                                   |
| Telephone                                                                                                    |  | Telephone                             |                                   |
| Email                                                                                                        |  | Email                                 |                                   |
| Project                                                                                                      |  | Project                               |                                   |
| Candidate's role on project                                                                                  |  | Candidate's role on project           |                                   |

|                                                                                                              |  |                                       |                                   |
|--------------------------------------------------------------------------------------------------------------|--|---------------------------------------|-----------------------------------|
| <b>Safety Manager</b>                                                                                        |  |                                       |                                   |
| Name of individual                                                                                           |  |                                       |                                   |
| Years of experience as project manager                                                                       |  |                                       |                                   |
| Years of experience with this organization                                                                   |  |                                       |                                   |
| Number of similar projects as project manager                                                                |  |                                       |                                   |
| Number of similar projects in other positions                                                                |  |                                       |                                   |
| Current Project Assignments                                                                                  |  |                                       |                                   |
| Name of assignment                                                                                           |  | Percent of time used for this project | Estimated project completion date |
|                                                                                                              |  |                                       |                                   |
|                                                                                                              |  |                                       |                                   |
|                                                                                                              |  |                                       |                                   |
| Reference Contact Information (listing names indicates approval to contact named individuals as a reference) |  |                                       |                                   |
| Name                                                                                                         |  | Name                                  |                                   |
| Title/Position                                                                                               |  | Title/Position                        |                                   |
| Organization                                                                                                 |  | Organization                          |                                   |
| Telephone                                                                                                    |  | Telephone                             |                                   |
| Email                                                                                                        |  | Email                                 |                                   |
| Project                                                                                                      |  | Project                               |                                   |
| Candidate's role on project                                                                                  |  | Candidate's role on project           |                                   |
| <b>Quality Control Manager</b>                                                                               |  |                                       |                                   |
| Name of individual                                                                                           |  |                                       |                                   |
| Years of experience as project superintendent                                                                |  |                                       |                                   |
| Years of experience with this organization                                                                   |  |                                       |                                   |
| Number of similar projects as project superintendent                                                         |  |                                       |                                   |
| Number of similar projects in other positions                                                                |  |                                       |                                   |
| Current Project Assignments                                                                                  |  |                                       |                                   |
| Name of assignment                                                                                           |  | Percent of time used for this project | Estimated project completion date |
|                                                                                                              |  |                                       |                                   |
|                                                                                                              |  |                                       |                                   |
|                                                                                                              |  |                                       |                                   |
| Reference Contact Information (listing names indicates approval to contact named individuals as a reference) |  |                                       |                                   |
| Name                                                                                                         |  | Name                                  |                                   |
| Title/Position                                                                                               |  | Title/Position                        |                                   |
| Organization                                                                                                 |  | Organization                          |                                   |
| Telephone                                                                                                    |  | Telephone                             |                                   |
| Email                                                                                                        |  | Email                                 |                                   |
| Project                                                                                                      |  | Project                               |                                   |
| Candidate's role on project                                                                                  |  | Candidate's role on project           |                                   |



## NOTICE OF AWARD

Date of Issuance:

Owner: **City of Box Elder** Owner's Project No.: **23-003**  
Engineer: **Towey Design Group, Inc.** Engineer's Project No.: **24-006**  
Project: **Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension**  
Contract Name: **Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension**  
Bidder:  
Bidder's Address:

You are notified that Owner has accepted your Bid dated [ ] for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

**Cheyenne Boulevard and Westgate Road  
Trunk Sanitary Sewer Main Extension  
Box Elder, SD**

The Contract Price of the awarded Contract is \$[ ]. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

**Five (5)** unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **five (5)** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): **None**

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **[Full formal name of Owner]**

By (signature): \_\_\_\_\_

Name (printed): \_\_\_\_\_

Title: \_\_\_\_\_

Copy: Engineer



# AGREEMENT BETWEEN OWNER AND CONTRACTOR FOR CONSTRUCTION CONTRACT (STIPULATED PRICE)

This Agreement is by and between **City of Box Elder** (“Owner”) and [\_\_\_\_\_] (“Contractor”).

Terms used in this Agreement have the meanings stated in the General Conditions and the Supplementary Conditions.

Owner and Contractor hereby agree as follows:

## ARTICLE 1—WORK

- 1.01 Contractor shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows: **Installation of new trunk sanitary sewer main, access roads and drainage improvements.**

## ARTICLE 2—THE PROJECT

- 2.01 The Project, of which the Work under the Contract Documents is a part, is generally described as follows:

Constructing over 18,500 lf of new trunk sanitary sewer main. This includes approximately 960 lf of 27-inch, 930 lf of 24-inch, 2,125 lf of 18-inch, 1,080 lf of 15-inch, 2,000 lf of 12-inch, 2,800 lf of 10-inch, 8,770 lf of 8-inch sanitary sewer main, and associated manholes and other appurtenances. The work will also include four utility bores for project, one under the eastbound lane of Highway 1416, two under the railroad right-of-way and the last under Box Elder Creek. Also, the project requires the relocation of approximately 1,150 lf of 16” PVC Water Main grading of future rights-of-ways and developing a graveled path along the new trunk sewer main, and improvements to local drainage crossing will also be required.

## ARTICLE 3—ENGINEER

- 3.01 The Owner has retained **Towey Design Group, Inc.** (“Engineer”) to act as Owner’s representative, assume all duties and responsibilities of Engineer, and have the rights and authority assigned to Engineer in the Contract.
- 3.02 The part of the Project that pertains to the Work has been designed by **ENGINEER.**

## ARTICLE 4—CONTRACT TIMES

- 4.01 *Time is of the Essence*

A. All time limits for Milestones, if any, Substantial Completion, and completion and readiness for final payment as stated in the Contract Documents are of the essence of the Contract.

4.02 *Contract Times: Dates*

- A. The Work associated with Bid Schedule I will be substantially complete on or before **September 30, 2025**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **November 7, 2025**.
- B. The Work associated with Bid Schedule II, III and IV will be substantially complete on or before **September 30, 2026**, and completed and ready for final payment in accordance with Paragraph 15.06 of the General Conditions on or before **November 6, 2026**.

4.03 *Contract Times: Days*

- A. **DELETED.**

4.04 *Milestones*

- A. **DELETED.**

4.05 *Liquidated Damages*

- A. Contractor and Owner recognize that time is of the essence as stated in Paragraph 4.01 above and that Owner will suffer financial and other losses if the Work is not completed and ~~Milestones not achieved~~ within the Contract Times, as duly modified. The parties also recognize the delays, expense, and difficulties involved in proving, in a legal or arbitration proceeding, the actual loss suffered by Owner if the Work is not completed on time. Accordingly, instead of requiring any such proof, Owner and Contractor agree that as liquidated damages for delay (but not as a penalty):
  - 1. *Substantial Completion*: Contractor shall pay Owner **\$1,350.00** for each day that expires after the time (as duly adjusted pursuant to the Contract) specified above for Substantial Completion, until the Work is substantially complete.
  - 2. *Completion of Remaining Work*: After Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times (as duly adjusted pursuant to the Contract) for completion and readiness for final payment, Contractor shall pay Owner **\$625.00** for each day that expires after such time until the Work is completed and ready for final payment.
  - 3. *Milestones*: **DELETED.**
  - 4. Liquidated damages for failing to timely attain ~~Milestones~~, Substantial Completion, and final completion are not additive, and will not be imposed concurrently.
- B. If Owner recovers liquidated damages for a delay in completion by Contractor, then such liquidated damages are Owner's sole and exclusive remedy for such delay, and Owner is precluded from recovering any other damages, whether actual, direct, excess, or consequential, for such delay, except for special damages (if any) specified in this Agreement.
- C. *Bonus*: **DELETED.**

4.06 *Special Damages*

- A. Contractor shall reimburse Owner (1) for any fines or penalties imposed on Owner as a direct result of the Contractor's failure to attain Substantial Completion according to the Contract Times, and (2) for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in

Paragraph 4.02 for Substantial Completion (as duly adjusted pursuant to the Contract), until the Work is substantially complete.

- B. After Contractor achieves Substantial Completion, if Contractor shall neglect, refuse, or fail to complete the remaining Work within the Contract Times, Contractor shall reimburse Owner for the actual costs reasonably incurred by Owner for engineering, construction observation, inspection, and administrative services needed after the time specified in Paragraph 4.02 for Work to be completed and ready for final payment (as duly adjusted pursuant to the Contract), until the Work is completed and ready for final payment.
- C. The special damages imposed in this paragraph are supplemental to any liquidated damages for delayed completion established in this Agreement.

#### ARTICLE 5—CONTRACT PRICE

5.01 Owner shall pay Contractor for completion of the Work in accordance with the Contract Documents, the amounts that follow, subject to adjustment under the Contract:

- A. **DELETED.**
- B. **DELETED.**
- C. **DELETED**

- D. For all Work, at the prices stated in Contractor's Bid, attached hereto as an exhibit.

For all Unit Price Work, an amount equal to the sum of the established unit price for each separately identified item of Unit Price Work times the estimated quantity of that item as indicated in the Contractor's Bid. As provided in Paragraph 11.03 of the General Conditions, estimated quantities are not guaranteed, and determinations of actual quantities and classifications are to be made by Engineer as provided in Paragraph 9.07 of the General Conditions. Unit prices have been computed as provided in Paragraph 11.03 of the General Conditions.

#### ARTICLE 6—PAYMENT PROCEDURES

6.01 *Submittal and Processing of Payments*

- A. Contractor shall submit Applications for Payment in accordance with Article 15 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

6.02 *Progress Payments; Retainage*

- A. Owner shall make progress payments on the basis of Contractor's Applications for Payment. ~~on or about the [ordinal number, such as 5th] day of each month during performance of the Work~~ Within ten (10) days after the presentation of the application for payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set off), will be submitted by the Owner to the Agency for approval and payment. Upon the Owner receiving funds from the Agency, Owner will pay the amount within ten (10) business days, as provided in Paragraph 6.02.A.1 below, provided that such Applications for Payment have been submitted in a timely manner and otherwise meet the requirements of the Contract. All such payments will be measured by the Schedule of Values established as provided in the General Conditions (and in the case of Unit Price Work based on the number of units

completed) or, in the event there is no Schedule of Values, as provided elsewhere in the Contract.

1. Prior to Substantial Completion, progress payments will be made in an amount equal to the percentage indicated below but, in each case, less the aggregate of payments previously made and less such amounts as Owner may withhold, including but not limited to liquidated damages, in accordance with the Contract.

- a. **90** percent of the value of the Work completed (with the balance being retainage).

- 1) **DELETED.**

- b. **90** percent of cost of materials and equipment not incorporated in the Work (with the balance being retainage).

- B. Upon Substantial Completion, **of the entire construction to be provided under the construction Contract Documents** Owner shall pay an amount sufficient to increase total payments to Contractor to **95** percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less **0** percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

#### 6.03 *Final Payment*

- A. Upon final completion and acceptance of the Work, Owner shall pay the remainder of the Contract Price in accordance with Paragraph 15.06 of the General Conditions.

#### 6.04 *Consent of Surety*

- A. Owner will not make final payment, or return or release retainage at Substantial Completion or any other time, unless Contractor submits written consent of the surety to such payment, return, or release.

#### 6.05 *Interest*

- A. All amounts not paid **starting sixty days** when due will bear interest at the rate of **8** percent per annum.

### ARTICLE 7—CONTRACT DOCUMENTS

#### 7.01 *Contents*

- A. The Contract Documents consist of all of the following:
    1. This Agreement.
    2. Bonds:
      - a. Performance bond (together with power of attorney).
      - b. Payment bond (together with power of attorney).
    3. General Conditions.
    4. Supplementary Conditions.
    5. Specifications as listed in the table of contents of the project manual (copy of list attached).

6. Drawings (not attached but incorporated by reference) consisting of [number] sheets with each sheet bearing the following general title: **Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension.**
7. **DELETED.**
8. Addenda (numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive).
9. Exhibits to this Agreement (enumerated as follows):
  - a. **None**
10. The following which may be delivered or issued on or after the Effective Date of the Contract and are not attached hereto:
  - a. Notice to Proceed.
  - b. Work Change Directives.
  - c. Change Orders.
  - d. Field Orders.
  - e. Warranty Bond, if any.
- B. The Contract Documents listed in Paragraph 7.01.A are attached to this Agreement (except as expressly noted otherwise above).
- C. There are no Contract Documents other than those listed above in this Article 7.
- D. The Contract Documents may only be amended, modified, or supplemented as provided in the Contract.

## **ARTICLE 8—REPRESENTATIONS, CERTIFICATIONS, AND STIPULATIONS**

### **8.01 Contractor's Representations**

- A. In order to induce Owner to enter into this Contract, Contractor makes the following representations:
  1. Contractor has examined and carefully studied the Contract Documents, including Addenda.
  2. Contractor has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
  3. Contractor is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work.
  4. Contractor has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
  5. Contractor has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in

the Supplementary Conditions, with respect to Technical Data in such reports and drawings.

6. Contractor has considered the information known to Contractor itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Contract Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor; and (c) Contractor's safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Contractor agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Contractor is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Contract Documents.
9. Contractor has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Contractor has discovered in the Contract Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. Contractor's entry into this Contract constitutes an incontrovertible representation by Contractor that without exception all prices in the Agreement are premised upon performing and furnishing the Work required by the Contract Documents.

#### 8.02 *Contractor's Certifications*

- A. Contractor certifies that it has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for or in executing the Contract. For the purposes of this Paragraph 8.02:
  1. "corrupt practice" means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process or in the Contract execution;
  2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process or the execution of the Contract to the detriment of Owner, (b) to establish Bid or Contract prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
  3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish Bid prices at artificial, non-competitive levels; and



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

8.03 *Standard General Conditions*

- A. Owner stipulates that if the General Conditions that are made a part of this Contract are EJCDC® C-700, Standard General Conditions for the Construction Contract (2018), published by the Engineers Joint Contract Documents Committee, and if Owner is the party that has furnished said General Conditions, then Owner has plainly shown all modifications to the standard wording of such published document to the Contractor, through a process such as highlighting or “track changes” (redline/strikeout), or in the Supplementary Conditions.

IN WITNESS WHEREOF, Owner and Contractor have signed this Agreement.

This Agreement will be effective on \_\_\_\_\_ (which is the Effective Date of the Contract).

Owner:

**City of Box Elder**

\_\_\_\_\_  
(typed or printed name of organization)

By:

\_\_\_\_\_  
(individual's signature)

Date:

\_\_\_\_\_  
(date signed)

Name:

\_\_\_\_\_  
(typed or printed)

Title:

\_\_\_\_\_  
(typed or printed)

Attest:

\_\_\_\_\_  
(individual's signature)

Title:

\_\_\_\_\_  
(typed or printed)

Address for giving notices:

**420 Villa Drive**

**Box Elder, SD 57719**

Designated Representative:

Name:

\_\_\_\_\_  
(typed or printed)

Title:

\_\_\_\_\_  
(typed or printed)

Address:

Contractor:

\_\_\_\_\_  
(typed or printed name of organization)

By:

\_\_\_\_\_  
(individual's signature)

Date:

\_\_\_\_\_  
(date signed)

Name:

\_\_\_\_\_  
(typed or printed)

Title:

\_\_\_\_\_  
(typed or printed)

(If [Type of Entity] is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.)

Attest:

\_\_\_\_\_  
(individual's signature)

Title:

\_\_\_\_\_  
(typed or printed)

Address for giving notices:

\_\_\_\_\_  
\_\_\_\_\_

Designated Representative:

Name:

\_\_\_\_\_  
(typed or printed)

Title:

\_\_\_\_\_  
(typed or printed)

Address:

\_\_\_\_\_  
\_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

*(If **[Type of Entity]** is a corporation, attach evidence of authority to sign. If **[Type of Entity]** is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of this Agreement.)*

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

License No.: \_\_\_\_\_  
*(where applicable)*

State: \_\_\_\_\_

## NOTICE TO PROCEED

Owner: City Of Box Elder Owner's Project No.: 23.003.00  
Engineer: Towey Design Group, Inc. Engineer's Project No.: 24-006  
Contractor: \_\_\_\_\_ Contractor's Project No.: \_\_\_\_\_  
Project: Cheyenne Boulevard and Westgate Trunk Sanitary Sewer Main Extension  
Contract Name: Cheyenne Boulevard and Westgate Trunk Sanitary Sewer Main Extension  
Effective Date of Contract: \_\_\_\_\_

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on [ ] pursuant to Paragraph 4.01 of the General Conditions.

On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement:

**For Task 1**, the date by which Substantial Completion must be achieved is **September 30, 2025**, and the date by which readiness for final payment must be achieved is **November 7, 2025**.

**For Task 2**, the date by which Substantial Completion must be achieved is **September 30, 2026**, and the date by which readiness for final payment must be achieved is **November 6, 2026**.

Before starting any Work at the Site, Contractor must comply with the following:

- 1. Obtain Necessary Permits from City of Box Elder, Pennington County, Railroad, and DANR.**

Owner: City of Box Elder  
By (signature): \_\_\_\_\_  
Name (printed): \_\_\_\_\_  
Title: \_\_\_\_\_  
Date Issued: \_\_\_\_\_  
Copy: Engineer



## PERFORMANCE BOND

|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Contractor</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                                           | <b>Surety</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                                                                   |
| <b>Owner</b><br>Name: <b>City of Box Elder, SD</b><br>Mailing address <i>(principal place of business)</i> :<br><b>420 Villa Drive</b><br><b>Box Elder, SD 57719</b>                                                                   | <b>Contract</b><br>Description <i>(name and location)</i> :<br><b>Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension, City of Box Elder City Project No 23.003.00 / TDG 24-006</b><br>Contract Price:<br>Effective Date of Contract: |
| <b>Bond</b><br>Bond Amount:<br>Date of Bond:<br><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i><br>Modifications to this Bond form:<br><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 16 |                                                                                                                                                                                                                                                            |
| Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.      |                                                                                                                                                                                                                                                            |
| Contractor as Principal                                                                                                                                                                                                                | Surety                                                                                                                                                                                                                                                     |
| <i>(Full formal name of Contractor)</i>                                                                                                                                                                                                | <i>(Full formal name of Surety) (corporate seal)</i>                                                                                                                                                                                                       |
| By: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                                 | By: _____<br><div style="text-align: center;"><i>(Signature)(Attach Power of Attorney)</i></div>                                                                                                                                                           |
| Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                        | Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                                            |
| Title: _____                                                                                                                                                                                                                           | Title: _____                                                                                                                                                                                                                                               |
| Attest: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                             | Attest: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                                                 |
| Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                        | Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                                            |
| Title: _____                                                                                                                                                                                                                           | Title: _____                                                                                                                                                                                                                                               |
| <i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>                    |                                                                                                                                                                                                                                                            |

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:
  - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;
  - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
  - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
  - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
  - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
  - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
  - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

- 5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
  - 5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
- 6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.
- 7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
  - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
  - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
  - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
- 8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
- 9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
- 10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
- 11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.
- 12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.
- 13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such

statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

- 14.1. *Balance of the Contract Price*—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
  - 14.2. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
  - 14.3. *Contractor Default*—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
  - 14.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
  - 14.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
16. Modifications to this Bond are as follows: **None**



## PAYMENT BOND

|                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Contractor</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                                           | <b>Surety</b><br>Name:<br>Address <i>(principal place of business)</i> :                                                                                                                                                                                   |
| <b>Owner</b><br>Name: <b>City of Box Elder, SD</b><br>Mailing address <i>(principal place of business)</i> :<br><b>420 Villa Drive</b><br><b>Box Elder, SD 57719</b>                                                                   | <b>Contract</b><br>Description <i>(name and location)</i> :<br><b>Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension, City of Box Elder City Project No 23.003.00 / TDG 24-006</b><br>Contract Price:<br>Effective Date of Contract: |
| <b>Bond</b><br>Bond Amount:<br>Date of Bond:<br><i>(Date of Bond cannot be earlier than Effective Date of Contract)</i><br>Modifications to this Bond form:<br><input type="checkbox"/> None <input type="checkbox"/> See Paragraph 18 |                                                                                                                                                                                                                                                            |
| Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.              |                                                                                                                                                                                                                                                            |
| Contractor as Principal                                                                                                                                                                                                                | Surety                                                                                                                                                                                                                                                     |
| <i>(Full formal name of Contractor)</i>                                                                                                                                                                                                | <i>(Full formal name of Surety) (corporate seal)</i>                                                                                                                                                                                                       |
| By: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                                 | By: _____<br><div style="text-align: center;"><i>(Signature)(Attach Power of Attorney)</i></div>                                                                                                                                                           |
| Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                        | Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                                            |
| Title: _____                                                                                                                                                                                                                           | Title: _____                                                                                                                                                                                                                                               |
| Attest: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                             | Attest: _____<br><div style="text-align: center;"><i>(Signature)</i></div>                                                                                                                                                                                 |
| Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                        | Name: _____<br><div style="text-align: center;"><i>(Printed or typed)</i></div>                                                                                                                                                                            |
| Title: _____                                                                                                                                                                                                                           | Title: _____                                                                                                                                                                                                                                               |
| <i>Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.</i>                    |                                                                                                                                                                                                                                                            |

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.
2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.
4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.
5. The Surety's obligations to a Claimant under this Bond will arise after the following:
  - 5.1. Claimants who do not have a direct contract with the Contractor
    - 5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and
    - 5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).
  - 5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).
6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.
7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:
  - 7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and
  - 7.2. Pay or arrange for payment of any undisputed amounts.
  - 7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.
9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.
11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.
13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.
14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.
15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.
16. Definitions
  - 16.1. *Claim*—A written statement by the Claimant including at a minimum:
    - 16.1.1. The name of the Claimant;
    - 16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;
    - 16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;
    - 16.1.4. A brief description of the labor, materials, or equipment furnished;

- 16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;
  - 16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;
  - 16.1.7. The total amount of previous payments received by the Claimant; and
  - 16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.
- 16.2. *Claimant*—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.
- 16.3. *Construction Contract*—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.
- 16.4. *Owner Default*—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
- 16.5. *Contract Documents*—All the documents that comprise the agreement between the Owner and Contractor.
17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.
18. Modifications to this Bond are as follows: **None**

**Contractor's Application for Payment**

|                                                                                             |                                              |
|---------------------------------------------------------------------------------------------|----------------------------------------------|
| <b>Owner:</b> <u>City of Box Elder</u>                                                      | <b>Owner's Project No.:</b> <u>23-003</u>    |
| <b>Engineer:</b> <u>Towey Design Group, Inc.</u>                                            | <b>Engineer's Project No.:</b> <u>24-006</u> |
| <b>Contractor:</b> _____                                                                    | <b>Contractor's Project No.:</b> _____       |
| <b>Project:</b> <u>Cheyenne Boulevard and West Gate Trunk Sanitary Sewer Main Extension</u> |                                              |
| <b>Contract:</b> _____                                                                      |                                              |
| <b>Application No.:</b> _____ <b>Application Date:</b> _____                                |                                              |
| <b>Application Period:</b> <b>From</b> _____ <b>to</b> _____                                |                                              |

|                                                                                                                        |      |
|------------------------------------------------------------------------------------------------------------------------|------|
| 1. Original Contract Price                                                                                             | \$ - |
| 2. Net change by Change Orders                                                                                         | \$ - |
| 3. Current Contract Price (Line 1 + Line 2)                                                                            | \$ - |
| 4. Total Work completed and materials stored to date<br>(Sum of Column G Lump Sum Total and Column J Unit Price Total) | \$ - |
| 5. Retainage                                                                                                           |      |
| a. _____ X \$ - Work Completed                                                                                         | \$ - |
| b. _____ X \$ - Stored Materials                                                                                       | \$ - |
| c. Total Retainage (Line 5.a + Line 5.b)                                                                               | \$ - |
| 6. Amount eligible to date (Line 4 - Line 5.c)                                                                         | \$ - |
| 7. Less previous payments (Line 6 from prior application)                                                              |      |
| 8. Amount due this application                                                                                         | \$ - |
| 9. Balance to finish, including retainage (Line 3 - Line 4)                                                            | \$ - |

**Contractor's Certification**

The undersigned Contractor certifies, to the best of its knowledge, the following:

(1) All previous progress payments received from Owner on account of Work done under the Contract have been applied on account to discharge Contractor's legitimate obligations incurred in connection with the Work covered by prior Applications for Payment;

(2) Title to all Work, materials and equipment incorporated in said Work, or otherwise listed in or covered by this Application for Payment, will pass to Owner at time of payment free and clear of all liens, security interests, and encumbrances (except such as are covered by a bond acceptable to Owner indemnifying Owner against any such liens, security interest, or encumbrances); and

(3) All the Work covered by this Application for Payment is in accordance with the Contract Documents and is not defective.

|                          |                    |
|--------------------------|--------------------|
| <b>Contractor:</b> _____ |                    |
| <b>Signature:</b> _____  | <b>Date:</b> _____ |

|                                   |                          |
|-----------------------------------|--------------------------|
| <b>Recommended by Engineer</b>    | <b>Approved by Owner</b> |
| <b>By:</b> _____                  | <b>By:</b> _____         |
| <b>Title:</b> _____               | <b>Title:</b> _____      |
| <b>Date:</b> _____                | <b>Date:</b> _____       |
| <b>Approved by Funding Agency</b> |                          |
| <b>By:</b> _____                  | <b>By:</b> _____         |
| <b>Title:</b> _____               | <b>Title:</b> _____      |
| <b>Date:</b> _____                | <b>Date:</b> _____       |



### Progress Estimate - Unit Price Work

## Contractor's Application for Payment

|                    |                                                                      |                                  |        |
|--------------------|----------------------------------------------------------------------|----------------------------------|--------|
| <b>Owner:</b>      | City of Box Elder                                                    | <b>Owner's Project No.:</b>      | 23-003 |
| <b>Engineer:</b>   | Towey Design Group, Inc.                                             | <b>Engineer's Project No.:</b>   | 24-006 |
| <b>Contractor:</b> |                                                                      | <b>Contractor's Project No.:</b> |        |
| <b>Project:</b>    | Cheyenne Boulevard and West Gate Trunk Sanitary Sewer Main Extension |                                  |        |
| <b>Contract:</b>   |                                                                      |                                  |        |

Application No.: \_\_\_\_\_ Application Period: From \_\_\_\_\_ to \_\_\_\_\_ Application Date: \_\_\_\_\_

| A                        | B           | C                    | D     | E               | F                                    | G                                           | H                                                  | I                                                | J                                                              | K                                    | L                                 |
|--------------------------|-------------|----------------------|-------|-----------------|--------------------------------------|---------------------------------------------|----------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------|--------------------------------------|-----------------------------------|
| Bid Item No.             | Description | Contract Information |       |                 |                                      | Work Completed                              |                                                    | Materials Currently Stored<br>(not in G)<br>(\$) | Work Completed and Materials Stored to Date<br>(H + I)<br>(\$) | % of Value of Item<br>(J / F)<br>(%) | Balance to Finish (F - J)<br>(\$) |
|                          |             | Item Quantity        | Units | Unit Price (\$) | Value of Bid Item<br>(C X E)<br>(\$) | Estimated Quantity Incorporated in the Work | Value of Work Completed to Date<br>(E X G)<br>(\$) |                                                  |                                                                |                                      |                                   |
| Original Contract        |             |                      |       |                 |                                      |                                             |                                                    |                                                  |                                                                |                                      |                                   |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                          |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
| Original Contract Totals |             |                      |       |                 | \$ -                                 |                                             | \$ -                                               | \$ -                                             | \$ -                                                           |                                      | \$ -                              |

## Contractor's Application for Payment

|                    |                                                                      |                                  |        |
|--------------------|----------------------------------------------------------------------|----------------------------------|--------|
| <b>Owner:</b>      | City of Box Elder                                                    | <b>Owner's Project No.:</b>      | 23-003 |
| <b>Engineer:</b>   | Towey Design Group, Inc.                                             | <b>Engineer's Project No.:</b>   | 24-006 |
| <b>Contractor:</b> |                                                                      | <b>Contractor's Project No.:</b> |        |
| <b>Project:</b>    | Cheyenne Boulevard and West Gate Trunk Sanitary Sewer Main Extension |                                  |        |
| <b>Contract:</b>   |                                                                      |                                  |        |

Application No.: \_\_\_\_\_ Application Period: From \_\_\_\_\_ to \_\_\_\_\_ Application Date: \_\_\_\_\_

| A                                   | B           | C                    | D     | E               | F                                    | G                                           | H                                                  | I                                                | J                                                              | K                                    | L                                 |
|-------------------------------------|-------------|----------------------|-------|-----------------|--------------------------------------|---------------------------------------------|----------------------------------------------------|--------------------------------------------------|----------------------------------------------------------------|--------------------------------------|-----------------------------------|
| Bid Item No.                        | Description | Contract Information |       |                 |                                      | Work Completed                              |                                                    | Materials Currently Stored<br>(not in G)<br>(\$) | Work Completed and Materials Stored to Date<br>(H + I)<br>(\$) | % of Value of Item<br>(J / F)<br>(%) | Balance to Finish (F - J)<br>(\$) |
|                                     |             | Item Quantity        | Units | Unit Price (\$) | Value of Bid Item<br>(C X E)<br>(\$) | Estimated Quantity Incorporated in the Work | Value of Work Completed to Date<br>(E X G)<br>(\$) |                                                  |                                                                |                                      |                                   |
|                                     |             |                      |       |                 |                                      |                                             |                                                    |                                                  |                                                                |                                      |                                   |
|                                     |             |                      |       |                 |                                      |                                             |                                                    |                                                  |                                                                |                                      |                                   |
|                                     |             |                      |       |                 |                                      |                                             |                                                    |                                                  |                                                                |                                      |                                   |
|                                     |             |                      |       |                 |                                      |                                             |                                                    |                                                  |                                                                |                                      |                                   |
| Change Orders                       |             |                      |       |                 |                                      |                                             |                                                    |                                                  |                                                                |                                      |                                   |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
|                                     |             |                      |       |                 | -                                    |                                             | -                                                  |                                                  | -                                                              |                                      | -                                 |
| Change Order Totals                 |             |                      |       |                 | \$ -                                 |                                             | \$ -                                               | \$ -                                             | \$ -                                                           |                                      | \$ -                              |
|                                     |             |                      |       |                 |                                      |                                             |                                                    |                                                  |                                                                |                                      |                                   |
| Original Contract and Change Orders |             |                      |       |                 |                                      |                                             |                                                    |                                                  |                                                                |                                      |                                   |
| Project Totals                      |             |                      |       |                 | \$ -                                 |                                             | \$ -                                               | \$ -                                             | \$ -                                                           |                                      | \$ -                              |



# CERTIFICATE OF SUBSTANTIAL COMPLETION

Owner: City of Box Elder Owner's Project No.: 23.003.00  
Engineer: Towey Design Group, Inc. Engineer's Project No.: 24-006  
Contractor: Contractor's Project No.:  
Project: Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension  
Contract Name: Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension

This ☐ Preliminary ☐ Final Certificate of Substantial Completion applies to:

☐ All Work ☐ The following specified portions of the Work:

**[Describe the portion of the work for which Certificate of Substantial Completion is issued]**

Date of Substantial Completion: **[Enter date, as determined by Engineer]**

The Work to which this Certificate applies has been inspected by authorized representatives of Owner, Contractor, and Engineer, and found to be substantially complete. The Date of Substantial Completion of the Work or portion thereof designated above is hereby established, subject to the provisions of the Contract pertaining to Substantial Completion. The date of Substantial Completion in the final Certificate of Substantial Completion marks the commencement of the contractual correction period and applicable warranties required by the Contract.

A punch list of items to be completed or corrected is attached to this Certificate. This list may not be all-inclusive, and the failure to include any items on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Amendments of contractual responsibilities recorded in this Certificate should be the product of mutual agreement of Owner and Contractor; see Paragraph 15.03.D of the General Conditions.

The responsibilities between Owner and Contractor for security, operation, safety, maintenance, heat, utilities, insurance, and warranties upon Owner's use or occupancy of the Work must be as provided in the Contract, except as amended as follows:

Amendments to Owner's Responsibilities: ☐ None ☐ As follows:

**[List amendments to Owner's Responsibilities]**

Amendments to Contractor's Responsibilities: ☐ None ☐ As follows:

**[List amendments to Contractor's Responsibilities]**

The following documents are attached to and made a part of this Certificate:

**[List attachments such as punch list; other documents]**

This Certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of Contractor's obligation to complete the Work in accordance with the Contract Documents.

Engineer

By (signature): \_\_\_\_\_

Name (printed): \_\_\_\_\_

Title: \_\_\_\_\_



## NOTICE OF ACCEPTABILITY OF WORK

|                |                                                                          |                           |           |
|----------------|--------------------------------------------------------------------------|---------------------------|-----------|
| Owner:         | City of Box Elder                                                        | Owner's Project No.:      | 23.003.00 |
| Engineer:      | Towey Design Group, Inc.                                                 | Engineer's Project No.:   | 24-006    |
| Contractor:    |                                                                          | Contractor's Project No.: |           |
| Project:       | Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension |                           |           |
| Contract Name: | Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension |                           |           |
| Notice Date:   | Effective Date of the Construction Contract:                             |                           |           |

The Engineer hereby gives notice to the Owner and Contractor that Engineer recommends final payment to Contractor, and that the Work furnished and performed by Contractor under the Construction Contract is acceptable, expressly subject to the provisions of the Construction Contract's Contract Documents ("Contract Documents") and of the Agreement between Owner and Engineer for Professional Services dated **[date of professional services agreement]** ("Owner-Engineer Agreement"). This Notice of Acceptability of Work (Notice) is made expressly subject to the following terms and conditions to which all who receive and rely on said Notice agree:

1. This Notice has been prepared with the skill and care ordinarily used by members of the engineering profession practicing under similar conditions at the same time and in the same locality.
2. This Notice reflects and is an expression of the Engineer's professional opinion.
3. This Notice has been prepared to the best of Engineer's knowledge, information, and belief as of the Notice Date.
4. This Notice is based entirely on and expressly limited by the scope of services Engineer has been employed by Owner to perform or furnish during construction of the Project (including observation of the Contractor's Work) under the Owner-Engineer Agreement, and applies only to facts that are within Engineer's knowledge or could reasonably have been ascertained by Engineer as a result of carrying out the responsibilities specifically assigned to Engineer under such Owner-Engineer Agreement.
5. This Notice is not a guarantee or warranty of Contractor's performance under the Construction Contract, an acceptance of Work that is not in accordance with the Contract Documents, including but not limited to defective Work discovered after final inspection, nor an assumption of responsibility for any failure of Contractor to furnish and perform the Work thereunder in accordance with the Contract Documents, or to otherwise comply with the Contract Documents or the terms of any special guarantees specified therein.
6. This Notice does not relieve Contractor of any surviving obligations under the Construction Contract, and is subject to Owner's reservations of rights with respect to completion and final payment.

Engineer

By (signature): \_\_\_\_\_

Name (printed): \_\_\_\_\_

Title: \_\_\_\_\_



# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

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# STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

### 1.01 *Defined Terms*

- A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.
1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.
  2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.
  3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.
  4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.
  5. *Bidder*—An individual or entity that submits a Bid to Owner.
  6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.
  7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.
  8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.
  9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.
  10. *Claim*
    - a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

- b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.
  - c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.
  - d. A demand for money or services by a third party is not a Claim.
- 11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.
  - 12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.
  - 13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.
  - 14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.
  - 15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.
  - 16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.
  - 17. *Cost of the Work*—See Paragraph 13.01 for definition.
  - 18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.
  - 19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.
  - 20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.
  - 21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.
23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.
24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.
  - a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.
  - b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.
  - c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.
25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.
26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.
27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.
28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.
29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.
30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.
31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.
32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.
34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.
35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.
36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.
37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.
38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.
39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.
40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.
41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.
42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.
44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.
45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.
46. *Technical Data*
- a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.
  - b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.
  - c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.
47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.
48. *Unit Price Work*—Work to be paid for on the basis of unit prices.
49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.
50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

## 1.02 Terminology

- A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.
- B. *Intent of Certain Terms or Adjectives:* The Contract Documents include the terms “as allowed,” “as approved,” “as ordered,” “as directed” or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives “reasonable,” “suitable,” “acceptable,” “proper,” “satisfactory,” or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.
- C. *Day:* The word “day” means a calendar day of 24 hours measured from midnight to the next midnight.
- D. *Defective:* The word “defective,” when modifying the word “Work,” refers to Work that is unsatisfactory, faulty, or deficient in that it:
  - 1. does not conform to the Contract Documents;
  - 2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or
  - 3. has been damaged prior to Engineer’s recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).
- E. *Furnish, Install, Perform, Provide*
  - 1. The word “furnish,” when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.
  - 2. The word “install,” when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.
  - 3. The words “perform” or “provide,” when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.
  - 4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words “furnish,” “install,” “perform,” or “provide,” then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.



- F. *Contract Price or Contract Times*: References to a change in “Contract Price or Contract Times” or “Contract Times or Contract Price” or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term “or both” is not expressed.
- G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2—PRELIMINARY MATTERS**

### **2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance***

- A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).
- B. *Evidence of Contractor’s Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.
- C. *Evidence of Owner’s Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

### **2.02 *Copies of Documents***

- A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.
- B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

### **2.03 *Before Starting Construction***

- A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:
  - 1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;
  - 2. a preliminary Schedule of Submittals; and
  - 3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

- A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.
- B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

- A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.
  - 1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.
  - 2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.
  - 3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.
  - 4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

- A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.
- B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.
- C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

## ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

### 3.01 *Intent*

- A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.
- B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.
- C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.
- D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.
- E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.
- F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- G. Nothing in the Contract Documents creates:
  - 1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or
  - 2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

### 3.02 *Reference Standards*

- A. *Standards Specifications, Codes, Laws and Regulations*
  - 1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.
  - 2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

### 3.03 *Reporting and Resolving Discrepancies*

#### A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements:* Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
2. *Contractor's Review of Contract Documents:* If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.
3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

#### B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:
  - a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or
  - b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

### 3.04 *Requirements of the Contract Documents*

- A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

- B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.
- C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the 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 notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

### 3.05 *Reuse of Documents*

- A. Contractor and its Subcontractors and Suppliers shall not:
  - 1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or
  - 2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.
- B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

## **ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK**

### 4.01 *Commencement of Contract Times; Notice to Proceed*

- A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

### 4.02 *Starting the Work*

- A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

### 4.03 *Reference Points*

- A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

#### 4.04 *Progress Schedule*

- A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.
  - 1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.
  - 2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.
- B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

#### 4.05 *Delays in Contractor's Progress*

- A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.
- B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.
- C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:
  - 1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;
  - 2. Abnormal weather conditions;
  - 3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and
  - 4. Acts of war or terrorism.

- D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:
1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.
  2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.
  3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.
- E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:
1. The circumstances that form the basis for the requested adjustment;
  2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;
  3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;
  4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and
  5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.
- Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.
- F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.
- G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

## **ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS**

### **5.01 *Availability of Lands***

- A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

- B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.
- C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

## 5.02 *Use of Site and Other Areas*

### A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.
  2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.
- B. *Removal of Debris During Performance of the Work:* During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.
  - C. *Cleaning:* Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment



and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

- D. *Loading of Structures:* Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

### 5.03 *Subsurface and Physical Conditions*

- A. *Reports and Drawings:* The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;
2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and
3. Technical Data contained in such reports and drawings.

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

- C. *Reliance by Contractor on Technical Data:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;
3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

#### 5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice by Contractor:* If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:
1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;
  2. is of such a nature as to require a change in the Drawings or Specifications;
  3. differs materially from that shown or indicated in the Contract Documents; or
  4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;
  - b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,
  - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
    - a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;
    - b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
    - c. Contractor failed to give the written notice required by Paragraph 5.04.A.
  3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

#### 5.05 *Underground Facilities*

- A. *Contractor's Responsibilities:* Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:
1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;
  2. complying with applicable state and local utility damage prevention Laws and Regulations;

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;
  4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and
  5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.
- B. *Notice by Contractor:* If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.
- C. *Engineer's Review:* Engineer will:
1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;
  2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;
  3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and
  4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.
- D. *Owner's Statement to Contractor Regarding Underground Facility:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.
- E. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- F. *Possible Price and Times Adjustments*
1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;
  - b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and
  - c. Contractor gave the notice required in Paragraph 5.05.B.
2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.
  3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.
  4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

#### 5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings:* The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;
2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and
3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

- of construction to be employed by Contractor, and safety precautions and programs incident thereto;
2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.
- C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.
- D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.
- E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.
- F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.
- G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.
- H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

- I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.
- K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

## **ARTICLE 6—BONDS AND INSURANCE**

### **6.01 *Performance, Payment, and Other Bonds***

- A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.
- B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.
- C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Regulations, and must be issued and signed by a surety named in “Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies” as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual’s authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

- D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.
- E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.
- F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner’s termination rights under Article 16.
- G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.
- H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

#### 6.02 *Insurance—General Provisions*

- A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.
- B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.
- C. Alternative forms of insurance coverage, including but not limited to self-insurance and “Occupational Accident and Excess Employer’s Indemnity Policies,” are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.
- D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by



Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

- E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.
- F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.
- G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.
- H. Contractor shall require:
  - 1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and
  - 2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.
- I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.
- J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.
- K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

- L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.
- M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.
- N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

- A. *Required Insurance:* Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.
- B. *General Provisions:* The policies of insurance required by this Paragraph 6.03 as supplemented must:
  - 1. include at least the specific coverages required;
  - 2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;
  - 3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;
  - 4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and
  - 5. include all necessary endorsements to support the stated requirements.
- C. *Additional Insureds:* The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:
  - 1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;
  - 2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;
  - 3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

4. not seek contribution from insurance maintained by the additional insured; and
5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

- A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.
- B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.
- C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.
- D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.
- E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

- A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
  2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.
- B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.
1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.
- C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.
- D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

6.06 *Receipt and Application of Property Insurance Proceeds*

- A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.
- B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.
- C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

**ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES**

7.01 *Contractor's Means and Methods of Construction*

- A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.
- B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

- A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.
- B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

- A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

- B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.
- C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

#### 7.04 *Services, Materials, and Equipment*

- A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.
- B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.
- C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

#### 7.05 *"Or Equals"*

- A. *Contractor's Request; Governing Criteria:* Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.
  - 1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:
    - a. in the exercise of reasonable judgment Engineer determines that the proposed item:
      - 1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

- 2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;
  - 3) has a proven record of performance and availability of responsive service; and
  - 4) is not objectionable to Owner.
- b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:
    - 1) there will be no increase in cost to the Owner or increase in Contract Times; and
    - 2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.
- B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.
- C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.
- D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.
- E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

#### 7.06 Substitutes

- A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.
1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.
  2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:
  - a. will certify that the proposed substitute item will:
    - 1) perform adequately the functions and achieve the results called for by the general design;
    - 2) be similar in substance to the item specified; and
    - 3) be suited to the same use as the item specified.
  - b. will state:
    - 1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;
    - 2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and
    - 3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.
  - c. will identify:
    - 1) all variations of the proposed substitute item from the item specified; and
    - 2) available engineering, sales, maintenance, repair, and replacement services.
  - d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.
- B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.
- C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.
- D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.



- E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.
- F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

- A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.
- B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.
- C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.
- D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.
- E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.
- F. **DELETED.**
- G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.
- H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.
- I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

- J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.
- K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.
- L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.
- M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

#### 7.08 *Patent Fees and Royalties*

- A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.
- B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.
- C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

#### 7.09 *Permits*

- A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable

at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

**7.10 Taxes**

- A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

**7.11 Laws and Regulations**

- A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.
- B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.
- C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

**7.12 Record Documents**

- A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

**7.13 Safety and Protection**

- A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

- B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.
- C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:
  - 1. all persons on the Site or who may be affected by the Work;
  - 2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and
  - 3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.
- D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).
- E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.
- F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.
- G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.
- H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.
- I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).
- J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

#### 7.14 *Hazard Communication Programs*

- A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

#### 7.15 *Emergencies*

- A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

#### 7.16 *Submittals*

##### A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:
  - a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;
  - b. determine and verify:
    - 1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;
    - 2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and
    - 3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;
  - c. confirm that the Submittal is complete with respect to all related data included in the Submittal.
2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.
3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples:* Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

- a. Contractor shall submit the number of copies required in the Specifications.
- b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

- a. Contractor shall submit the number of Samples required in the Specifications.
  - b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.
3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.
2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.
3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.
4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.
5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.
7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.
8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

*D. Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.
2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.
3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

*E. Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:
  - a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.
  - b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.
  - c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.
  - d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.
2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03, 2.04, and 2.05.

- F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

**7.17 Contractor's General Warranty and Guarantee**

- A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.
- B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:
  - 1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and
  - 2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.
- C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:
  - 1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or
  - 2. normal wear and tear under normal usage.
- D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:
  - 1. Observations by Engineer;
  - 2. Recommendation by Engineer or payment by Owner of any progress or final payment;
  - 3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;
  - 4. Use or occupancy of the Work or any part thereof by Owner;
  - 5. Any review and approval of a Shop Drawing or Sample submittal;
  - 6. The issuance of a notice of acceptability by Engineer;
  - 7. The end of the correction period established in Paragraph 15.08;
  - 8. Any inspection, test, or approval by others; or
  - 9. Any correction of defective Work by Owner.
- E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the



assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

**7.18 Indemnification**

- A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.
- B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

**7.19 Delegation of Professional Design Services**

- A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.
- B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.
- C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.
- D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject

to the professional standard of care and the performance and design criteria stated in the Contract Documents.

- E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:
  - 1. Checking for conformance with the requirements of this Paragraph 7.19;
  - 2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and
  - 3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.
- F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.
- G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

## **ARTICLE 8—OTHER WORK AT THE SITE**

### **8.01 *Other Work***

- A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.
- B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.
- C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.
- D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.
- E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it

unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

- F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

#### 8.02 *Coordination*

- A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:
  - 1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;
  - 2. An itemization of the specific matters to be covered by such authority and responsibility; and
  - 3. The extent of such authority and responsibilities.
- B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

#### 8.03 *Legal Relationships*

- A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
- B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.
  2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.
- C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

## **ARTICLE 9—OWNER'S RESPONSIBILITIES**

### **9.01    *Communications to Contractor***

- A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

### **9.02    *Replacement of Engineer***

- A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

### **9.03    *Furnish Data***

- A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

### **9.04    *Pay When Due***

- A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

### **9.05    *Lands and Easements; Reports, Tests, and Drawings***

- A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

- B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.
  - C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.
- 9.06 *Insurance*
- A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.
- 9.07 *Change Orders*
- A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.
- 9.08 *Inspections, Tests, and Approvals*
- A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.
- 9.09 *Limitations on Owner's Responsibilities*
- A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- 9.10 *Undisclosed Hazardous Environmental Condition*
- A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.
- 9.11 *Evidence of Financial Arrangements*
- A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).
- 9.12 *Safety Programs*
- A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.
  - B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

## **ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION**

### **10.01 *Owner's Representative***

- A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

#### 10.02 *Visits to Site*

- A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.
- B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

#### 10.03 *Resident Project Representative*

- A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.
- B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

#### 10.04 *Engineer's Authority*

- A. Engineer has the authority to reject Work in accordance with Article 14.
- B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.
- C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.
- D. Engineer's authority as to changes in the Work is set forth in Article 11.
- E. Engineer's authority as to Applications for Payment is set forth in Article 15.

#### 10.05 *Determinations for Unit Price Work*

- A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

- A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein 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.

10.07 *Limitations on Engineer's Authority and Responsibilities*

- A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.
- B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.
- C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.
- D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.
- E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

- A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

**ARTICLE 11—CHANGES TO THE CONTRACT**

11.01 *Amending and Supplementing the Contract*

- A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.
- B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

- C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

#### 11.02 *Change Orders*

- A. Owner and Contractor shall execute appropriate Change Orders covering:
  - 1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;
  - 2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;
  - 3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and
  - 4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.
- B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

#### 11.03 *Work Change Directives*

- A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.
- B. If Owner has issued a Work Change Directive and:
  - 1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.
  - 2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.



#### 11.04 *Field Orders*

- A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.
- B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

#### 11.05 *Owner-Authorized Changes in the Work*

- A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.
- B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.
- C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

#### 11.06 *Unauthorized Changes in the Work*

- A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

#### 11.07 *Change of Contract Price*

- A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.
- B. An adjustment in the Contract Price will be determined as follows:
  - 1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);
  - 2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).
- C. *Contractor's Fee:* When applicable, the Contractor's fee for overhead and profit will be determined as follows:
1. A mutually acceptable fixed fee; or
  2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:
    - a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;
    - b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;
    - c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;
    - d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;
    - e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and
    - f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

#### 11.08 *Change of Contract Times*

- A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

- B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

#### 11.09 *Change Proposals*

- A. *Purpose and Content:* Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

- B. *Change Proposal Procedures*

1. *Submittal:* Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.
2. *Supporting Data:* The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.
  - a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.
  - b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review:* Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.
4. *Engineer's Full Review and Action on the Change Proposal:* Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

- 5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.
- C. *Resolution of Certain Change Proposals*: 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 in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.
- D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

#### 11.10 *Notification to Surety*

- A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

### ARTICLE 12—CLAIMS

#### 12.01 *Claims*

- A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:
  - 1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;
  - 2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;
  - 3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and
  - 4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.
- B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.
- C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for

resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.
  2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.
  3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.
- E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.
- F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.
- G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

## **ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK**

### **13.01 *Cost of the Work***

- A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:
1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or
  2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

- B. *Costs Included:* Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:
1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.
  2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.
  3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.
  4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.
  5. Other costs consisting of the following:
    - a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.
    - b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.
      - 1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not

be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

- 1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.
  - 2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.
  - 3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.
- d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.
- e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.
- f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.
- g. The cost of utilities, fuel, and sanitary facilities at the Site.
- h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.
- i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded:* The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expeditors, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.
2. The cost of purchasing, renting, or furnishing small tools and hand tools.
3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.
4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.
5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.
6. Expenses incurred in preparing and advancing Claims.
7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:
  - a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.
  - b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:
    - 1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.
    - 2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.
2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit:* Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions,



drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

#### 13.02 Allowances

- A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.
- B. *Cash Allowances*: Contractor agrees that:
  - 1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and
  - 2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.
- C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.
- D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

#### 13.03 Unit Price Work

- A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.
- B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.
- C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.
- D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:
  - a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and
  - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

**ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

14.01 *Access to Work*

- A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

- A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.
- B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.
- C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.
- D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:
  1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;
3. by manufacturers of equipment furnished under the Contract Documents;
4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and
5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

- E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.
- F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

#### 14.03 *Defective Work*

- A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.
- B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.
- C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.
- D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.
- E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.
- F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs, losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

#### 14.04 *Acceptance of Defective Work*

- A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

#### 14.05 *Uncovering Work*

- A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.
- B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.
- C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.
  - 1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.
  - 2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

#### 14.06 *Owner May Stop the Work*

- A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this

right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

**14.07 Owner May Correct Defective Work**

- A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.
- B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.
- C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.
- D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

**ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD**

**15.01 Progress Payments**

- A. *Basis for Progress Payments:* The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.
- B. *Applications for Payments*
  - 1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.
  - 2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and

equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.
4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

*C. Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.
2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:
  - a. the Work has progressed to the point indicated;
  - b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and
  - c. 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.
3. By recommending any such payment Engineer will not thereby be deemed to have represented that:
  - a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or
  - b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

4. 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 responsibility on Engineer:
  - a. to supervise, direct, or control the Work;
  - b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;
  - c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;
  - d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or
  - e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.
5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.
6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:
  - a. the Work is defective, requiring correction or replacement;
  - b. the Contract Price has been reduced by Change Orders;
  - c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or
  - e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

**D. *Payment Becomes Due***

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

**E. *Reductions in Payment by Owner***

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:
  - a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

- b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;
  - c. Contractor has failed to provide and maintain required bonds or insurance;
  - d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;
  - e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;
  - f. The Work is defective, requiring correction or replacement;
  - g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;
  - h. The Contract Price has been reduced by Change Orders;
  - i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;
  - j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;
  - k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or
  - l. Other items entitle Owner to a set-off against the amount recommended.
2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.
  3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

#### 15.02 *Contractor's Warranty of Title*

- A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

#### 15.03 *Substantial Completion*

- A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time



submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

- B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.
- C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.
- D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.
- E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.
- F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

#### 15.04 *Partial Use or Occupancy*

- A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.
2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.
3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.
4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

#### 15.05 *Final Inspection*

- A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

#### 15.06 *Final Payment*

##### A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.
2. The final Application for Payment must be accompanied (except as previously delivered) by:
  - a. all documentation called for in the Contract Documents;
  - b. consent of the surety, if any, to final payment;
  - c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

- d. a list of all duly pending Change Proposals and Claims; and
  - e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.
- 3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.
- B. *Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.
- C. *Notice of Acceptability:* In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.
- D. *Completion of Work:* The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.
- E. *Final Payment Becomes Due:* Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

#### 15.07 *Waiver of Claims*

- A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

- B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

#### 15.08 *Correction Period*

- A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:
  - 1. correct the defective repairs to the Site or such adjacent areas;
  - 2. correct such defective Work;
  - 3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
  - 4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.
- B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.
- C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.
- D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.
- E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

- F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

## **ARTICLE 16—SUSPENSION OF WORK AND TERMINATION**

### **16.01 *Owner May Suspend Work***

- A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

### **16.02 *Owner May Terminate for Cause***

- A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:
  - 1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);
  - 2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;
  - 3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or
  - 4. Contractor's repeated disregard of the authority of Owner or Engineer.
- B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:
  - 1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and
  - 2. enforce the rights available to Owner under any applicable performance bond.
- C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.
- D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.
- E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

- F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.
- G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

#### 16.03 *Owner May Terminate for Convenience*

- A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):
  - 1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;
  - 2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and
  - 3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.
- B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

#### 16.04 *Contractor May Stop Work or Terminate*

- A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.
- B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

## **ARTICLE 17—FINAL RESOLUTION OF DISPUTES**

### **17.01 *Methods and Procedures***

- A. *Disputes Subject to Final Resolution:* The following disputed matters are subject to final resolution under the provisions of this article:
  - 1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and
  - 2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.
- B. *Final Resolution of Disputes:* For any dispute subject to resolution under this article, Owner or Contractor may:
  - 1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;
  - 2. agree with the other party to submit the dispute to another dispute resolution process; or
  - 3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

## **ARTICLE 18—MISCELLANEOUS**

### **18.01 *Giving Notice***

- A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:
  - 1. in person, by a commercial courier service or otherwise, to the recipient's place of business;
  - 2. by registered or certified mail, postage prepaid, to the recipient's place of business; or
  - 3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

### **18.02 *Computation of Times***

- A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

18.03 *Cumulative Remedies*

- A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

- A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

- A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

- A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

- A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

- A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

- A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

- A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.



# SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

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# SUPPLEMENTARY CONDITIONS OF THE CONSTRUCTION CONTRACT

## ARTICLE 1—DEFINITIONS AND TERMINOLOGY

### SC-1.01.A.8 – Add the following at the end of the Paragraph:

The Change Order form to be used on this Project is EJCDC C-941 (2018). Agency approval is required before Change Orders are effective.

### SC-1.01.A.50 – Add the following at the end of the Paragraph:

The Work Change Directive form to be used on this Project is EJCDC C-940 (2018). Agency approval is required before a Work Change Directive is issued.

## ARTICLE 2—PRELIMINARY MATTERS

### 2.01 *Delivery of Bonds and Evidence of Insurance*

SC-2.01 Delete Paragraphs 2.01.B. and C. in their entirety and insert the following in their place:

B. **DELETED.**

C. **DELETED.**

### 2.02 *Copies of Documents*

SC-2.02 Amend the first sentence of Paragraph 2.02.A. to read as follows:

Owner shall furnish to Contractor **five (5)** printed copies of the Contract Documents (including one fully signed counterpart of the Agreement), and **one copy** in electronic portable document format (PDF).

SC-2.02 Delete Paragraph 2.02.A in its entirety and insert the following new paragraph in its place:

A. **DELETED.**

### 2.06 *Electronic Transmittals*

SC-2.06 Delete Paragraphs 2.06.B and 2.06.C in their entirety and insert the following in their place:

B. *Electronic Documents Protocol:* The parties shall conform to the following provisions in Paragraphs 2.06.B and 2.06.C, together referred to as the Electronic Documents Protocol (“EDP” or “Protocol”) for exchange of electronic transmittals.

#### 1. *Basic Requirements*

- a. To the fullest extent practical, the parties agree to and will transmit and accept Electronic Documents in an electronic or digital format using the procedures described in this Protocol. Use of the Electronic Documents and any information contained therein is subject to the requirements of this Protocol and other provisions of the Contract.
- b. The contents of the information in any Electronic Document will be the responsibility of the transmitting party.
- c. Electronic Documents as exchanged by this Protocol may be used in the same manner as the printed versions of the same documents that are exchanged using

non-electronic format and methods, subject to the same governing requirements, limitations, and restrictions, set forth in the Contract Documents.

- d. Except as otherwise explicitly stated herein, the terms of this Protocol will be incorporated into any other agreement or subcontract between a party and any third party for any portion of the Work on the Project, or any Project-related services, where that third party is, either directly or indirectly, required to exchange Electronic Documents with a party or with Engineer. Nothing herein will modify the requirements of the Contract regarding communications between and among the parties and their subcontractors and consultants.
- e. When transmitting Electronic Documents, the transmitting party makes no representations as to long term compatibility, usability, or readability of the items resulting from the receiving party's use of software application packages, operating systems, or computer hardware differing from those established in this Protocol.
- f. Nothing herein negates any obligation 1) in the Contract to create, provide, or maintain an original printed record version of Drawings and Specifications, signed and sealed according to applicable Laws and Regulations; 2) to comply with any applicable Law or Regulation governing the signing and sealing of design documents or the signing and electronic transmission of any other documents; or 3) to comply with the notice requirements of Paragraph 18.01 of the General Conditions.

## *2. System Infrastructure for Electronic Document Exchange*

- a. Each party will provide hardware, operating system(s) software, internet, e-mail, and large file transfer functions ("System Infrastructure") at its own cost and sufficient for complying with the EDP requirements. With the exception of minimum standards set forth in this EDP, and any explicit system requirements specified by attachment to this EDP, it is the obligation of each party to determine, for itself, its own System Infrastructure.
  - 1) The maximum size of an email attachment for exchange of Electronic Documents under this EDP is **[number]** MB. Attachments larger than that may be exchanged using large file transfer functions or physical media.
  - 2) Each Party assumes full and complete responsibility for any and all of its own costs, delays, deficiencies, and errors associated with converting, translating, updating, verifying, licensing, or otherwise enabling its System Infrastructure, including operating systems and software, for use with respect to this EDP.
- b. Each party is responsible for its own system operations, security, back-up, archiving, audits, printing resources, and other Information Technology ("IT") for maintaining operations of its System Infrastructure during the Project, including coordination with the party's individual(s) or entity responsible for managing its System Infrastructure and capable of addressing routine communications and other IT issues affecting the exchange of Electronic Documents.
- c. Each party will operate and maintain industry-standard, industry-accepted, ISO-standard, commercial-grade security software and systems that are intended to protect the other party from: software viruses and other malicious software like worms, trojans, adware; data breaches; loss of confidentiality; and other threats in

the transmission to or storage of information from the other parties, including transmission of Electronic Documents by physical media such as CD/DVD/flash drive/hard drive. To the extent that a party maintains and operates such security software and systems, it shall not be liable to the other party for any breach of system security.

- d. In the case of disputes, conflicts, or modifications to the EDP required to address issues affecting System Infrastructure, the parties shall cooperatively resolve the issues; but, failing resolution, the Owner is authorized to make and require reasonable and necessary changes to the EDP to effectuate its original intent. If the changes cause additional cost or time to Contractor, not reasonably anticipated under the original EDP, Contractor may seek an adjustment in price or time under the appropriate process in the Contract.
- e. Each party is responsible for its own back-up and archive of documents sent and received during the term of the contract under this EDP, unless this EDP establishes a Project document archive, either as part of a mandatory Project website or other communications protocol, upon which the parties may rely for document archiving during the specified term of operation of such Project document archive. Further, each party remains solely responsible for its own post-Project back-up and archive of Project documents after the term of the Contract, or after termination of the Project document archive, if one is established, for as long as required by the Contract and as each party deems necessary for its own purposes.
- f. If a receiving party receives an obviously corrupted, damaged, or unreadable Electronic Document, the receiving party will advise the sending party of the incomplete transmission.
- g. The parties will bring any non-conforming Electronic Documents into compliance with the EDP. The parties will attempt to complete a successful transmission of the Electronic Document or use an alternative delivery method to complete the communication.
- h. The Owner will operate a Project information management system (also referred to in this EDP as "Project Website") for use of Owner, Engineer and Contractor during the Project for exchange and storage of Project-related communications and information. Except as otherwise provided in this EDP or the General Conditions, use of the Project Website by the parties as described in this Paragraph will be mandatory for exchange of Project documents, communications, submittals, and other Project-related information. The following conditions and standards will govern use of the Project Website:
  - 1) Describe the period of time during which the Project Website will be operated and be available for reliance by the parties;
  - 2) Provide any minimum system infrastructure, software licensing and security standards for access to and use of the Project Website;
  - 3) Describe the types and extent of services to be provided at the Project Website (such as large file transfer, email, communication, and document archives, etc.); and

- 4) Include any other Project Website attributes that may be pertinent to Contractor's use of the facility and pricing of such use.

C. *Software Requirements for Electronic Document Exchange; Limitations*

1. Each party will acquire the software and software licenses necessary to create and transmit Electronic Documents and to read and to use any Electronic Documents received from the other party (and if relevant from third parties), using the software formats required in this section of the EDP.
  - a. Prior to using any updated version of the software required in this section for sending Electronic Documents to the other party, the originating party will first notify and receive concurrence from the other party for use of the updated version or adjust its transmission to comply with this EDP.
2. The parties agree not to intentionally edit, reverse engineer, decrypt, remove security or encryption features, or convert to another format for modification purposes any Electronic Document or information contained therein that was transmitted in a software data format, including Portable Document Format (PDF), intended by sender not to be modified, unless the receiving party obtains the permission of the sending party or is citing or quoting excerpts of the Electronic Document for Project purposes.
3. Software and data formats for exchange of Electronic Documents will conform to the requirements set forth in Exhibit A to this EDP, including software versions, if listed.

SC-2.06 Supplement Paragraph 2.06 of the General Conditions by adding the following paragraph:

D. *Requests by Contractor for Electronic Documents in Other Formats*

1. Release of any Electronic Document versions of the Project documents in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be at the sole discretion of the Owner.
2. To extent determined by Owner, in its sole discretion, to be prudent and necessary, release of Electronic Documents versions of Project documents and other Project information requested by Contractor ("Request") in formats other than those identified in the Electronic Documents Protocol (if any) or elsewhere in the Contract will be subject to the provisions of the Owner's response to the Request, and to the following conditions to which Contractor agrees:
  - a. The content included in the Electronic Documents created by Engineer and covered by the Request was prepared by Engineer as an internal working document for Engineer's purposes solely, and is being provided to Contractor on an "AS IS" basis without any warranties of any kind, including, but not limited to any implied warranties of fitness for any purpose. As such, Contractor is advised and acknowledges that the content may not be suitable for Contractor's application, or may require substantial modification and independent verification by Contractor. The content may include limited resolution of models, not-to-scale schematic representations and symbols, use of notes to convey design concepts in lieu of accurate graphics, approximations, graphical simplifications, undocumented intermediate revisions, and other devices that may affect subsequent reuse.
  - b. Electronic Documents containing text, graphics, metadata, or other types of data that are provided by Engineer to Contractor under the request are only for

convenience of Contractor. Any conclusion or information obtained or derived from such data will be at the Contractor's sole risk and the Contractor waives any claims against Engineer or Owner arising from use of data in Electronic Documents covered by the Request.

- c. Contractor shall indemnify and hold harmless Owner and Engineer and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from Contractor's use, adaptation, or distribution of any Electronic Documents provided under the Request.
  - d. Contractor agrees not to sell, copy, transfer, forward, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of Engineer, unless such distribution is specifically identified in the Request and is limited to Contractor's subcontractors. Contractor warrants that subsequent use by Contractor's subcontractors complies with all terms of the Contract Documents and Owner's response to Request.
3. In the event that Owner elects to provide or directs the Engineer to provide to Contractor any Contractor-requested Electronic Document versions of Project information that is not explicitly identified in the Contract Documents as being available to Contractor, the Owner shall be reimbursed by Contractor on an hourly basis (at **\$150.00** per hour) for any engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by Engineer.

### ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

#### 3.01 **DELETED**

### ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

#### **SC-4.01.A – Delete the last sentence in the paragraph.**

SC-4.05 Amend Paragraph 4.05.C by adding the following subparagraphs:

- 5. *Weather-Related Delays*
  - a. If "abnormal weather conditions" as set forth in Paragraph 4.05.C.2 of the General Conditions are the basis for a request for an equitable adjustment in the Contract Times, such request must be documented by data substantiating each of the following: 1) that weather conditions were abnormal for the period of time in which the delay occurred, 2) that such weather conditions could not have been reasonably anticipated, and 3) that such weather conditions had an adverse effect on the Work as scheduled. **Extreme or unusual weather that is typical for a given region, elevation, or season should not be considered abnormal weather conditions. Requests for time extensions due to abnormal weather conditions will be submitted to the Engineer within five days of the end of the abnormal weather condition event. It is the responsibility of the Contractor to provide the information listed in SC 4.05.C.5.b.**
  - b. The existence of abnormal weather conditions will be determined on a month-by-month basis in accordance with the following:

- 1) Every workday on which one or more of the following conditions exist will be considered a “bad weather day”:
  - i) Total precipitation (as rain equivalent) occurring between 7:00 p.m. on the preceding day (regardless of whether such preceding day is a workday) through 7:00 p.m. on the workday in question equals or exceeds **2-inches** of precipitation (as rain equivalent, based on the snow/rain conversion indicated in the table entitled Foreseeable Bad Weather Days; such table is hereby incorporated in this SC-4.05.C by reference.
  - ii) Ambient outdoor air temperature at 11:00 a.m. is equal to or less than the following low temperature threshold: **10** degrees Fahrenheit; or, at 3:00 p.m. the ambient outdoor temperature is equal to or greater than the following high temperature threshold: **95** degrees Fahrenheit.
- 2) Determination of actual bad weather days during performance of the Work will be based on the weather records measured and recorded by **US National Weather Service** weather monitoring station at **Rapid City, SD**.
- 3) Contractor shall anticipate the number of foreseeable bad weather days per month indicated in the table in Exhibit **1**—Foreseeable Bad Weather Days.
- 4) In each month, every bad weather day exceeding the number of foreseeable bad weather days established in the table in Exhibit **1**—Foreseeable Bad Weather Days will be considered as “abnormal weather conditions.” The existence of abnormal weather conditions will not relieve Contractor of the obligation to demonstrate and document that delays caused by abnormal weather are specific to the planned work activities or that such activities thus delayed were on Contractor’s then-current Progress Schedule’s critical path for the Project.

## ARTICLE 5—SITE, SUBSURFACE AND PHYSICAL CONDITIONS, HAZARDOUS ENVIRONMENTAL CONDITIONS

### 5.03 *Subsurface and Physical Conditions*

SC-5.03 Add the following new paragraphs immediately after Paragraph 5.03.D:

- E. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely: **[If there are no such reports, so indicate in the table.]**

| Report Title | Date of Report | Technical Data                   |
|--------------|----------------|----------------------------------|
|              |                | <b>[Identify Technical Data]</b> |
|              |                |                                  |
|              |                |                                  |

- F. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to



the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely:

| Drawings Title | Date of Drawings | Technical Data            |
|----------------|------------------|---------------------------|
|                |                  | [Identify Technical Data] |
|                |                  |                           |
|                |                  |                           |

- G. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F that were not included with the Bidding Documents at **Towey Design Group, Inc., PO Box 67 | 147 Chisholm Drive, Box Elder, SD 57719** during regular business hours, or may request copies from Engineer.

#### 5.06 Hazardous Environmental Conditions

SC-5.06 Add the following new paragraphs immediately after Paragraph 5.06.A.3:

4. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely:

| Report Title | Date of Report | Technical Data |
|--------------|----------------|----------------|
| <b>None</b>  |                |                |
|              |                |                |
|              |                |                |

5. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely:

| Drawings Title | Date of Drawings | Technical Data |
|----------------|------------------|----------------|
| <b>None</b>    |                  |                |
|                |                  |                |
|                |                  |                |

## ARTICLE 6—BONDS AND INSURANCE

### 6.01 Performance, Payment, and Other Bonds

**SC-6.01 – Disregard EJCDC Guidance Notes – Performance and Payment Bonds, Note 1. Performance and Payment Bonds are required for WEP projects.**

SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.A:

- Required Performance Bond Form:* The performance bond that Contractor furnishes will be in the form of EJCDC® C-610, Performance Bond (2010, 2013, or 2018 edition).
- Required Payment Bond Form:* The payment bond that Contractor furnishes will be in the form of EJCDC® C-615, Payment Bond (2010, 2013, or 2018 edition).

- SC-6.01 Add the following paragraphs immediately after Paragraph 6.01.B:
1. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be **[number—either 2, 3, or other]** years after Substantial Completion.
  2. After Substantial Completion, Contractor shall furnish a warranty bond issued in the form of EJCDC® C-612, Warranty Bond (2018). The warranty bond must be in a bond amount of **[number—either 10, 15, or other]** percent of the final Contract Price. The warranty bond period will extend to a date **[number—either 2, 3, or other]** years after Substantial Completion of the Work. Contractor shall deliver the fully executed warranty bond to Owner prior to or with the final application for payment, and in any event no later than 11 months after Substantial Completion.
  3. The warranty bond must be issued by the same surety that issues the performance bond required under Paragraph 6.01.A of the General Conditions.

6.02 *Insurance—General Provisions*

- SC-6.02 Add the following paragraph immediately after Paragraph 6.02.B:
1. Contractor may obtain worker's compensation insurance from an insurance company that has not been rated by A.M. Best, provided that such company (a) is domiciled in the state in which the Project is located, (b) is certified or authorized as a worker's compensation insurance provider by the appropriate state agency, and (c) has been accepted to provide worker's compensation insurance for similar projects by the state within the last 12 months.
- SC-6.02 Add the following paragraph immediately after Paragraph 6.02.H.2 of the General Conditions:
3. For the following Subcontractors, Suppliers, or categories of Subcontractor or Supplier, Contractor shall require the following specified insurance, with policy limits as stated:  
**None**

6.03 *Contractor's Insurance*

- SC-6.03 Supplement Paragraph 6.03 with the following provisions after Paragraph 6.03.C:
- D. *Other Additional Insureds:* As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: **City of Box Elder and Towey Design Group**
  - E. *Workers' Compensation and Employer's Liability:* Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

| <b>Workers' Compensation and Related Policies</b>                                                                                                                                           | <b>Policy limits of not less than:</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <b>Workers' Compensation</b>                                                                                                                                                                |                                        |
| State                                                                                                                                                                                       | Statutory                              |
| Applicable Federal (e.g., Longshoreman's)                                                                                                                                                   | Statutory                              |
| Foreign voluntary workers' compensation (employer's responsibility coverage), if applicable                                                                                                 | Statutory                              |
| <b>Jones Act (if applicable)</b>                                                                                                                                                            |                                        |
| Bodily injury by accident—each accident                                                                                                                                                     | <b>N/A</b>                             |
| Bodily injury by disease—aggregate                                                                                                                                                          | <b>N/A</b>                             |
| <b>Employer's Liability</b>                                                                                                                                                                 |                                        |
| Each accident                                                                                                                                                                               | <b>\$ 500,000</b>                      |
| Each employee                                                                                                                                                                               | <b>\$ 500,000</b>                      |
| Policy limit                                                                                                                                                                                | <b>\$ 500,000</b>                      |
| <b>Stop-gap Liability Coverage</b>                                                                                                                                                          |                                        |
| For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of: | <b>\$</b>                              |

- F. *Commercial General Liability—Claims Covered:* Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor's employees,
  2. damages insured by reasonably available personal injury liability coverage, and
  3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
- G. *Commercial General Liability—Form and Content:* Contractor's commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
1. Products and completed operations coverage.
    - a. Such insurance must be maintained for three years after final payment.
    - b. Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
  2. Blanket contractual liability coverage, including but not limited to coverage of Contractor's contractual indemnity obligations in Paragraph 7.18.
  3. Severability of interests and no insured-versus-insured or cross-liability exclusions.
  4. Underground, explosion, and collapse coverage.
  5. Personal injury coverage.

6. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
  7. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 "Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured" or its equivalent.
- H. *Commercial General Liability—Excluded Content:* The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
1. Any modification of the standard definition of "insured contract" (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
  2. Any exclusion for water intrusion or water damage.
  3. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
  4. Any exclusion of coverage relating to earth subsidence or movement.
  5. Any exclusion for the insured's vicarious liability, strict liability, or statutory liability (other than worker's compensation).
  6. Any limitation or exclusion based on the nature of Contractor's work.
  7. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
- I. *Commercial General Liability—Minimum Policy Limits*

| <b>Commercial General Liability</b>               | <b>Policy limits of not less than:</b> |
|---------------------------------------------------|----------------------------------------|
| General Aggregate                                 | \$ 2,000,000                           |
| Products—Completed Operations Aggregate           | \$ 2,000,000                           |
| Personal and Advertising Injury                   | \$ 1,000,000                           |
| Bodily Injury and Property Damage—Each Occurrence | \$ 1,000,000                           |

- J. *Automobile Liability:* Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

| <b>Automobile Liability</b> | <b>Policy limits of not less than:</b> |
|-----------------------------|----------------------------------------|
| <b>Bodily Injury</b>        |                                        |
| Each Person                 | \$ 500,000                             |
| Each Accident               | \$ 1,000,000                           |

| <b>Automobile Liability</b>                               | <b>Policy limits of not less than:</b> |
|-----------------------------------------------------------|----------------------------------------|
| <b>Property Damage</b>                                    |                                        |
| Each Accident                                             | <b>\$ 1,000,000</b>                    |
| <b>[or]</b>                                               |                                        |
| <b>Combined Single Limit</b>                              |                                        |
| Combined Single Limit (Bodily Injury and Property Damage) | <b>\$ 2,000,000</b>                    |

- K. *Umbrella or Excess Liability:* Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer's liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

| <b>Excess or Umbrella Liability</b> | <b>Policy limits of not less than:</b> |
|-------------------------------------|----------------------------------------|
| Each Occurrence                     | <b>\$ 1,000,000</b>                    |
| General Aggregate                   | <b>\$ 1,000,000</b>                    |

- L. *Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements:* Contractor may meet the policy limits specified for employer's liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy's policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of **\$[specify amount]** after accounting for partial attribution of its limits to underlying policies, as allowed above.
- M. *Contractor's Pollution Liability Insurance:* Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor's operations and completed operations. This insurance must be maintained for no less than three years after final completion.

| <b>Contractor's Pollution Liability</b> | <b>Policy limits of not less than:</b> |
|-----------------------------------------|----------------------------------------|
| Each Occurrence/Claim                   | <b>\$ 1,000,000</b>                    |
| General Aggregate                       | <b>\$ 1,000,000</b>                    |

- N. *Contractor's Professional Liability Insurance:* If Contractor will provide or furnish professional services under this *Contract*, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

| <b>Contractor's Professional Liability</b> | <b>Policy limits of not less than:</b> |
|--------------------------------------------|----------------------------------------|
| Each Claim                                 | \$ 2,000,000                           |
| Annual Aggregate                           | \$ 2,000,000                           |

- O. *Railroad Protective Liability Insurance:* Prior to commencing any Work within 50 feet of railroad-owned and controlled property, Contractor shall (1) endorse its commercial general liability policy with ISO CG 24 17, removing the contractual liability exclusion for work within 50 feet of a railroad, (2) purchase and maintain railroad protective liability insurance meeting the following requirements, (3) furnish a copy of the endorsement to Owner, and (4) submit a copy of the railroad protective policy and other railroad-required documentation to the railroad, and notify Owner of such submittal.

| <b>Railroad Protective Liability Insurance</b> | <b>Policy limits of not less than:</b> |
|------------------------------------------------|----------------------------------------|
| Each Claim                                     | \$ 1,000,000                           |
| Aggregate                                      | \$ 1,000,000                           |

- P. *Unmanned Aerial Vehicle Liability Insurance:* If Contractor uses unmanned aerial vehicles (UAV—commonly referred to as drones) at the Site or in support of any aspect of the Work, Contractor shall obtain UAV liability insurance in the amounts stated; name Owner, Engineer, and all individuals and entities identified in the Supplementary Conditions as additional insureds; and provide a certificate to Owner confirming Contractor's compliance with this requirement. Such insurance will provide coverage for property damage, bodily injury or death, and invasion of privacy.

| <b>Unmanned Aerial Vehicle Liability Insurance</b> | <b>Policy limits of not less than:</b> |
|----------------------------------------------------|----------------------------------------|
| Each Claim                                         | N/A                                    |
| General Aggregate                                  | N/A                                    |

- Q. *Other Required Insurance:* **None**

~~6.04 — Builder's Risk and Other Property Insurance~~

~~SC-6.04 — Delete Paragraph 6.04.A and insert the following in its place:~~

- A. **DELETED.**

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

- F. *Builder's Risk Requirements:* The builder's risk insurance must:
- be written on a builder's risk "all risk" policy form that at a minimum includes insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment stored and in transit, and must not exclude the coverage of the following risks: fire; windstorm; hail; flood; earthquake, volcanic activity, and other earth movement; lightning; riot; civil commotion; terrorism; vehicle impact; aircraft; smoke; theft; vandalism and malicious mischief; mechanical breakdown, boiler explosion, and artificially generated electric current; collapse; explosion; debris removal; demolition

occasioned by enforcement of Laws and Regulations; and water damage (other than that caused by flood).

- a. Such policy will include an exception that results in coverage for ensuing losses from physical damage or loss with respect to any defective workmanship, methods, design, or materials exclusions.
  - b. If insurance against mechanical breakdown, boiler explosion, and artificially generated electric current; earthquake, volcanic activity, and other earth movement; or flood, are not commercially available under builder's risk policies, by endorsement or otherwise, such insurance will be provided through other insurance policies acceptable to Owner and Contractor.
2. cover, as insured property, at least the following: (a) the Work and all materials, supplies, machinery, apparatus, equipment, fixtures, and other property of a similar nature that are to be incorporated into or used in the preparation, fabrication, construction, erection, or completion of the Work, including Owner-furnished or assigned property; (b) spare parts inventory required within the scope of the Contract; and (c) temporary works which are not intended to form part of the permanent constructed Work but which are intended to provide working access to the Site, or to the Work under construction, or which are intended to provide temporary support for the Work under construction, including scaffolding, form work, fences, shoring, falsework, and temporary structures.
  3. cover expenses incurred in the repair or replacement of any insured property (including but not limited to fees and charges of contractors, engineers, and architects).
  4. extend to cover damage or loss to insured property while in temporary storage at the Site or in a storage location outside the Site (but not including property stored at the premises of a manufacturer or Supplier). If this coverage is subject to a sublimit, such sublimit will be a minimum of **\$1,000,000**.
  5. extend to cover damage or loss to insured property while in transit. If this coverage is subject to a sublimit, such sublimit will be a minimum of **\$1,000,000**.
  6. allow for the waiver of the insurer's subrogation rights, as set forth in this Contract.
  7. allow for partial occupancy or use by Owner by endorsement, and without cancellation or lapse of coverage.
  8. include performance/hot testing and start-up, if applicable.
  9. be maintained in effect until the Work is complete, as set forth in Paragraph 15.06.D of the General Conditions, or until written confirmation of Owner's procurement of property insurance following Substantial Completion, whichever occurs first.
  10. include as named insureds the Owner, Contractor, Subcontractors (of every tier), and any other individuals or entities required by this Contract to be insured under such builder's risk policy. For purposes of Paragraphs 6.04, 6.05, and 6.06 of the General Conditions, and this and all other corresponding Supplementary Conditions, the parties required to be insured will be referred to collectively as "insureds." In addition to Owner, Contractor, and Subcontractors of every tier, include as insureds the following:
    - a. **City of Box Elder, 420 N. Villa Drive, Box Elder, SD 57719.**



11. include, in addition to the Contract Price amount, the value of the following equipment and materials to be installed by the Contractor but furnished by the Owner or third parties:
  - a. **None.**
12. If debris removal in connection with repair or replacement of insured property is subject to a coverage sublimit, such sublimit will be a minimum of **\$1,000,000.**
13. In addition to the coverage sublimits stated above, the following coverages are also subject to sublimits, as follows:
  - a. **None.**

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provision:

- G. *Coverage for Completion Delays:* The builder's risk policy will include, for the benefit of Owner, loss of revenue and soft cost coverage for losses arising from delays in completion that result from covered physical losses or damage. Such coverage will include, without limitation, fixed expenses and debt service for a minimum of 12 months with a maximum deductible of 30 days, compensation for loss of net revenues, rental costs, and attorneys' fees and engineering or other consultants' fees, if not otherwise covered.

SC-6.04 Supplement Paragraph 6.04 of the General Conditions with the following provisions:

- H. *Builder's Risk and Other Property Insurance Deductibles:* The purchaser of any required builder's risk, installation floater, or other property insurance will be responsible for costs not covered because of the application of a policy deductible.
  1. The builder's risk policy (or if applicable the installation floater) will be subject to a deductible amount of no more than **\$50,000** for direct physical loss in any one occurrence.

SC-6.04 Delete Paragraph 6.04.A of the General Conditions and substitute the following in its place:

A. *Installation Floater*

1. Contractor shall provide and maintain installation floater insurance on a broad form or "all risk" policy providing coverage for materials, supplies, machinery, fixtures, and equipment that will be incorporated into the Work ("Covered Property"). Coverage under the Contractor's installation floater will include loss from covered "all risk" causes (perils) to Covered Property:
  - a. of the Contractor, and Covered Property of others that is in Contractor's care, custody, and control;
  - b. while in transit to the Site, including while at temporary storage sites;
  - c. while at the Site awaiting and during installation, erection, and testing;
  - d. continuing at least until the installation or erection of the Covered Property is completed, and the Work into which it is incorporated is accepted by Owner.
2. The installation floater coverage cannot be contingent on an external cause or risk, or limited to property for which the Contractor is legally liable.



3. The installation floater coverage will be in an amount sufficient to protect Contractor's interest in the Covered Property. The Contractor will be solely responsible for any deductible carried under this coverage.
4. This policy will include a waiver of subrogation applicable to Owner, Contractor, Engineer, all Subcontractors, and the officers, directors, partners, employees, agents and other consultants and subcontractors of any of them.

## ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

### 7.03 *Labor; Working Hours*

SC-7.03 Add the following new subparagraphs immediately after Paragraph 7.03.C:

1. Regular working hours will be **6:00 am. to 7:00 pm., Monday through Friday.**
2. Owner's legal holidays are **New Years Day, Martin Luther King Jr. Day, President's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, Christmas Day.**

SC-7.03 Amend the first and second sentences of Paragraph 7.03.C to state "...all Work at the Site must be performed during regular working hours, **Monday** through **Friday, Saturday work may be allowed with three (3) day advance notice.** Contractor will not perform Work on a **Sunday** or any legal holiday."

SC-7.03 Delete Paragraph 7.03.C in its entirety, and insert the following:

- C. In the absence of any Laws or Regulations to the contrary, Contractor may perform the Work on holidays, during any or all hours of the day, and on any or all days of the week, at Contractor's sole discretion.

SC-7.03 Add the following new paragraph immediately after Paragraph 7.03.C:

- D. **Owner** shall be responsible for the cost of any overtime pay or other expense incurred by the Owner for Engineer's services (including those of the Resident Project Representative, if any), Owner's representative, and construction observation services, occasioned by the performance of Work on Saturday, Sunday, any legal holiday, or as overtime on any regular work day. If Contractor is responsible but does not pay, or if the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under Article 15.

SC-7.03 Add the following new subparagraph immediately after Paragraph SC-7.03.D:

1. For purposes of administering the foregoing requirement, additional overtime costs are defined as **to follow Federal Requirements.**

SC-7.04.D Add the following new paragraph immediately after Paragraph 7.04.C:

- D. All Iron and Steel products must meet American Iron and Steel requirements.

SC-7.04.E Add the following new paragraph immediately after Paragraph 7.04.D:

- E. For projects utilizing a De Minimis waiver, Contractor shall maintain an itemized list of non-domestically produced iron or steel incidental components and ensure that the cost is less than 5% of total materials cost for project.

## 7.10 *Taxes*

SC-7.10 Add a new paragraph immediately after Paragraph 7.10.A:

B. **DELETED.**

**SC-7.12.A Amend paragraph by adding the following after “written interpretations and clarifications,”:**

**Manufacturers’ Certifications,**

## 7.13 *Safety and Protection*

SC-7.13 Insert the following after the second sentence of Paragraph 7.13.G:

The following Owner safety programs are applicable to the Work: **None.**

**SC-7.16.A.1.c – Amend paragraph by deleting the last period and adding:**

**, including Manufacturer’s Certification letter for any item in the submittal subject to American Iron and Steel requirements and include the Certificate in the submittal. Refer to Manufacturer’s Certification Letter provided in these Contract Documents.**

**SC-7.16.C.9 – Add new paragraph immediately after Paragraph 7.16.C.8:**

**9. Engineer’s review and approval of a Shop Drawing or Sample shall include review of Manufacturers’ Certifications in order to document compliance with American Iron and Steel requirements, as applicable.**

**SC-7.17.F – Add new paragraph immediately after Paragraph 7.17.E:**

**F. Contractor shall certify upon Substantial Completion that all Work and Materials have complied with American Iron and Steel requirements as mandated by Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A - Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference. Contractor shall provide said Certification to Owner. Refer to General Contractor’s Certification Letter provided in these Contract Documents.**

## **ARTICLE 8—OTHER WORK AT THE SITE**

### 8.02 *Coordination*

SC-8.02 Add the following new Paragraph 8.02.C immediately after Paragraph 8.02.B:

C. **DELETED.**

## **ARTICLE 9—OWNER’S RESPONSIBILITIES**

### 9.13 *Owner’s Site Representative*

SC-9.13 Add the following new paragraph immediately after Paragraph 9.12 of the General Conditions:

### 9.13 *Owner’s Site Representative*

- A. Owner will furnish an “Owner’s Site Representative” to represent Owner at the Site and assist Owner in observing the progress and quality of the Work. The Owner’s Site Representative is ~~not~~ Engineer’s consultant, agent, or employee. Owner’s Site Representative will be **a Towey Design Group Employee**. The authority and responsibilities of Owner’s Site Representative follow: **Address Concerns, Answer Questions, Observe Construction Activities, Address Community Concerns, Community Outreach, and Attend Progress Review Meetings.**

## ARTICLE 10—ENGINEER’S STATUS DURING CONSTRUCTION

### 10.03 *Resident Project Representative*

SC-10.03 Add the following new subparagraph immediately after Paragraph 10.03.A:

1. On this Project, by agreement with the Owner, the Engineer will not furnish a Resident Project Representative to represent Engineer at the Site or assist Engineer in observing the progress and quality of the Work.

SC-10.03 Add the following new paragraphs immediately after Paragraph 10.03.B:

- C. The Resident Project Representative (RPR) will be Engineer's representative at the Site. RPR's dealings in matters pertaining to the Work in general will be with Engineer and Contractor. RPR's dealings with Subcontractors will only be through or with the full knowledge or approval of Contractor. The RPR will:
1. *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 minutes thereof.
  2. *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.
  3. *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 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 Contractor’s proper execution of the Work.
  4. *Review of Work; Defective Work*
    - a. Conduct on-Site observations of the Work to assist Engineer in determining, to the extent set forth in Paragraph 10.02, if the Work is in general proceeding in accordance with the Contract Documents.
    - b. Observe whether any Work in place appears to be defective.

- c. Observe whether any Work in place should be uncovered for observation, or requires special testing, inspection or approval.
- 5. *Inspections and Tests*
  - a. Observe Contractor-arranged inspections required by Laws and Regulations, including but not limited to those performed by public or other agencies having jurisdiction over the Work.
  - b. Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work.
- 6. *Payment Requests: Review Applications for Payment with Contractor.*
- 7. *Completion*
  - a. Participate in Engineer's visits regarding Substantial Completion.
  - b. Assist in the preparation of a punch list of items to be completed or corrected.
  - c. Participate in Engineer's visit to the Site in the company of Owner and Contractor regarding completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.
  - d. Observe whether items on the final punch list have been completed or corrected.
- D. The RPR will not:
  - 1. Authorize any deviation from the Contract Documents or substitution of materials or equipment (including "or-equal" items).
  - 2. Exceed limitations of Engineer's authority as set forth in the Contract Documents.
  - 3. Undertake any of the responsibilities of Contractor, Subcontractors, or Suppliers.
  - 4. Advise on, issue directions relative to, or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction.
  - 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. Authorize Owner to occupy the Project in whole or in part.

## ARTICLE 11—CHANGES TO THE CONTRACT

No suggested Supplementary Conditions in this Article.

### **SC-11.02.C – Add new paragraph immediately after Paragraph 11.02.B:**

- C. The Engineer or Owner shall contact the Agency for concurrence on each Change Order prior to issuance. All Contract Change Orders must be concurred on (signed) by Agency before they are effective.**

**SC-11.03.A.2 – Add new Paragraph 11.03.A.2 immediately after Paragraph 11.03.A, which shall be renamed Paragraph 11.03.A.1:**

2. The Engineer or Owner shall contact the Agency for concurrence on each Work Change Directive prior to issuance. Once authorized by Owner, a copy of each Work Change Directive shall be provided by Engineer to the Agency.

**SC-11.05.B – Add the following at the end of this paragraph:**

For Owner-authorized changes in the Work, the Contractor will provide the Manufacturer's Certification(s) for materials subject to American Iron and Steel requirements except when sole-source is specified, in which case the Engineer will provide the Manufacturer's Certification(s).

**SC-11.09.B.2.c – Add new paragraph immediately after Paragraph 11.09.B.2.b:**

- c. Change orders involving materials subject to American Iron and Steel requirements shall include supporting data (name of Manufacturer, city and state where the product was manufactured, description of product, signature of authorized Manufacturer's representative) in the Manufacturer's Certification Letter, as applicable.

## **ARTICLE 12—CLAIMS**

No suggested Supplementary Conditions in this Article.

## **ARTICLE 13—COST OF WORK; ALLOWANCES, UNIT PRICE WORK**

### **13.01 *Cost of the Work***

SC-13.01 Supplement Paragraph 13.01.B.5.c.(2) by adding the following sentence:

The equipment rental rate book that governs the included costs for the rental of machinery and equipment owned by Contractor (or a related entity) under the Cost of the Work provisions of this Contract is the most current edition of **[name of equipment rental rate book]**.

SC-13.01 Supplement Paragraph 13.01.C.2 by adding the following definition of small tools and hand tools:

- a. For purposes of this paragraph, "small tools and hand tools" means any tool or equipment whose current price if it were purchased new at retail would be less than \$500.

**SC-13.02.C – Delete paragraph in its entirety and insert "Deleted".**

### **13.03 *Unit Price Work***

SC-13.03 Delete Paragraph 13.03.E in its entirety and insert the following in its place:

#### **E. *Adjustments in Unit Price***

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

- a. the extended price of a particular item of Unit Price Work amounts to **[number]** percent or more of the Contract Price (based on estimated quantities at the time of Contract formation) and the variation in the quantity of that particular item of Unit Price Work actually furnished or performed by Contractor differs by more than **[number]** percent from the estimated quantity of such item indicated in the Agreement; and
  - b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.
2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.
3. Adjusted unit prices will apply to all units of that item.

#### **ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK**

##### **SC-14.03.G – Add new paragraph immediately after Paragraph 14.03.F:**

- G. Installation of materials that are non-compliant with American Iron and Steel requirements shall be considered defective work.

#### **ARTICLE 15—PAYMENTS TO CONTRACTOR, SET OFFS; COMPLETIONS; CORRECTION PERIOD**

##### **15.01 Progress Payments**

##### **SC-15.01.B.4 – Add the following language at the end of paragraph:**

No payments will be made that would deplete the retainage, place in escrow any funds that are required for retainage or invest the retainage for the benefit of the Contractor.

##### **SC-15.01.B.5 – Add new paragraph immediately after Paragraph 15.01.B.4:**

The Application for Payment form to be used on this Project is EJCDC® C-620. The Agency must approve all Applications for Payment before payment is made.

##### **SC-15.01.C.2.d – Add the following new paragraph immediately after Paragraph 15.01.C.2.c:**

- d. The materials presented for payment in an Application for Payment comply with American Iron and Steel requirements.

##### **SC-15.01.D.1 – Delete paragraph in its entirety and insert the following in its place:**

~~The Application for Payment with Engineer's recommendations will be presented to the Owner and Agency for consideration. If both the Owner and Agency find the Application for Payment acceptable, the recommended amount less any reduction under the provisions of Paragraph 15.01.E will become due twenty (20) days after the Application for Payment is presented to the Owner, and the Owner will make payment to the Contractor. Within ten (10) days after the presentation of the application for payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set off),~~

**will be submitted by the Owner to the Agency for approval and payment. Upon the Owner receiving funds from the Agency, Owner will pay the amount within ten (10) business days.**

SC-15.01 Add the following new Paragraph 15.01.F:

- F. For contracts in which the Contract Price is based on the Cost of Work, if Owner determines that progress payments made to date substantially exceed the actual progress of the Work (as measured by reference to the Schedule of Values), or present a potential conflict with the Guaranteed Maximum Price, then Owner may require that Contractor prepare and submit a plan for the remaining anticipated Applications for Payment that will bring payments and progress into closer alignment and take into account the Guaranteed Maximum Price (if any), through reductions in billings, increases in retainage, or other equitable measures. Owner will review the plan, discuss any necessary modifications, and implement the plan as modified for all remaining Applications for Payment.

**SC-15.02.A – Amend paragraph by striking out the following text: “7 days after”.**

15.03 *Substantial Completion*

**SC-15.03.A – Modify by adding the following after the last sentence:**

**Contractor shall also submit the General (Prime) Contractor’s Certification of Compliance certifying that to the best of the Contractor’s knowledge and belief all substitutes, equals, and all Iron and Steel products proposed in the Shop Drawings, Change Orders, and Partial Payment Estimates, and those installed for the Project, are either Produced in the United States or are the subject of an approved waiver under Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A - Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference.**

SC-15.03 Add the following new subparagraph to Paragraph 15.03.B:

- 1. If some or all of the Work has been determined not to be at a point of Substantial Completion and will require re-inspection or re-testing by Engineer, the cost of such re-inspection or re-testing, including the cost of time, travel and living expenses, will be paid by Contractor to Owner. If Contractor does not pay, or the parties are unable to agree as to the amount owed, then Owner may impose a reasonable set-off against payments due under this Article 15.

**SC-15.06 Strike subparagraph 15.06.E Add the following new subparagraph to Paragraph 15.06.E:**

- E. Upon receipt of final application for payment from Engineer, Owner will submit the same to the Agency for approval, and upon receipt from the Agency, Owner shall pay the final application payment within ten (10) business days.**

15.08 *Correction Period*

SC-15.08 Add the following new Paragraph 15.08.G:

- G. The correction period specified as one year after the date of Substantial Completion in Paragraph 15.08.A of the General Conditions is hereby revised to be the number of years set forth in SC-6.01.B.1; or if no such revision has been made in SC-6.01.B, then the correction period is hereby specified to be **two (2)** years after Substantial Completion.



## ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

No suggested Supplementary Conditions in this Article.

## ARTICLE 17—FINAL RESOLUTIONS OF DISPUTES

### 17.02 *Arbitration*

SC-17.02 Add the following new paragraph immediately after Paragraph 17.01.

### 17.02 *Arbitration*

A. **DELETED.**

### 17.03 *Attorneys' Fees*

SC-17.03 Add the following new paragraph immediately after Paragraph 17.02. [Note: If there is no Paragraph 17.02, because neither arbitration nor any other dispute resolution process has been specified here in the Supplementary Conditions, then revise this to state "Add the following new Paragraph immediately after Paragraph 17.01" and revise the numbering accordingly].

### 17.03 *Attorneys' Fees*

- A. For any matter subject to final resolution under this Article, the prevailing party shall be entitled to an award of its attorneys' fees incurred in the final resolution proceedings, in an equitable amount to be determined in the discretion of the court, arbitrator, arbitration panel, or other arbiter of the matter subject to final resolution, taking into account the parties' initial demand or defense positions in comparison with the final result.

## ARTICLE 18—MISCELLANEOUS

### 18.08 *Assignment of Contract*

SC-18.08 Add the following new paragraph immediately after Paragraph 18.08.A:

- B. The contract dated **[date]** between Owner as "buyer" and **[identify seller]** as "seller" for procurement of goods and special services ("procurement contract") **[is hereby] [will be]** assigned to Contractor by Owner, and Contractor **[accepts] [will accept]** such assignment. A form documenting the assignment is attached as an exhibit to this Contract.
1. This assignment will occur on the **[Effective Date of the Contract]**, and will relieve the Owner as "buyer" from all further obligations and liabilities under the procurement contract.
  2. Upon assignment, the "seller" will be a Subcontractor or Supplier of the Contractor, and Contractor will be responsible for seller's performance, acts, and omissions, as set forth in Paragraph 7.07 of the General Conditions just as Contractor is responsible for all other Subcontractors and Suppliers.
  3. Notwithstanding this assignment, all performance guarantees and warranties required by the procurement contract will continue to run for the benefit of the Owner and, in addition, for the benefit of the Contractor.



4. Except as noted in the procurement contract, all rights, duties and obligations of Engineer to “buyer” and “seller” under the procurement contract will cease [upon the assignment to Contractor].

**SC-19 – Add the following new Article 19 immediately after Article 18:**

## **ARTICLE 19—FEDERAL REQUIREMENTS**

### **19.01 Agency Not a Party**

- A. This Contract is expected to be funded in part with funds provided by Agency. Neither Agency, nor any of its departments, entities, or employees, is a party to this Contract.

### **19.02 Contract Approval**

- A. Owner and Contractor will furnish Owner’s attorney such evidence as required so that Owner’s attorney can complete and execute the “Certificate of Owner’s Attorney” (Exhibit G of this Bulletin) before Owner submits the executed Contract Documents to Agency for approval.
- B. Agency concurrence is required on both the Bid and the Contract before the Contract is effective.

### **19.03 Conflict of Interest**

- A. Contractor may not knowingly contract with a Supplier or Manufacturer if the individual or entity who prepared the Drawings and Specifications has a corporate or financial affiliation with the Supplier or Manufacturer. Owner’s officers, employees, or agents shall not engage in the award or administration of this Contract if a conflict of interest, real or apparent, would be involved. Such a conflict would arise when: (i) the employee, officer, or agent; (ii) any member of their immediate family; (iii) their partner or (iv) an organization that employs, or is about to employ, any of the above, has a financial interest or other interest in or a tangible personal benefit from the Contractor. Owner’s officers, employees, or agents shall neither solicit nor accept gratuities, favors or anything of monetary value from Contractor or subcontractors.

### **19.04 Gratuities**

- A. If Owner finds after a notice and hearing that Contractor, or any of Contractor’s agents or representatives, offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of Owner or Agency in an attempt to secure this Contract or favorable treatment in awarding, amending, or making any determinations related to the performance of this Contract, Owner may, by written notice to Contractor, terminate this Contract. Owner may also pursue other rights and remedies that the law or this Contract provides. However, the existence of the facts on which Owner bases such findings shall be an issue and may be reviewed in proceedings under the dispute resolution provisions of this Contract.
- B. In the event this Contract is terminated as provided in paragraph 19.04.A, Owner may pursue the same remedies against Contractor as it could pursue in the event of a breach of this Contract by Contractor. As a penalty, in addition to any other damages to which it may be entitled by law, Owner may pursue exemplary damages in an amount (as determined

by Owner) which shall not be less than three nor more than ten times the costs Contractor incurs in providing any such gratuities to any such officer or employee.

#### **19.05 Small, Minority and Women's Businesses**

- A. If Contractor intends to let any subcontracts for a portion of the work, Contractor will take all necessary affirmative steps to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible. Affirmative steps will include:
1. Placing qualified small and minority businesses and women's business enterprises on solicitation lists;
  2. Assuring that small and minority businesses, and women's business enterprises are solicited whenever they are potential sources;
  3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women's business enterprises;
  4. Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises;
  5. Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce.

#### **19.06 Anti-Kickback**

- A. Contractor shall comply with the Copeland Anti-Kickback Act (40 USC 3145) as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Buildings or Public Works Financed in Whole or in Part by Loans or Grants of the United States"). The Act provides that Contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public facilities, to give up any part of the compensation to which they are otherwise entitled. Owner shall report all suspected or reported violations to Agency.

#### **19.07 Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended**

- A. Contractor to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

#### **19.08 Equal Employment Opportunity**

- A. The Contract is considered a federally assisted construction contract. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Executive Order 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of

Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor.”

**19.09 Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)**

- A. Contractors that apply or bid for an award exceeding \$100,000 must file the required certification (RD Instruction 1940-Q Exhibit A-1). The Contractor certifies to the Owner and every subcontractor certifies to the Contractor that it will not and has not used federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining the Contract if it is covered by 31 U.S.C. 1352. The Contractor and every subcontractor must also disclose any lobbying with non-federal funds that takes place in connection with obtaining any federal award. Such disclosures are forwarded from tier to tier up to the Owner. Necessary certification and disclosure forms shall be provided by Owner.

**19.10 Environmental Requirements**

- A. When constructing a Project involving trenching and/or other related earth excavations, Contractor shall comply with the following environmental conditions:
1. Wetlands – When disposing of excess, spoil, or other Construction Materials on public or private property, Contractor shall not fill in or otherwise convert wetlands.
  2. Floodplains – When disposing of excess, spoil, or other Construction Materials on public or private property, Contractor shall not fill in or otherwise convert 100-year floodplain areas (Standard Flood Hazard Area) delineated on the latest Federal Emergency Management Agency Floodplain Maps, or other appropriate maps, e.g., alluvial soils on NRCS Soil Survey Maps.
  3. Historic Preservation - Applicants shall ensure that Contractors maintain a copy of the following inadvertent discovery plan onsite for review:
    - a. If during the course of any ground disturbance related to any Project, any post review discovery, including but not limited to, any artifacts, foundations, or other indications of past human occupation of the area are uncovered, shall be protected by complying with 36 CFR § 800.13(b)(3) and (c) and shall include the following:
      - i. All Work, including vehicular traffic, shall immediately stop within a 50 ft. radius around the area of discovery. The Contractor shall ensure barriers are established to protect the area of discovery and notify the Engineer to contact the appropriate RD personnel. The Engineer shall engage a Secretary of the Interior (SOI) qualified professional archeologist to quickly assess the nature and scope of the discovery; implement interim measures to protect the discovery from looting and vandalism; and establish broader barriers if further historic and/or precontact properties, can reasonably be expected to occur.
      - ii. The RD personnel shall notify the appropriate RD environmental staff member, the Federal Preservation Officer (FPO), and State Historic Preservation Office (SHPO) immediately. Indian tribe(s) or Native Hawaiian Organization (NHOs) that have an interest in the area of discovery shall be

contacted immediately. The SHPO may require additional tribes or NHOs who may have an interest in the area of discovery also be contacted. The notification shall include an assessment of the discovery provided by the SOI qualified professional archeologist.

- iii. When the discovery contains burial sites or human remains, the Contractor shall immediately notify the appropriate RD personnel who will contact the RD environmental staff member, FPO, and the SHPO. The relevant law enforcement authorities shall be immediately contacted by onsite personnel to reduce delay times, in accordance with tribal, state, or local laws including 36 CFR Part 800.13; 43 CFR Part 10, Subpart B; and the Advisory Council on Historic Preservation's Policy Statement Regarding treatment of Burial Sites, Human Remains, or Funerary Objects (February 23, 2007).
  - iv. When the discovery contains burial sites or human remains, all construction activities, including vehicular traffic shall stop within a 100 ft. radius of the discovery and barriers shall be established. The evaluation of human remains shall be conducted at the site of discovery by a SOI qualified professional. Remains that have been removed from their primary context and where that context may be in question may be retained in a secure location, pending further decisions on treatment and disposition. RD may expand this radius based on the SOI professional's assessment of the discovery and establish broader barriers if further subsurface burial sites, or human remains can reasonably be expected to occur. RD, in consultation with the SHPO and interested tribes or NHOs, shall develop a plan for the treatment of native human remains.
  - v. Work may continue in other areas of the undertaking where no historic properties, burial sites, or human remains are present. If the inadvertent discovery appears to be a consequence of illegal activity such as looting, the onsite personnel shall contact the appropriate legal authorities immediately if the landowner has not already done so.
  - vi. Work may not resume in the area of the discovery until a notice to proceed has been issued by RD. RD shall not issue the notice to proceed until it has determined that the appropriate local protocols and consulting parties have been consulted.
  - vii. Inadvertent discoveries on federal and tribal land shall follow the processes required by the federal or tribal entity.
4. Endangered Species – Contractor shall comply with the Endangered Species Act, which provides for the protection of endangered and/or threatened species and critical habitat. Should any evidence of the presence of endangered and/or threatened species or their critical habitat be brought to the attention of Contractor, Contractor will immediately report this evidence to Owner and a representative of Agency. Construction shall be temporarily halted pending the notification process and further directions issued by Agency after consultation with the U.S. Fish and Wildlife Service.

5. Mitigation Measures – The following environmental mitigation measures are required on this Project: [Insert mitigation measures from the Letter of Conditions here].

**19.11 Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708)**

- A. Where applicable, for contracts awarded by the Owner in excess of \$100,000 that involve the employment of mechanics or laborers, the Contractor will comply with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, the Contractor will compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic will be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

**19.12 Debarment and Suspension (Executive Orders 12549 and 12689)**

- A. A contract award (see 2 CFR 180.220) must not be made to parties listed on the governmentwide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Executive Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), “Debarment and Suspension.” SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Executive Order 12549.

**19.13 Procurement of recovered materials**

- A. The Contractor will comply with 2 CFR Part 200.322, “Procurement of recovered materials.”

**19.14 American Iron and Steel**

- A. Section 746 of Title VII of the Consolidated Appropriations Act of 2017 (Division A - Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Appropriations Act, 2017) and subsequent statutes mandating domestic preference applies an American Iron and Steel requirement to this project. All iron and steel products used in this project must be produced in the United States. The term “iron and steel products” means the following products made primarily of iron or steel: lined or unlined pipes and fittings, manhole covers and other municipal castings, hydrants, tanks, flanges, pipe clamps and restraints, valves, structural steel, reinforced precast concrete, and Construction Materials.
- B. The following waivers apply to this Contract:
1. De Minimis,
  2. Minor Components,
  3. Pig iron and direct reduced iron, and
  4. [add project specific waivers as applicable].



## EXHIBIT A—SOFTWARE REQUIREMENTS FOR ELECTRONIC DOCUMENT EXCHANGE

**Guidance Notes—Exhibit A—**This exhibit is used with the Electronic Documents Protocol (EDP) presented in SC-2.06. If the Project-specific Supplementary Conditions do not include SC-2.06, then do not include Exhibit A. If Exhibit A is included, modify it to conform to Project-specific requirements.

| Item  | Electronic Documents                                                                                                                                                                                                                                                                                       | Transmittal Means          | Data Format | Note (1) |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|-------------|----------|
| a.1   | General communications, transmittal covers, meeting notices and responses to general information requests for which there is no specific prescribed form.                                                                                                                                                  | Email                      | Email       |          |
| a.2   | Meeting agendas, meeting minutes, RFI's and responses to RFI's, and Contract forms.                                                                                                                                                                                                                        | Email w/ Attachment        | PDF         | (2)      |
| a.3   | Contractors Submittals (Shop Drawings, "or equal" requests, substitution requests, documentation accompanying Sample submittals and other submittals) to Owner and Engineer, and Owner's and Engineer's responses to Contractor's Submittals, Shop Drawings, correspondence, and Applications for Payment. | Email w/ Attachment        | PDF         |          |
| a.4   | Correspondence; milestone and final version Submittals of reports, layouts, Drawings, maps, calculations and spreadsheets, Specifications, Drawings and other Submittals from Contractor to Owner or Engineer and for responses from Engineer and Owner to Contractor regarding Submittals.                | Email w/ Attachment or LFE | PDF         |          |
| a.5   | Layouts and drawings to be submitted to Owner for future use and modification.                                                                                                                                                                                                                             | Email w/ Attachment or LFE | DWG         |          |
| a.6   | Correspondence, reports and Specifications to be submitted to Owner for future word processing use and modification.                                                                                                                                                                                       | Email w/ Attachment or LFE | DOC         |          |
| a.7   | Spreadsheets and data to be submitted to Owner for future data processing use and modification.                                                                                                                                                                                                            | Email w/ Attachment or LFE | EXC         |          |
| a.8   | Database files and data to be submitted to Owner for future data processing use and modification.                                                                                                                                                                                                          | Email w/ Attachment or LFE | DB          |          |
| Notes |                                                                                                                                                                                                                                                                                                            |                            |             |          |
| (1)   | All exchanges and uses of transmitted data are subject to the appropriate provisions of Contract Documents.                                                                                                                                                                                                |                            |             |          |
| (2)   | Transmittal of written notices is governed by Paragraph 18.01 of the General Conditions.                                                                                                                                                                                                                   |                            |             |          |
| Key   |                                                                                                                                                                                                                                                                                                            |                            |             |          |
| Email | Standard Email formats (.htm, .rtf, or .txt). Do not use stationery formatting or other features that impair legibility of content on screen or in printed copies                                                                                                                                          |                            |             |          |
| LFE   | Agreed upon Large File Exchange method (FTP, CD, DVD, hard drive)                                                                                                                                                                                                                                          |                            |             |          |
| PDF   | Portable Document Format readable by Adobe® Acrobat Reader Version <b>22.1.20117.0</b> or later                                                                                                                                                                                                            |                            |             |          |
| DWG   | Autodesk® AutoCAD .dwg format Version <b>Civil 3D, 2019</b>                                                                                                                                                                                                                                                |                            |             |          |
| DOC   | Microsoft® Word .docx format Version <b>Microsoft Office, 2013</b>                                                                                                                                                                                                                                         |                            |             |          |
| EXC   | Microsoft® Excel .xls or .xml format Version <b>Microsoft Office, 2013</b>                                                                                                                                                                                                                                 |                            |             |          |
| DB    | Microsoft® Access .mdb format Version <b>Microsoft Office, 2013</b>                                                                                                                                                                                                                                        |                            |             |          |





**EXHIBIT B—FORESEEABLE BAD WEATHER DAYS**

| <b>Month</b>                                                                                                                                                                            | <b>Number of Foreseeable Bad Weather Days in Month Based on Precipitation as Rain Equivalent (inches) (1)</b> | <b>Ambient Outdoor Air Temperature (degrees F)</b>                                              |                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                         |                                                                                                               | <b>Number of Foreseeable Bad Weather Days in Month Based on Low Temperature (at 11:00 a.m.)</b> | <b>Number of Foreseeable Bad Weather Days in Month Based on High Temperature (at 3:00 p.m.)</b> |
| January                                                                                                                                                                                 |                                                                                                               |                                                                                                 |                                                                                                 |
| February                                                                                                                                                                                |                                                                                                               |                                                                                                 |                                                                                                 |
| March                                                                                                                                                                                   |                                                                                                               |                                                                                                 |                                                                                                 |
| April                                                                                                                                                                                   |                                                                                                               |                                                                                                 |                                                                                                 |
| May                                                                                                                                                                                     |                                                                                                               |                                                                                                 |                                                                                                 |
| June                                                                                                                                                                                    |                                                                                                               |                                                                                                 |                                                                                                 |
| July                                                                                                                                                                                    |                                                                                                               |                                                                                                 |                                                                                                 |
| August                                                                                                                                                                                  |                                                                                                               |                                                                                                 |                                                                                                 |
| September                                                                                                                                                                               |                                                                                                               |                                                                                                 |                                                                                                 |
| October                                                                                                                                                                                 |                                                                                                               |                                                                                                 |                                                                                                 |
| November                                                                                                                                                                                |                                                                                                               |                                                                                                 |                                                                                                 |
| December                                                                                                                                                                                |                                                                                                               |                                                                                                 |                                                                                                 |
| <b>Notes:</b><br>1. ——— Two inches of sleet equal one inch of rain. Five inches of wet, heavy snow equal one inch of rain. Fifteen inches of “dry” powder snow equals one inch of rain. |                                                                                                               |                                                                                                 |                                                                                                 |

**Reference Exhibit 1 for a listing of Expected Adverse Weather Days.**



## EXHIBIT C—GEOTECHNICAL BASELINE REPORT SUPPLEMENT TO THE SUPPLEMENTARY CONDITIONS

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### 1.01 Definitions

SC-1.01 Add to the list of definitions in Paragraph 1.01.A by inserting the following as numbered items in their proper alphabetical positions:

1. *Geotechnical Baseline Report (GBR)*—The interpretive report prepared by or for Owner regarding subsurface conditions at the Site, and containing specific baseline geotechnical conditions that may be anticipated or relied upon for bidding and contract administration purposes, subject to the controlling provisions of the Contract, including the GBR's own terms. The GBR is a Contract Document.
2. *Geotechnical Data Report (GDR)*—The factual report that collects and presents data regarding actual subsurface conditions at or adjacent to the Site, including Technical Data and other geotechnical data, prepared by or for Owner in support of the Geotechnical Baseline Report. The GDR's content may include logs of borings, trenches, and other site investigations, recorded measurements of subsurface water levels, the results of field and laboratory testing, and descriptions of the investigative and testing programs. The GDR does not include an interpretation of the data. If opinions, or interpretive or speculative non-factual comments or statements appear in a document that is labeled a GDR, such opinions, comments, or statements are not operative parts of the GDR and do not have contractual standing. Subject to that exception, the GDR is a Contract Document.

### 5.03 Subsurface and Physical Conditions

SC-5.03 Delete Paragraph 5.03 in its entirety and replace with the following:

### 5.03 Subsurface and Physical Conditions

A. *Reports and Drawings*: The Supplementary Conditions hereby identify:

1. those reports of explorations and tests of subsurface conditions at or adjacent to the Site (other than any Geotechnical Data Report or Geotechnical Baseline Report) that contain Technical Data. Such reports are as follows:
  - a. *Report Title*: **Wetland Report**
  - b. *Date of Report*:
  - c. *Technical Data in report upon which Contractor may rely*:
2. those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data. Such drawings are as follows:
  - a. *Drawings Title*: **Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Extension**
  - b. *Date of Drawings*: [\_\_\_\_\_]
  - c. *Technical Data in drawings upon which Contractor may rely*: **Construction Drawings.**

---

Exhibit C—Geotechnical Baseline Report Supplement to the Supplementary Conditions.

EJCDC® C-800, Supplementary Conditions of the Construction Contract.

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and American Society of Civil Engineers. All rights reserved.

~~3. Contractor may examine copies of reports and drawings identified immediately above that were not included with the Bidding Documents at [location] during regular business hours, or may request copies from Engineer, at the cost of reproduction.~~

- B. *Underground Facilities:* Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph SC-5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.
- C. *Reliance by Contractor on Technical Data Authorized:* Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.
- D. *Limitations of Other Data and Documents:* Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:
1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto; or
  2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or
  3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or
  4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.
- E. *Geotechnical Baseline Report*
1. This Contract contains a Geotechnical Baseline Report ("GBR"), identified as follows: **None**. This Contract also contains a Geotechnical Data Report (GDR), identified as follows: **None**.
  2. The GBR and GDR are incorporated as Contract Documents. The GBR and GDR are to be used in conjunction with other Contract Documents, including the Drawings and Specifications. If there is a conflict between the terms of the GBR and the GDR, the GBR's terms prevail.
  3. The GBR describes certain select subsurface conditions that are anticipated to be encountered by Contractor during construction in specified locations (referred to here in the Supplementary Conditions as "Baseline Conditions"). These may include ground, geological, groundwater, and other subsurface geotechnical conditions, and baselines of anticipated Underground Facilities or subsurface structures.

4. The Baseline Conditions will be used to assist in the administration of the Contract's differing site conditions clause at locations where subsurface conditions have been baselined. If a condition is baselined in the GBR, then only the pertinent Baseline Conditions will be used to determine whether there is a differing site condition; and no other indication of that condition in the Contract Documents or Technical Data, or of a condition that describes, quantifies, or measures a similar characteristic of the subsurface, will be used for the differing site condition determination.
5. The Baseline Conditions will not be used to make differing site conditions determinations at locations that have not been baselined in the GBR, or at any location with respect to subsurface conditions that the Baseline Conditions do not address. If Underground Facilities or Hazardous Environmental Conditions are expressly addressed in the Baseline Conditions, then comparison to such Baseline Conditions will be the primary means of determining (a) whether an Underground Facility was shown or indicated with reasonable accuracy, as provided in Paragraph 5.05 of the General Conditions, or (b) whether a Hazardous Environmental Condition was shown or indicated in the Contract Documents as indicated in Paragraph 5.06.H of the General Conditions. As indicated in Paragraph SC-5.04 below, the GDR will be the primary resource for differing site conditions determinations in cases in which the GBR is inapplicable.
6. The descriptions of subsurface conditions provided in the GBR are based on geotechnical investigations, laboratory tests, interpretation, interpolation, extrapolation, and analyses. Neither Owner, Engineer, nor any geotechnical or other consultant warrants or guarantees that actual subsurface conditions will be as described in the GBR, nor is the GBR intended to warrant or guarantee the use of specific means or methods of construction.
7. The behavior of the ground during construction depends substantially upon the Contractor's selected means, methods, techniques, sequences, and procedures of construction. If ground behavior conditions are baselined in the GBR, they are based on stated assumptions regarding construction means and methods.
8. The GBR will not reduce or relieve Contractor of its responsibility for the planning, selection, and implementation of safety precautions and programs incident to Contractor's means, methods, techniques, sequences, and procedures of construction, or to the Work.

5.04 *Differing Subsurface or Physical Conditions*

SC-5.04 Delete Paragraph 5.04 in its entirety and replace with the following:

5.04 *Differing Subsurface or Physical Conditions*

- A. *Notice:* If Contractor believes that any subsurface condition that is uncovered or revealed at the Site:
  1. differs materially from conditions shown or indicated in the GBR; or
  2. differs materially from conditions shown or indicated in the GDR, to the extent the GBR is inapplicable; or

3. differs materially from conditions shown or indicated in Contract Documents other than the GBR or GDR, to the extent the GBR and GDR are inapplicable; or
4. to the extent the GBR and GDR are inapplicable, is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate; or
5. to the extent the GBR and GDR are inapplicable, is of such a nature as to require a change in the Drawings or Specifications; or
6. to the extent the GBR and GDR are inapplicable, is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

- B. *Engineer's Review:* After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine the necessity of Owner's obtaining additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph SC-5.04.A above; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption or continuation of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.
- C. *Owner's Statement to Contractor Regarding Site Condition:* After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption or continuation of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.
- D. *Early Resumption of Work:* If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.
- E. *Possible Price and Times Adjustments*
  1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

- a. such condition must fall within any one or more of the categories described in Paragraph SC-5.04.A;
  - b. with respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03 of the General Conditions; and
  - c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.
2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:
- a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise; or
  - b. the existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or
  - c. Contractor failed to give the written notice as required by Paragraph SC-5.04.A.
3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment must be set forth in a Change Order.
4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.
- F. *Underground Facilities; Hazardous Environmental Conditions:* Paragraph 5.05 of the General Conditions governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 of the General Conditions governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs SC-5.03 and SC-5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.





**WORK CHANGE DIRECTIVE NO.: [Number of Work Change Directive]**

Owner: **City of Box Elder** Owner's Project No.: **23.003.00**  
Engineer: **Towey Design Group, Inc.** Engineer's Project No.: **24-006**  
Contractor: Contractor's Project No.:  
Project:  
Contract Name:  
Date Issued: Effective Date of Work Change Directive:

Contractor is directed to proceed promptly with the following change(s):

Description:

**[Description of the change to the Work]**

Attachments:

**[List documents related to the change to the Work]**

Purpose for the Work Change Directive:

**[Describe the purpose for the change to the Work]**

Directive to proceed promptly with the Work described herein, prior to agreeing to change in Contract Price and Contract Time, is issued due to:

**Notes to User—Check one or both of the following**

☐ Non-agreement on pricing of proposed change. ☐ Necessity to proceed for schedule or other reasons.

Estimated Change in Contract Price and Contract Times (non-binding, preliminary):

Contract Price: \$ \_\_\_\_\_ **[increase] [decrease] [not yet estimated].**

Contract Time: \_\_\_\_\_ days **[increase] [decrease] [not yet estimated].**

Basis of estimated change in Contract Price:

☐ Lump Sum ☐ Unit Price ☐ Cost of the Work ☐ Other

Recommended by Engineer

Authorized by Owner

By:

\_\_\_\_\_

\_\_\_\_\_

Title:

\_\_\_\_\_

\_\_\_\_\_

Date:

\_\_\_\_\_

\_\_\_\_\_



**CHANGE ORDER NO.: [Number of Change Order]**

|                |                                                                          |                                 |           |
|----------------|--------------------------------------------------------------------------|---------------------------------|-----------|
| Owner:         | City of Box Elder                                                        | Owner's Project No.:            | 23.003.00 |
| Engineer:      | Towey Design Group, Inc.                                                 | Engineer's Project No.:         | 24-006    |
| Contractor:    |                                                                          | Contractor's Project No.:       |           |
| Project:       | Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension |                                 |           |
| Contract Name: | Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension |                                 |           |
| Date Issued:   |                                                                          | Effective Date of Change Order: |           |

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

Description:

**[Description of the change]**

Attachments:

**[List documents related to the change]**

| <b>Change in Contract Price</b>                                                                                                         | <b>Change in Contract Times<br/>[State Contract Times as either a specific date or a number of days]</b>                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Original Contract Price:<br>\$ _____                                                                                                    | Original Contract Times:<br>Substantial Completion: _____<br>Ready for final payment: _____                                                                                                   |
| <b>[Increase] [Decrease]</b> from previously approved Change Orders No. 1 to No. <b>[Number of previous Change Order]</b> :<br>\$ _____ | <b>[Increase] [Decrease]</b> from previously approved Change Orders No.1 to No. <b>[Number of previous Change Order]</b> :<br>Substantial Completion: _____<br>Ready for final payment: _____ |
| Contract Price prior to this Change Order:<br>\$ _____                                                                                  | Contract Times prior to this Change Order:<br>Substantial Completion: _____<br>Ready for final payment: _____                                                                                 |
| <b>[Increase] [Decrease]</b> this Change Order:<br>\$ _____                                                                             | <b>[Increase] [Decrease]</b> this Change Order:<br>Substantial Completion: _____<br>Ready for final payment: _____                                                                            |
| Contract Price incorporating this Change Order:<br>\$ _____                                                                             | Contract Times with all approved Change Orders:<br>Substantial Completion: _____<br>Ready for final payment: _____                                                                            |

Recommended by Engineer (if required)

Accepted by Contractor

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Authorized by Owner \_\_\_\_\_ Approved by Funding Agency (if applicable) \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



**FIELD ORDER NO.: [Number of Field Order]**

|                |                                                                          |                           |           |
|----------------|--------------------------------------------------------------------------|---------------------------|-----------|
| Owner:         | City of Box Elder                                                        | Owner's Project No.:      | 23.003.00 |
| Engineer:      | Towey Design Group, Inc.                                                 | Engineer's Project No.:   | 24-006    |
| Contractor:    |                                                                          | Contractor's Project No.: |           |
| Project:       | Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension |                           |           |
| Contract Name: | Cheyenne Boulevard and Westgate Road Trunk Sanitary Sewer Main Extension |                           |           |
| Date Issued:   | Effective Date of Field Order:                                           |                           |           |

Contractor is hereby directed to promptly perform the Work described in this Field Order, issued in accordance with Paragraph 11.04 of the General Conditions, for minor changes in the Work without changes in Contract Price or Contract Times. If Contractor considers that a change in Contract Price or Contract Times is required, submit a Change Proposal before proceeding with this Work.

**Reference:**

Specification Section(s):

Drawing(s) / Details (s):

**Description:**

**[Description of the change to the Work]**

**Attachments:**

**[List documents supporting change]**

**Issued by Engineer**

By: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_



## **Appendix A**

### **Supplemental Information**

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Expected Adverse Weather Days

Buy American Preferences for Infrastructure Projects

DBE Documents

DBE Wages

Certificate of Prohibited Entity





# **EXHIBIT 1**

## **Expected Adverse Weather Days**

### **Expected Adverse Weather Days**

The Owner has provided Attachment 1 for information purposes only as a guide to bidders. This table depicts the typical number of adverse weather days expected for any given month, based on historical records. The Owner will consider this project a surfacing and structural project in Zone 4.

The Owner will consider expected adverse weather days cumulative in nature over the time period when the Contractor is actively pursuing completion of the work. The Owner will not consider adverse weather days during an extended period of time when the Contractor is not pursuing completion of the work. When considering a time extension for calendar day count completion, working day count completion, interim completion, substantial completion, or field work completion of the project, the Engineer will compare the total number of expected adverse weather days against the total number of actual adverse weather days for the time period during which the work was being completed.

## ATTACHMENT 1

Figure A. Expected Adverse Weather Days for South Dakota

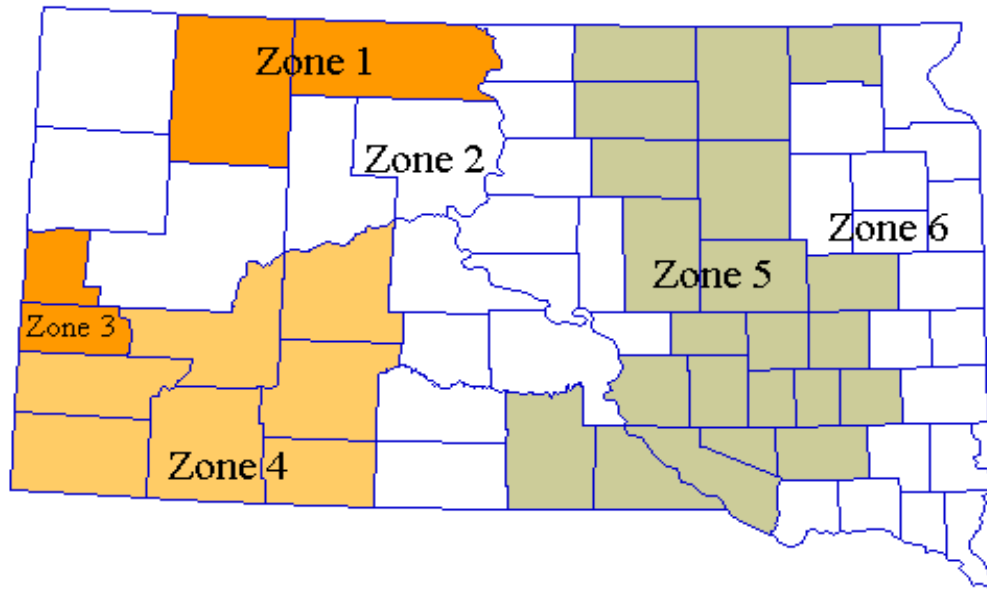


Table 1. Expected Adverse Weather Days for South Dakota

|     | Grading Projects |        |        |        |        |        | Surfacing and Structural Projects |        |        |        |        |        |
|-----|------------------|--------|--------|--------|--------|--------|-----------------------------------|--------|--------|--------|--------|--------|
|     | Zone 1           | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 | Zone 1                            | Zone 2 | Zone 3 | Zone 4 | Zone 5 | Zone 6 |
| Jan | 18               | 18     | 16     | 16     | 22     | 24     | 18                                | 18     | 15     | 16     | 21     | 23     |
| Feb | 19               | 18     | 12     | 14     | 19     | 21     | 19                                | 18     | 12     | 14     | 19     | 21     |
| Mar | 12               | 10     | 9      | 8      | 11     | 13     | 12                                | 10     | 9      | 8      | 10     | 12     |
| Apr | 6                | 5      | 8      | 5      | 6      | 6      | 5                                 | 4      | 6      | 4      | 4      | 4      |
| May | 6                | 6      | 8      | 6      | 6      | 6      | 5                                 | 5      | 6      | 4      | 4      | 5      |
| Jun | 7                | 6      | 7      | 6      | 7      | 8      | 5                                 | 5      | 5      | 4      | 5      | 6      |
| Jul | 5                | 5      | 6      | 5      | 6      | 7      | 4                                 | 4      | 5      | 3      | 4      | 5      |
| Aug | 4                | 4      | 5      | 4      | 5      | 6      | 3                                 | 3      | 4      | 3      | 4      | 4      |
| Sep | 3                | 3      | 4      | 3      | 4      | 5      | 2                                 | 2      | 3      | 2      | 3      | 4      |
| Oct | 4                | 3      | 5      | 3      | 4      | 4      | 3                                 | 3      | 4      | 2      | 3      | 3      |
| Nov | 11               | 9      | 8      | 7      | 10     | 12     | 11                                | 9      | 8      | 7      | 10     | 11     |
| Dec | 21               | 19     | 15     | 14     | 20     | 22     | 21                                | 19     | 15     | 14     | 20     | 22     |

NOTE: Includes Holidays and Weekends.

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This content is from the eCFR and is authoritative but unofficial.

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## Title 2 — Grants and Agreements

### Subtitle A — Office of Management and Budget Guidance for Grants and Agreements

#### Chapter I — Office of Management and Budget Governmentwide Guidance for Grants and Agreements

#### Part 184 Buy America Preferences for Infrastructure Projects

§ 184.1 Purpose and policy.

§ 184.2 Applicability, effective date, and severability.

§ 184.3 Definitions.

§ 184.4 Applying the Buy America Preference to a Federal award.

§ 184.5 Determining the cost of components for manufactured products.

§ 184.6 Construction material standards.

§ 184.7 Federal awarding agency's issuance of a Buy America Preference waiver.

§ 184.8 Exemptions to the Buy America Preference.

## PART 184—BUY AMERICA PREFERENCES FOR INFRASTRUCTURE PROJECTS

**Authority:** Pub. L. 117–58, 135 Stat. 429.

**Source:** 88 FR 57787, Aug. 23, 2023, unless otherwise noted.

### § 184.1 Purpose and policy.

- (a) **Purpose.** This part provides guidance to Federal awarding agencies on the implementation of the Buy America Preference applicable to Federal financial assistance set forth in part I of subtitle A, Buy America Sourcing Preferences, of the Build America, Buy America Act included in the Infrastructure Investment and Jobs Act (Pub. L. 117–58) at division G, title IX, subtitle A, part I, sections 70911 through 70917.
- (b) **Policy.** The head of each Federal agency must ensure that none of the funds made available for a Federal award for an infrastructure project may be obligated unless all of the iron, steel, manufactured products, and construction materials incorporated into the project are produced in the United States. See section 70914(a) of the Build America Buy America Act.

### § 184.2 Applicability, effective date, and severability.

- (a) **Non-applicability of this part to existing Buy America Preferences.** This part does not apply to a Buy America Preference meeting or exceeding the requirements of section 70914 of the Build America, Buy America Act applied by a Federal Awarding Agency to Federal awards for infrastructure projects before November 15, 2021.

- (b) **Effective date of this part.** The effective date of this part is October 23, 2023. Except as provided in paragraph (c) of this section, this part applies to Federal awards obligated on or after its effective date. Awards obligated on or after May 14, 2022, the effective date of the Build America, Buy America Act, and before the effective date of this part, are instead subject to OMB Memorandum M–22–11.
- (c) **Modified effective date of this part for certain infrastructure projects.** If an infrastructure project that has previously received a Federal award obligated on or after May 14, 2022, but before the effective date of this part receives an additional Federal award obligated within one year of the effective date of this part, the additional Federal award is subject to OMB Memorandum M–22–11. However, if significant design or planning changes are made to the infrastructure project, the Federal awarding agency may apply this part to the additional Federal award. Federal awards for an infrastructure project obligated after one year from the effective date of this part are subject to this part, regardless of whether this part applied to previous awards for the project.
- (d) **Severability.** The provisions of this part are separate and severable from one another. OMB intends that if a provision of this part is held to be invalid or unenforceable as applied to a particular person or circumstance, the provision should be construed so as to continue to give the maximum effect permitted by law as applied to other persons not similarly situated or to dissimilar circumstances. If any provision is determined to be wholly invalid and unenforceable, it should be severed from the remaining provisions of this part, which should remain in effect.

### § 184.3 Definitions.

Acronyms used in this part have the same meaning as provided in 2 CFR 200.0. Terms not defined in this part have the same meaning as provided in 2 CFR 200.1. As used in this part:

**Build America, Buy America Act** means division G, title IX, subtitle A, parts I–II, sections 70901 through 70927 of the Infrastructure Investment and Jobs Act (Pub. L. 117–58).

**Buy America Preference** means the “domestic content procurement preference” set forth in section 70914 of the Build America, Buy America Act, which requires the head of each Federal agency to ensure that none of the funds made available for a Federal award for an infrastructure project may be obligated unless all of the iron, steel, manufactured products, and construction materials incorporated into the project are produced in the United States.

**Component** means an article, material, or supply, whether manufactured or unmanufactured, incorporated directly into: a manufactured product; or, where applicable, an iron or steel product.

**Construction materials** means articles, materials, or supplies that consist of only one of the items listed in paragraph (1) of this definition, except as provided in paragraph (2) of this definition. To the extent one of the items listed in paragraph (1) contains as inputs other items listed in paragraph (1), it is nonetheless a construction material.

(1) The listed items are:

- (i) Non-ferrous metals;
- (ii) Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- (iii) Glass (including optic glass);
- (iv) Fiber optic cable (including drop cable);

- (v) Optical fiber;
- (vi) Lumber;
- (vii) Engineered wood; and
- (viii) Drywall.

- (2) Minor additions of articles, materials, supplies, or binding agents to a construction material do not change the categorization of the construction material.

**Infrastructure project** means any activity related to the construction, alteration, maintenance, or repair of infrastructure in the United States regardless of whether infrastructure is the primary purpose of the project. See also paragraphs (c) and (d) of § 184.4.

**Iron or steel products** means articles, materials, or supplies that consist wholly or predominantly of iron or steel or a combination of both.

**Manufactured products** means:

- (1) Articles, materials, or supplies that have been:
  - (i) Processed into a specific form and shape; or
  - (ii) Combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies.
- (2) If an item is classified as an iron or steel product, a construction material, or a section 70917(c) material under § 184.4(e) and the definitions set forth in this section, then it is not a manufactured product. However, an article, material, or supply classified as a manufactured product under § 184.4(e) and paragraph (1) of this definition may include components that are construction materials, iron or steel products, or section 70917(c) materials.

**Manufacturer** means the entity that performs the final manufacturing process that produces a manufactured product.

**Predominantly of iron or steel or a combination of both** means that the cost of the iron and steel content exceeds 50 percent of the total cost of all its components. The cost of iron and steel is the cost of the iron or steel mill products (such as bar, billet, slab, wire, plate, or sheet), castings, or forgings utilized in the manufacture of the product and a good faith estimate of the cost of iron or steel components.

**Produced in the United States** means:

- (1) In the case of iron or steel products, all manufacturing processes, from the initial melting stage through the application of coatings, occurred in the United States.
- (2) In the case of manufactured products:
  - (i) The product was manufactured in the United States; and
  - (ii) The cost of the components of the manufactured product that are mined, produced, or manufactured in the United States is greater than 55 percent of the total cost of all components of the manufactured product, unless another standard that meets or exceeds this standard has been established under applicable law or regulation for determining the minimum amount of domestic content of the manufactured product. See § 184.2(a). The costs of components of a manufactured product are determined according to § 184.5.

- (3) In the case of construction materials, all manufacturing processes for the construction material occurred in the United States. See § 184.6 for more information on the meaning of “all manufacturing processes” for specific construction materials.

**Section 70917(c) materials** means cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. See section 70917(c) of the Build America, Buy America Act.

## § 184.4 Applying the Buy America Preference to a Federal award.

- (a) **Applicability of Buy America Preference to infrastructure projects.** The Buy America Preference applies to Federal awards where funds are appropriated or otherwise made available for infrastructure projects in the United States, regardless of whether infrastructure is the primary purpose of the Federal award.
- (b) **Including the Buy America Preference in Federal awards.** All Federal awards with infrastructure projects must include the Buy America Preference in the terms and conditions. The Buy America Preference must be included in all subawards, contracts, and purchase orders for the work performed, or products supplied under the Federal award. The terms and conditions of a Federal award flow down to subawards to subrecipients unless a particular section of the terms and conditions of the Federal award specifically indicate otherwise.
- (c) **Infrastructure in general.** Infrastructure encompasses public infrastructure projects in the United States, which includes, at a minimum, the structures, facilities, and equipment for roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure; and buildings and real property; and structures, facilities, and equipment that generate, transport, and distribute energy including electric vehicle (EV) charging.
- (d) **Interpretation of infrastructure.** The Federal awarding agency should interpret the term “infrastructure” broadly and consider the description provided in paragraph (c) of this section as illustrative and not exhaustive. When determining if a particular project of a type not listed in the description in paragraph (c) constitutes “infrastructure,” the Federal awarding agency should consider whether the project will serve a public function, including whether the project is publicly owned and operated, privately operated on behalf of the public, or is a place of public accommodation, as opposed to a project that is privately owned and not open to the public.
- (e) **Categorization of articles, materials, and supplies.**
  - (1) An article, material, or supply should only be classified into one of the following categories:
    - (i) Iron or steel products;
    - (ii) Manufactured products;
    - (iii) Construction materials; or
    - (iv) Section 70917(c) materials.
  - (2) An article, material, or supply should not be considered to fall into multiple categories. In some cases, an article, material, or supply may not fall under any of the categories listed in paragraph (e)(1) of this section. The classification of an article, material, or supply as falling into one of the categories listed in paragraph (e)(1) must be made based on its status at the time it is brought to the

work site for incorporation into an infrastructure project. In general, the work site is the location of the infrastructure project at which the iron, steel, manufactured products, and construction materials will be incorporated.

- (f) **Application of the Buy America Preference by category.** An article, material, or supply incorporated into an infrastructure project must meet the Buy America Preference for only the single category in which it is classified.

## § 184.5 Determining the cost of components for manufactured products.

In determining whether the cost of components for manufactured products is greater than 55 percent of the total cost of all components, use the following instructions:

- (a) For components purchased by the manufacturer, the acquisition cost, including transportation costs to the place of incorporation into the manufactured product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
- (b) For components manufactured by the manufacturer, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (a) of this section, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the manufactured product.

## § 184.6 Construction material standards.

- (a) The Buy America Preference applies to the following construction materials incorporated into infrastructure projects. Each construction material is followed by a standard for the material to be considered “produced in the United States.”
- (1) **Non-ferrous metals.** All manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.
  - (2) **Plastic and polymer-based products.** All manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.
  - (3) **Glass.** All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.
  - (4) **Fiber optic cable (including drop cable).** All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.
  - (5) **Optical fiber.** All manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.
  - (6) **Lumber.** All manufacturing processes, from initial debarking through treatment and planing, occurred in the United States.
  - (7) **Drywall.** All manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.
  - (8) **Engineered wood.** All manufacturing processes from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

- (b) Except as specifically provided, only a single standard under paragraph (a) of this section should be applied to a single construction material.

### § 184.7 Federal awarding agency's issuance of a Buy America Preference waiver.

- (a) **Justification of waivers.** A Federal awarding agency may waive the application of the Buy America Preference in any case in which it finds that:
  - (1) Applying the Buy America Preference would be inconsistent with the public interest (a “public interest waiver”);
  - (2) Types of iron, steel, manufactured products, or construction materials are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality (a “nonavailability waiver”); or
  - (3) The inclusion of iron, steel, manufactured products, or construction materials produced in the United States will increase the cost of the overall infrastructure project by more than 25 percent (an “unreasonable cost waiver”).
- (b) **Requesting a waiver.** Recipients may request waivers from a Federal awarding agency if the recipient reasonably believes a waiver is justified under paragraph (a) of this section. A request from a recipient to waive the application of the Buy America Preference must be provided to the Federal awarding agency in writing. Federal awarding agencies must provide waiver request submission instructions and guidance on the format, contents, and supporting materials required for waiver requests from recipients.
- (c) **Before issuing a proposed waiver.** Before issuing a proposed waiver, the Federal awarding agency must prepare a detailed written explanation for the proposed determination to issue the waiver based on a justification listed under paragraph (a) of this section, including for waivers requested by a recipient.
- (d) **Before issuing a final waiver.** Before issuing a final waiver, the Federal awarding agency must:
  - (1) Make the proposed waiver and the detailed written explanation publicly available in an easily accessible location on a website designated by the Federal awarding agency and the Office of Management and Budget;
  - (2) Except as provided in paragraph (e) of this section, provide a period of not less than 15 calendar days for public comment on the proposed waiver; and
  - (3) Unless the Director of OMB provides otherwise, submit the waiver determination to the Made in America Office in OMB for final review pursuant to Executive Order 14005 and section 70923(b) of the Build America, Buy America Act.
- (e) **Waivers of general applicability.** Waivers of general applicability mean waivers that apply generally across multiple Federal awards. A Federal agency must provide a period of not less than 30 days for public comment on a proposal to modify or renew a waiver of general applicability.

### § 184.8 Exemptions to the Buy America Preference.

- (a) The Buy America Preference does not apply to expenditures for assistance authorized under section 402, 403, 404, 406, 408, or 502 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5170a, 5170b, 16 5170c, 5172, 5174, or 5192) relating to a major disaster or emergency declared by the President under section 401 or 501, respectively, of such Act (42 U.S.C. 5170, 5191) or pre and post disaster or emergency response expenditures.



- (b) "Pre and post disaster or emergency response expenditures" consist of expenditures for financial assistance that are:
  - (1) Authorized by statutes other than the Stafford Act, 42 U.S.C. 5121 *et seq.*; and
  - (2) Made in anticipation of or response to an event or events that qualify as an "emergency" or "major disaster" within the meaning of the Stafford Act, 42 U.S.C. 5122(1), (2).



# BIDDER'S ACTIVITY REPORT

In accordance with 49 CFR Part 26.11(c), a bidder's list must be created and maintained of ALL firms bidding on prime contracts and bidding or quoting subcontracts; therefore, the following information is required.

THIS FORM TO BE COMPLETED AND RETURNED WITH BID SUBMITTAL BY ALL BIDDING ENTITIES.

Prime Contractor: \_\_\_\_\_

Project Owner: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Prime's Racial/Ethnic Code: \_\_\_\_\_

Project Name: \_\_\_\_\_

Is Prime a Certified DBE?: \_\_\_\_\_

Project Address: \_\_\_\_\_

(Use codes below to complete first column.)

City, State, Zip: \_\_\_\_\_

LIST ALL SUBCONTRACTORS, VENDERS, AND/OR SUPPLIERS CONTACTED FOR QUOTES PERTAINING TO THIS BID

| Racial /<br>Ethnic<br>Code | Company<br>Name | Contact<br>Person | Address | City | State | Zip<br>Code | Phone<br>Number |
|----------------------------|-----------------|-------------------|---------|------|-------|-------------|-----------------|
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
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|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |
|                            |                 |                   |         |      |       |             |                 |

If any of the above firms are "Certified Disadvantaged Business Enterprises," please designate by placing an "X" in the first column next to the appropriate code used below.

| Racial/Ethnic Code           |
|------------------------------|
| 1. White American            |
| 2. Black American            |
| 3. Native American           |
| 4. Hispanic American         |
| 5. Asian/Pacific American    |
| 6. Women Business Enterprise |
| 7. Other                     |

COMPLETED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

| DBE SUBCONTRACTOR SOLICITATION INFORMATION |            |                             |                                            |                                         |                                                        |
|--------------------------------------------|------------|-----------------------------|--------------------------------------------|-----------------------------------------|--------------------------------------------------------|
| PROJECT NAME:                              |            |                             |                                            |                                         |                                                        |
| Subcontractor Name and Telephone Number    | MBE or WBE | Description of Work Offered | Date of Phone Follow-up & Person Contacted | Amount of Bid or Reason for not Quoting | Bid Accepted or Rejected? Include Reason for Rejection |
|                                            |            |                             |                                            |                                         |                                                        |
|                                            |            |                             |                                            |                                         |                                                        |
|                                            |            |                             |                                            |                                         |                                                        |
|                                            |            |                             |                                            |                                         |                                                        |
|                                            |            |                             |                                            |                                         |                                                        |
|                                            |            |                             |                                            |                                         |                                                        |

This information is true and correct to the best of my knowledge

\_\_\_\_\_  
Contractor Name, Address and Telephone Number

**This form shall be submitted as part of the contractor’s bid.**

Signature \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_

Disadvantaged Business Enterprise  
Program DBE Subcontractor  
Participation Form

|                                          |                      |
|------------------------------------------|----------------------|
| <b>NAME OF SUBCONTRACTOR<sup>1</sup></b> | <b>PROJECT NAME</b>  |
| <b>ADDRESS</b>                           | <b>CONTRACT NO.</b>  |
| <b>TELEPHONE NO.</b>                     | <b>EMAIL ADDRESS</b> |
| <b>PRIME CONTRACTOR NAME</b>             |                      |

Please use the space below to report any concerns regarding the above SRF-funded project (e.g., reason for termination by prime contractor, late payment, etc.).

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| <b>CONTRACT<br/>ITEM NO.</b>                                                                                                     | <b>ITEM OF WORK OR DESCRIPTION OF SERVICES RECEIVED FROM<br/>THE PRIME CONTRACTOR</b> | <b>AMOUNT<br/>SUBCONTRACTOR<br/>WAS PAID BY PRIME<br/>CONTRACTOR</b> |
|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------|
|                                                                                                                                  |                                                                                       |                                                                      |
|                                                                                                                                  |                                                                                       |                                                                      |
| <div style="display: flex; justify-content: space-between;"> <span>Subcontractor Signature</span> <span>Title/Date</span> </div> |                                                                                       |                                                                      |

<sup>1</sup>Subcontractor is defined as a company, firm, Joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an SRF award of financial assistance.

FORM 6100-2 (DBE Subcontractor Participation Form)

**Disadvantaged Business Enterprise Program  
DBE Subcontractor Performance Form**

|                                                                                                                               |                                                                 |                                                            |  |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------------------------|--|
| <b>NAME OF SUBCONTRACTOR<sup>1</sup></b>                                                                                      |                                                                 | <b>PROJECT NAME</b>                                        |  |
| <b>ADDRESS</b>                                                                                                                |                                                                 | <b>BID/PROPOSAL NO.</b>                                    |  |
| <b>TELEPHONE NO.</b>                                                                                                          |                                                                 | <b>E-MAIL ADDRESS</b>                                      |  |
| <b>PRIME CONTRACTOR NAME</b>                                                                                                  |                                                                 |                                                            |  |
| <b>CONTRACT<br/>ITEM NO.</b>                                                                                                  | <b>ITEM OF WORK OR DESCRIPTION OF SERVICES<br/>BID TO PRIME</b> | <b>PRICE OF WORK<br/>SUBMITTED TO<br/>PRIME CONTRACTOR</b> |  |
|                                                                                                                               |                                                                 |                                                            |  |
| <b>Currently certified as an MBE or WBE under EPA's DBE Program?</b> <input type="checkbox"/> Yes <input type="checkbox"/> No |                                                                 |                                                            |  |
| _____<br>Signature of Prime Contractor                                                                                        |                                                                 | _____<br>Date                                              |  |
| _____<br>Print Name                                                                                                           |                                                                 | _____<br>Title                                             |  |
| _____<br>Signature of Subcontractor                                                                                           |                                                                 | _____<br>Date                                              |  |
| _____<br>Print Name                                                                                                           |                                                                 | _____<br>Title                                             |  |

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<sup>1</sup>Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an SRF award of financial assistance.

FORM 6100-3 (DBE Subcontractor Performance Form)

**Disadvantaged Business Enterprise Program  
DBE Subcontractor Utilization Form**

|                                      |                       |
|--------------------------------------|-----------------------|
| <b>BID/PROPOSAL NO.</b>              | <b>PROJECT NAME</b>   |
| <b>NAME OF PRIME BIDDER/PROPOSER</b> | <b>E-MAIL ADDRESS</b> |
| <b>ADDRESS</b>                       |                       |
| <b>TELEPHONE NO.</b>                 | <b>FAX NO.</b>        |

| <b>The following subcontractors will be used on this project :</b>                                                                                                                                                                  |                              |                         |                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------------------|----------------------------------------------|
| COMPANY NAME, ADDRESS, PHONE NUMBER, AND E-MAIL ADDRESS                                                                                                                                                                             | TYPE OF WORK TO BE PERFORMED | ESTIMATED DOLLAR AMOUNT | TYPE OF FIRM? (Print MBE, WBE or None below) |
|                                                                                                                                                                                                                                     |                              |                         |                                              |
| I certify under penalty of perjury that the forgoing statements are true and correct. In the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c) |                              |                         |                                              |
| _____<br>Signature of Prime Contractor                                                                                                                                                                                              |                              | _____<br>Date           |                                              |
| _____<br>Print Name                                                                                                                                                                                                                 |                              | _____<br>Title          |                                              |

**'Subcontractor is defined as a company firm, joint venture, or individual who enters into an agreement with a contractor to provide service, pursuant to an SRF award of financial assistance.**

FORM 6 100-4 (DBE Subcontractor Utilization Form)

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

### **A. INSTRUCTIONS**

Under Executive Order 12549, an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program, or a sub-agreement thereunder for \$25,000 or more. The status of prospective individuals or organizations can be checked at:

<http://epls.arnet.gov/>

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or sub-agreement participant thereunder must complete the attached certification or provide an explanation why they cannot complete the certification. For further details, see 40 CFR 32.510, Participants Responsibilities.

### **B. WHERE TO SUBMIT**

A prospective prime contractor must submit a completed certification or explanation to the project owner for the project. Each prospective subcontractor must submit a completed certification or explanation to the prime contractor for the project.

### **C. HOW TO OBTAIN FORMS**

This form may be reproduced as necessary. If needed, additional forms may be obtained from the Department of Environment and Natural Resources.



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SRF Project Number

United States Environmental Protection Agency  
Washington, DC 20460

**Certification Regarding  
Debarment, Suspension, and Other Responsibility Matters**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

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Typed Name & Title of Authorized Representative

---

Signature of Authorized Representative

Date

\_\_\_\_\_ I am unable to certify to the above statements. My explanation is attached.

## **AMERICAN IRON AND STEEL CERTIFICATION**

1. Identification of American-made Iron and Steel: Consistent with the terms of the Borrower's bid solicitation and the provisions of the Consolidated Appropriations Act of 2014 ("Omnibus Spending Bill"), Section 436, the Bidder certifies that this bid reflects the Bidder's best, good faith to identify domestic sources of iron and steel for all iron and steel products contained in the bid solicitation where such American-made products are available on the schedule and consistent with the deadlines prescribed in or required by the bid solicitation.
2. Verification of U.S. Production: The Bidder certifies that all iron and steel products contained in the bid solicitation that are American-made have been so identified, and if this bid is accepted, the Bidder agrees that it will provide reasonable, sufficient, and timely verification to the Borrower of the U.S. production of each iron and steel product so identified through the completion of the step certification process.
3. The Bidder is responsible for submitting certified product information to the assistance recipient. Utilization of the step certification process is strongly encouraged. This process requires that each handler (supplier, fabricator, manufacturer, processor, etc.) of the iron and steel products certifies that their step in the process was domestically performed and provides a letter of certification from each supplier/fabricator on transfer of intermediate product. Step certification creates a paper trail which documents the location of the manufacturing process involved with the production of steel and iron materials. An example certification letter can be found in Appendix 5 of the American Iron and Steel Provisions in the SRF General Conditions.
4. The American Iron and Steel provision applies in a manner consistent with United States obligations under international agreements. Typically, these obligations only apply to direct procurement by the entities that are signatory to such agreements. State Revolving Fund assistance recipients are not signatories to such agreements, so these agreements have no impact on the American Iron and Steel provision. Claims from suppliers that the American Iron and Steel provision does not apply to certain products based on the International Trade Agreement exemptions of the Consolidated Appropriations Act of 2014 will not be accepted.
5. Documentation Regarding Non-American-made Iron or Steel: The Bidder certifies that for any iron and steel product that is not American-made and is so identified in this bid, the Bidders has included in or attached to this bid the following, as applicable:
  - a. Identification of and citation to a national waiver published by the U.S. Environmental Protection Agency on the official public Internet Web site of the Environmental Protection Agency that is applicable to such iron and steel product, and an analysis that supports its applicability to the iron and steel product;
  - b. Verifiable documentation sufficient to the Borrower that the waiver request process has been initiated. The assistance recipient may receive a waiver at any point before, during, or after the bid process, if one or more of three conditions is met:
    1. Applying the American Iron and Steel requirements of the Act would be inconsistent with the public interest;

2. Iron and steel products are not produced in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or
3. Inclusion of iron and steel products produced in the United States will increase the cost of the overall project by more than 25 percent.

A checklist detailing the types of information required for a waiver to be processed can be found in Appendix 1 of the American Iron and Steel Provisions of the SRF General Conditions. Until a waiver is granted by EPA, the AIS requirements stand.

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Bidder/Contractor

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Date

---

Signature of Contractor/Title



"General Decision Number: SD20240025 04/19/2024

Superseded General Decision Number: SD20230025

State: South Dakota

Construction Type: Building

County: Custer County in South Dakota.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

|                                                                                                                                                                   |                                                                                                                                                                                                                   |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: | . Executive Order 14026 generally applies to the contract.                                                                                                                                                        |  |
|                                                                                                                                                                   | . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.  |  |
|                                                                                                                                                                   |                                                                                                                                                                                                                   |  |
| If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:         | . Executive Order 13658 generally applies to the contract.                                                                                                                                                        |  |
|                                                                                                                                                                   | . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024. |  |
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The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a

conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

| Modification Number | Publication Date |
|---------------------|------------------|
| 0                   | 01/05/2024       |
| 1                   | 04/19/2024       |

BRSD0004-003 08/01/2022

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| BRICKLAYER..... | \$ 33.58 | 4.60    |

PLUM0300-015 05/01/2023

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| PIPEFITTER..... | \$ 34.01 | 15.65   |

\* SFSD0669-003 04/01/2024

|                                            | Rates    | Fringes |
|--------------------------------------------|----------|---------|
| SPRINKLER FITTER (Fire<br>Sprinklers)..... | \$ 36.05 | 24.09   |

\* SUSD2012-022 08/21/2014

|                                                                                        | Rates       | Fringes |
|----------------------------------------------------------------------------------------|-------------|---------|
| CARPENTER, Excludes Drywall<br>Hanging, Form Work, and Metal<br>Stud Installation..... | \$ 19.48    | 7.88    |
| CEMENT MASON/CONCRETE FINISHER...                                                      | \$ 19.58    | 0.00    |
| DRYWALL HANGER AND METAL STUD<br>INSTALLER.....                                        | \$ 18.19    | 0.00    |
| ELECTRICIAN.....                                                                       | \$ 19.89    | 2.69    |
| FORM WORKER.....                                                                       | \$ 17.50    | 0.00    |
| INSULATOR - MECHANICAL<br>(Duct, Pipe & Mechanical<br>System Insulation).....          | \$ 15.20 ** | 0.00    |
| IRONWORKER, STRUCTURAL.....                                                            | \$ 23.91    | 12.05   |
| LABORER: Common or General.....                                                        | \$ 10.91 ** | 0.00    |

|                                                          |             |      |
|----------------------------------------------------------|-------------|------|
| LABORER: Mason Tender - Brick....                        | \$ 20.70    | 0.00 |
| LABORER: Landscape and<br>Irrigation.....                | \$ 12.44 ** | 0.00 |
| OPERATOR:<br>Backhoe/Excavator/Trackhoe.....             | \$ 17.80    | 0.00 |
| PAINTER (Brush, Roller, and<br>Spray).....               | \$ 18.48    | 0.00 |
| PLUMBER.....                                             | \$ 21.23    | 9.00 |
| ROOFER.....                                              | \$ 13.74 ** | 1.35 |
| SHEET METAL WORKER (HVAC Duct<br>Installation Only)..... | \$ 18.68    | 3.72 |
| TRUCK DRIVER: Dump Truck.....                            | \$ 15.06 ** | 1.10 |

---

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

=====

\*\* Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.20) or 13658 (\$12.90). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <https://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

-----

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

#### Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

#### Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion



date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

#### Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

---

#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION"

"General Decision Number: SD20240029 04/19/2024

Superseded General Decision Number: SD20230029

State: South Dakota

Construction Type: Building

County: Pennington County in South Dakota.

BUILDING CONSTRUCTION PROJECTS (does not include single family homes or apartments up to and including 4 stories).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

|                                                                                                                                                                   |                                                                                                                                                                                                                   |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022: | . Executive Order 14026 generally applies to the contract.                                                                                                                                                        |  |
|                                                                                                                                                                   | . The contractor must pay all covered workers at least \$17.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2024.  |  |
|                                                                                                                                                                   |                                                                                                                                                                                                                   |  |
| If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:         | . Executive Order 13658 generally applies to the contract.                                                                                                                                                        |  |
|                                                                                                                                                                   | . The contractor must pay all covered workers at least \$12.90 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2024. |  |
|                                                                                                                                                                   |                                                                                                                                                                                                                   |  |
|                                                                                                                                                                   |                                                                                                                                                                                                                   |  |
|                                                                                                                                                                   |                                                                                                                                                                                                                   |  |

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BRSD0004-003 08/01/2022

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| BRICKLAYER..... | \$ 33.58 | 4.60    |

PLUM0300-015 05/01/2023

|                 | Rates    | Fringes |
|-----------------|----------|---------|
| PIPEFITTER..... | \$ 34.01 | 15.65   |

\* SFSD0669-003 04/01/2024

|                                            | Rates    | Fringes |
|--------------------------------------------|----------|---------|
| SPRINKLER FITTER (Fire<br>Sprinklers)..... | \$ 36.05 | 24.09   |

\* SUSD2012-026 08/21/2014

|                                                                                           | Rates       | Fringes |
|-------------------------------------------------------------------------------------------|-------------|---------|
| CARPENTER, Excludes Drywall<br>Hanging and Metal Stud<br>Installation, and Form Work..... | \$ 19.78    | 4.11    |
| CEMENT MASON/CONCRETE FINISHER...                                                         | \$ 19.58    | 0.00    |
| DRYWALL HANGER AND METAL STUD<br>INSTALLER.....                                           | \$ 18.19    | 0.00    |
| ELECTRICIAN.....                                                                          | \$ 20.39    | 2.69    |
| FORM WORKER.....                                                                          | \$ 17.50    | 0.00    |
| INSULATOR - MECHANICAL<br>(Duct, Pipe & Mechanical<br>System Insulation).....             | \$ 15.20 ** | 0.00    |
| IRONWORKER, STRUCTURAL.....                                                               | \$ 23.91    | 12.05   |
| LABORER: Common or General.....                                                           | \$ 11.24 ** | 0.00    |

|                                                          |             |      |
|----------------------------------------------------------|-------------|------|
| LABORER: Mason Tender - Brick....                        | \$ 21.05    | 0.00 |
| LABORER: Landscape and<br>Irrigation.....                | \$ 12.44 ** | 0.00 |
| OPERATOR:<br>Backhoe/Excavator/Trackhoe.....             | \$ 17.80    | 0.00 |
| PAINTER (Brush, Roller, and<br>Spray).....               | \$ 18.48    | 0.00 |
| PLUMBER.....                                             | \$ 20.13    | 0.00 |
| ROOFER.....                                              | \$ 13.62 ** | 1.00 |
| SHEET METAL WORKER (HVAC Duct<br>Installation Only)..... | \$ 18.68    | 3.72 |
| TRUCK DRIVER: Dump Truck.....                            | \$ 15.06 ** | 1.10 |

---

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date for the classifications and rates under that identifier.

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---

#### WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

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- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

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Administrative Review Board  
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200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

=====

END OF GENERAL DECISION"



## CERTIFICATION OF PROHIBITED ENTITY STATUS

### SDCL 5-18A-51

As a required portion of the bid being submitted to the City of Box Elder, Bidder submits this certification.

SDCL 5-18A-1(19A) defines "Prohibited Entity" as follows:

"[A]n organization, association, corporation, partnership, joint venture, limited partnership, limited liability partnership, limited liability company, or other entity or business association, including all wholly owned subsidiaries, majority-owned subsidiaries, parent companies, or affiliates, of those entities or business associations, regardless of their principal place of business, which is ultimately owned or controlled by:

- (a) A foreign parent entity from the People's Republic of China, the Republic of Cuba, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Russian Federation, or the Bolivarian Republic of Venezuela; or
- (b) The government of the People's Republic of China, the Republic of Cuba, the Islamic Republic of Iran, the Democratic People's Republic of Korea, the Russian Federation, or the Bolivarian Republic of Venezuela.

A prohibited entity does not include a citizen or legal permanent resident of the United States, or an individual foreign national.

The undersigned hereby certifies to the City of Box Elder the following:

1. I am an authorized representative and agent of

\_\_\_\_\_ (Bidder);

2. Check one:

\_\_\_\_\_ Bidder is not a Prohibited Entity as defined by SDCL 5-18A-1(19A); or

\_\_\_\_\_ Bidder is a Prohibited Entity pursuant to SDCL 5-18A-1(19A) but grounds for waiver exist pursuant to SDCL 5-18A-52. If marking this option, provide the basis for the requested grounds for waiver.

2. I understand that a Bidder who becomes a Prohibited Entity, as defined above, at any time after making this certification that it is not a Prohibited Entity, Bidder must provide written notice to the City of Box Elder, who may terminate the contract.
3. I understand that SBHWS has the right to terminate a contract with any contractor who submits a false certification, and that any bidder who submits a false certification may be subject to suspension or debarment under SDCL 5-18D-12.

Dated this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

(Contractor Business Name)

By: \_\_\_\_\_

Printed name:

Title: \_\_\_\_\_



## **Appendix B**

### **Geotechnical Evaluation**

---

Geotechnical Evaluation Proposed Sanitary Sewer  
Improvements Cheyenne Boulevard & West Gate Road  
Box Elder, SD





**Report of Geotechnical Exploration**  
Proposed Sanitary Sewer Improvements  
Cheyenne Boulevard & West Gate Road  
Box Elder, South Dakota

AET Project No. P-0032141

**Date:**  
June 6, 2024

**Prepared for:**  
Towey Design Group, Inc.  
475 Villa Drive, Suite #3  
Box Elder, South Dakota 57719

Geotechnical • Materials  
Forensic • Environmental  
Building Technology  
Petrography/Chemistry

**American Engineering Testing**  
1745 Samco Road  
Rapid City, South Dakota 57702  
TeamAET.com • 605.388.0029



June 6, 2024

Towey Design Group, Inc.  
475 Villa Drive, #3  
Box Elder, South Dakota 57719

Attn: Mr. Mike Towey, PE

RE: Report of Geotechnical Exploration  
Proposed Sanitary Sewer Improvements  
Cheyenne Boulevard and West Gate Road  
Box Elder, South Dakota  
AET Project No. P-0032141

Dear Mike,

American Engineering Testing, Inc. (AET) is pleased to present the results of our subsurface exploration program and geotechnical engineering review for the above referenced project to be constructed in Box Elder, South Dakota. These services were performed in general accordance with our proposal to you dated February 23, 2024, and your written authorization to proceed provided on March 20, 2024. We are submitting one (1) electronic copy of the report to you.

Please contact me if you have any questions about the report. I can also be contacted to arrange observation and testing services during construction of the project.

Sincerely,  
**American Engineering Testing, Inc.**

A handwritten signature in blue ink that reads 'Walt Feeger'.

Walt Feeger, PE  
Principal Engineer – West Division  
[wfeeger@teamaet.com](mailto:wfeeger@teamaet.com)  
Phone: (605) 388-0029

## SIGNATURE PAGE

Prepared for:

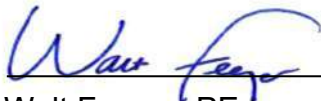
Towey Design Group, Inc.  
475 Villa Drive, Suite #3  
Box Elder, South Dakota 57719

Attn: Mr. Mike Towey, PE

Prepared by:

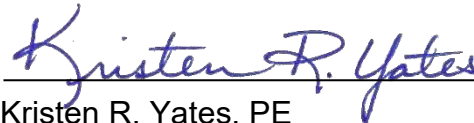
American Engineering Testing, Inc.  
1745 Samco Road  
Rapid City, South Dakota 57702  
(605) 388-0029  
[www.teamAET.com](http://www.teamAET.com)

Authored by:



Walt Feeger, PE  
Principal Engineer – West Division

Reviewed by:



Kristen R. Yates, PE  
Western Dakotas Area Manager





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- Subsurface Boring Logs
- Gradation Curves
- Moisture-Density Relationship (Proctor) Test Reports
- California Bearing Ratio (CBR) Test Reports

### **APPENDIX B**

- Geotechnical Report Limitations and Guidelines for Use



## **1.0 INTRODUCTION**

We understand new roadway and associated utility extensions of Cheyenne Boulevard and West Gate Road have been proposed in Box Elder, South Dakota. Please refer to Figure 1: Site Location Map within Appendix A for the location of the site. To assist with the planning and design, American Engineering Testing, Inc. (AET) has been authorized to conduct a subsurface exploration program at the site, conduct soil laboratory testing, and perform a geotechnical engineering review for the project. This report presents the results of the above services and provides our engineering recommendations based on this data.

## **2.0 SCOPE OF SERVICES**

AET's services were performed in general accordance with our proposal dated February 23, 2024. The authorized scope consists of the following:

- Fifteen (15) Standard Penetration Test (SPT) borings to depths of about 20 to 25 feet below existing grade along the proposed street alignments.
- Soil laboratory testing.
- Geotechnical engineering analysis based on the gained data and preparation of this report.

These services are intended for geotechnical purposes only. The scope is not intended to explore for the presence or extent of environmental contamination in the soil or groundwater.

## **3.0 PROJECT INFORMATION**

Based on the information provided, we understand the project will consist of the design and construction of new trunk sanitary sewer mains along the future extensions of Cheyenne Boulevard (~12,500 lf) and West Gate Road (~6,700 lf) in Box Elder. The project will include horizontal boring under a railroad crossing as well as crossing Box Elder Creek. Additionally, the project will include preliminary design of the paved street alignments.

The purpose of the geotechnical study was to determine the subsurface geology and groundwater conditions along the alignments and to evaluate the suitability of the site soils for their use in constructing the new underground utilities as well as the proposed paved streets.

The previously stated information represents our understanding of the proposed construction. This information is an integral part of our engineering review. It is important that you contact us if there are changes from that described so that we can evaluate whether modifications to our recommendations are appropriate.

## **4.0 SUBSURFACE EXPLORATION AND TESTING**

### **4.1 Field Exploration Program**

The subsurface exploration program conducted for the project consisted of fifteen (15) standard penetration test (SPT) borings, which were drilled on April 10, 11, and 14, 2024. The borings were drilled at locations selected by AET and Towey Design Group (TDG) personnel at approximate spacing of 1,500 lineal feet along the proposed alignments.

The boring locations are shown on Figure 2: Cheyenne Boulevard Boring Location Map and Figure 3: West Gate Road Boring Location Map, included in Appendix A. The elevations at the boring locations were provided by TDG.

The logs of the borings and details of the methods used appear in Appendix A. The logs contain information concerning soil layering, soil classification, geologic origins, and moisture condition. A density description or consistency is also noted for the natural soils, which is based on the standard penetration resistance (N-value).

### **4.2 Laboratory Testing**

The laboratory test program included natural moisture content, Atterberg Limits, sieve (gradation) analysis, pH, resistivity, moisture-density relationship (proctor), and California Bearing Ratio (CBR). The test results appear in Appendix A on the individual boring logs adjacent to the samples upon which they were performed or on the data sheets following the logs.

Moisture-density relationship (modified Proctor) and California Bearing Ratio (CBR) tests, performed on selected bulk samples as summarized below, are also included on separate sheets within Appendix A at the end of this report. The CBR tests were remolded to approximately 95% of maximum dry density at the optimum moisture content for the specific boring/material.

Results of the moisture-density relationship and CBR tests are summarized as follows:

| Boring    | Depth, ft | Soil Classification            | Optimum Moisture Content, % <sup>1</sup> | Maximum Dry Density, pcf <sup>1</sup> | CBR Value <sup>2</sup> |
|-----------|-----------|--------------------------------|------------------------------------------|---------------------------------------|------------------------|
| B-1       | 1-5       | Sandy Lean to Fat Clay (CL-CH) | 13.6                                     | 118.5                                 | 2.8                    |
| B-4/B-5   | 1-5       | Sandy Lean to Fat Clay (CL-CH) | 16.3                                     | 111.2                                 | 2.2                    |
| B-8/B-9   | 1-5       | Sandy Lean to Fat Clay (CL-CH) | 20.4                                     | 106.2                                 | 2.4                    |
| B-13/B-14 | 1-5       | Sandy Fat Clay (CH)            | 16.0                                     | 113.2                                 | 2.2                    |

<sup>1</sup> Based on ASTM D 1557 (modified proctor)

<sup>2</sup> Based on ASTM D 1883

It should be noted the bulk soil samples represent a mixture of the soils encountered within the upper 1 to 5 foot interval of the borehole. As such, the soil classification as presented on the Moisture-Density Relationship and CBR data sheets may differ from the classifications of the individual soil layers identified on the respective Subsurface Boring Log.

Laboratory pH and resistivity tests were performed on bulk samples obtained from Boring B-1, combined bulk samples from Borings B-4 & B-5, B-8 & B-9, and B-13 & B-14. The results are summarized below.

| Boring    | Depth, ft | Soil Type                      | pH   | Resistivity, ohm-cm | Corrosion Potential |
|-----------|-----------|--------------------------------|------|---------------------|---------------------|
| B-1       | 1-5       | Sandy Lean to Fat Clay (CL-CH) | 7.04 | 410                 | Severe              |
| B-4/B-5   | 1-5       | Sandy Lean to Fat Clay (CL-CH) | 7.37 | 240                 | Severe              |
| B-8/B-9   | 1-5       | Sandy Lean to Fat Clay (CL-CH) | 7.57 | 280                 | Severe              |
| B-13/B-14 | 1-5       | Sandy Fat Clay (CH)            | 7.43 | 350                 | Severe              |

The corrosion potentials provided are based on information published in the Department of the Army's Technical Manual TM 5-811-7 "Electrical Design, Cathodic Protection. Based on this information, the site soils have a severe corrosion potential towards iron and other buried metals. If corrosion of buried metal is critical, it should be protected using a non-corrosive backfill, wrapping, coating, sacrificial anodes, or a combination of these methods, as designed by a qualified corrosion engineer.

## **5.0 SITE CONDITIONS**

### **5.1 Surface Observations**

At the time of our field work, the overall site consisted of rolling vacant rangeland and agricultural farmland vegetated with native and planted grasses, agricultural feed products, weed and trees. The proposed roadway alignments are also bisected by numerous drainages as well as Box Elder Creek.

### **5.2 Subsurface Soils/Geology**

In general, the subsurface geology encountered at the boring locations consisted of Terrace Deposits overlying weathered to competent Shale Bedrock, associated with the Pierre Shale Formation, which were encountered, extended to the total depths explored. The Terrace Deposits are comprised of soft to very stiff sandy lean to fat clays, medium dense to very dense well graded gravels, and loose to medium dense clayey sands.

It should be noted that about 2 feet of sandy lean to fat clay fill was encountered under a gravel surfacing material in Boring B-7. The fill is underlain by very stiff to hard shale bedrock. Similarly, in Boring B-14, underlying surface topsoil, about 1 foot of sandy lean to fat clay fill was encountered over sandy lean to fat clay terrace deposits and weathered shale bedrock.

Additionally, the weathered shale bedrock was encountered directly below the topsoil in Borings B-11 through B-13. The weathered shale is underlain by competent shale bedrock, which extended to the total depths explored.

The Subsurface Boring Logs included in Appendix A give a more detailed description of the soils encountered within the borings.

### **5.3 Groundwater**

At the time of our field work, groundwater was only encountered within Borings B-1, B-2, and B-4 at depths of approximately 7.5 feet, 8.6 feet, and 14.5 feet, respectively. The presence or lack of groundwater noted at the boring locations should not be taken as an accurate representation of the actual groundwater levels. Groundwater levels can fluctuate due to varying seasonal and annual rainfall and snow melt amounts, as well as other factors including local irrigation practices and levels of water in drainage areas as well as within Box Elder Creek. A long period of time may be required for groundwater to stabilize in the soils present at the site; this period of time is generally not available during a typical subsurface exploration program.

## **6.0 RECOMMENDATIONS**

### **6.1 Discussion**

The following recommendations are based on the conditions observed in the widely spaced soil borings at the time of our exploration. Based upon the variation of surface elevations across the site, it is anticipated that cut and fill balances on the order of 5 feet or less will be required during site grading to obtain the final street alignments. Some deeper fills may be required where the alignments bisect existing drainage areas.

Once the existing topsoil is removed, the exposed subgrade will more than likely require some level of subgrade remediation, depending on the moisture conditions at the time of construction. Contractors working on this project should be aware of the potential of encountering soft subgrade soils and should anticipate processing and moisture conditioning the subgrade material in order to reach the specified compaction requirements.

Groundwater was encountered in several of the borings, and the potential exists for encountering soft, wet, and unstable subgrade soils almost anywhere in the vicinity of irrigated/drainage areas. The earthwork contractor should anticipate these soil/groundwater conditions, and the bid documents should include a line item for subgrade remediation and trench/excavation dewatering.

Also, please note that due the variability of the soils across this site, it is likely the soils between the boring locations may differ from those encountered at the boring locations. Further, changes in climatic conditions between the time of exploration and the time of construction may also affect soil conditions, particularly groundwater levels and the moisture content of the soils. We highly recommend that construction take place during warmer weather months (typically May through October) which will aid in the proper processing and moisture conditioning of the subgrade as well as the excavated site soils for re-use as overlot, street embankment, and utility trench backfill.

### **6.2 Site Grading**

We recommend that all topsoil, vegetation, man-made debris and other unsuitable materials be removed in their entirety from within the proposed street alignments and all areas to receive fill. Stripped materials consisting of vegetation/organic and unsuitable debris should be wasted from the site. Topsoil may be stockpiled on-site to re-vegetate embankment ditch slope areas after completion of grading operations.

Please note, determining the thickness of the “topsoil” layer is usually limited, due to variations in topsoil definition, sample recovery, and other factors. Visual-manual description often relies on color for determination, and transitioning changes can account for significant variation in thickness judgment. Accordingly, the topsoil thickness presented on the logs should not be the sole basis for calculating topsoil stripping depths and volumes. If more accurate information is needed relating to thickness and topsoil quality definition, alternate methods of sample retrieval and testing should be employed.

Where required, grading should continue to the desired design elevations. In areas to receive fill, the exposed subgrade should be scarified to a depth of at least 8-inches, the moisture content of the scarified soils adjusted to near optimum moisture content and the soils compacted to at least 92% of maximum modified Proctor dry density (ASTM D1557).

Based on the borings, near surface clay soils will be predominately encountered across the site as the subgrade material for support of pavements. The site soils are suitable for use as embankment fill to reach the desired site street grade elevations as well as for overlot fill material, where required.

For grading purposes, the site clay soils should be processed and moisture conditioned to within of -1 to +3% of optimum, placed in maximum 8-inch loose lift thicknesses, and then compacted to at least 92% of maximum modified Proctor dry density (ASTM D1557) for fill heights of 10 feet or less. Where encountered, granular soils (sands and gravels) should be moisture conditioned to within  $\pm 3\%$  prior to use. Additionally, if re-used, the shale bedrock should be processed and moisture conditioned to within -1 to +3% of optimum.

For fill heights greater than 10 feet, we recommend the compaction requirement be increased to 95% of the maximum dry density (ASTM D1557). Additionally, we recommend that regardless of fill heights, the final lift of fill material be compacted to a minimum of 95% of the maximum dry density. We also recommend particular attention be paid to the compaction efforts around manholes to reduce the potential of future related settlement issues.

It is our opinion that site materials can be ripped and moved with conventional earthmoving equipment. We recommend a shrinkage factor of at least 25% be used for calculating cut and fill balances across the site. Should additional fill be required, the proposed import backfill should be submitted to the geotechnical engineer for approval prior to use.

Intrusion of perched groundwater or run-off accumulation should be expected in the excavations performed at this site. Temporary dewatering of these excavations will be necessary if groundwater is encountered or surface drainage is allowed to accumulate in the excavations. Contractors working on the project should have equipment on-site that will lower and maintain the groundwater level below the base of the excavations.

### **6.3 Permanent Cut and Fill Slopes**

As noted, cut and fill balances are anticipated in order to reach the desired street alignment elevations. Proper subgrade preparation/remediation as well as strict moisture and density control during fill placement will be critical at this site. We highly recommend that fill sections be constructed as early as possible within the construction period to allow for settlements to occur before the placement of structures and paving.

Where fill placement against existing slopes is required, engineered fill should be placed starting at the toe of the slope. Subsequent fill should be benched into the exposed soils/bedrock. Wherever existing slopes within the site soils are steeper than 4H:1V and will be covered by fill, the existing slope should be benched with a maximum bench height of 5 feet. Benches should be wide enough to accommodate compaction and earth-moving equipment, and to allow placement of horizontal lifts of fill. All fill slopes and benches should be constructed across the entire width of the slope and tied into the existing contours.

Where the site bedrock is exposed, benching should be performed regardless of existing slopes. Failure to properly bench the exposed bedrock prior to fill placement dramatically increases the potential of post construction slope movement.

The reconstructed slopes should be re-vegetated once construction is complete to alleviate excessive erosion. Typically, we recommend the slope be seeded with a native seed mix and covered with a straw blanket or vegetation mat. Hydro-seed technology may be utilized as well.

### **6.4 Utility Construction**

Other than the exceptions noted herein, we recommend that all trench excavation and backfilling be performed in accordance with Section 31.23.16 'Excavation, Trenching and Backfill', of the City of Box Elder Standard Construction Specifications and Details, current edition.



Conventional equipment such as tracked excavators should be able to make the required trench excavations within the site soils along the proposed utility alignments. Depending on the depths required for utility placement, cobble to boulder sized material could be encountered within the site terrace deposits, which may make excavation difficult where such oversized material is encountered.

As noted, groundwater was encountered within several of the borings drilled along the proposed alignments. Depending on the time of year construction takes place, groundwater accumulation may occur within new trenches, especially where granular (sands and gravels) are encountered overlying the shale bedrock. Earthwork contractors should anticipate dewatering the excavations and have equipment on-site that will lower and maintain the groundwater level below the base of the excavations.

As noted, near surface lean to fat clay soils and shale (fat clay) bedrock will be predominantly present along the utility alignment(s). Based on the results of our laboratory tests, the trench spoils will likely be at or above the optimum moisture content. As such, the earthwork contractor should anticipate processing (drying) the material in order to reach the desired moisture content prior to placing the material as trench backfill.

Means and methods of attaining the required moisture content and workability of the material should be left to the discretion of the earthwork contractor, but high moisture content soils should not be deemed 'unsuitable' for use. We recommend, if possible and where encountered together, the site clay and sand/gravel soils be mixed and re-used as backfill material.

## 6.5 Trench Excavation

If excavation faces are not retained, the excavations should maintain maximum allowable slopes in accordance with *OSHA Regulations (Standards 29 CFR), Part 1926, Subpart P, "Excavations"* (can be found on [www.osha.gov](http://www.osha.gov)). Even with the required OSHA sloping, water seepage or surface runoff can potentially induce side slope erosion or running which could require slope maintenance.

For trench excavations, it is our opinion the soils should be classified as Type C with recommended slope laybacks of 1.5H:1V. The site shale should be classified as Type B, with recommended slope laybacks of 1H:1V. These classifications should be considered preliminary and should be verified in the field on a daily basis by the contractor and/or geotechnical engineer. Excavations deeper than 20 feet and/or in saturated soils or below the ground water table should be considered on an individual basis.

Water levels, due to climatic conditions, should be evaluated at the time of construction. If the above trench layback recommendations are not feasible, due to space limitations or other factors, the OSHA rules should be consulted for alternative trench stabilization methods. Trench boxes or shoring/sheet piling in compliance with OSHA rules may be acceptable alternatives.

## **6.6 Utility Trench Backfill**

It is our opinion that the site soils may be used as trench backfill. As noted, processing and moisture conditioning of the soils should be anticipated to obtain moisture contents suitable to achieve the recommended compaction levels. All recommendations are based on the modified Proctor method (ASTM D1557).

1. All backfill should be free of organics, deleterious/frozen material, and manmade/construction debris and have a maximum nominal size of 2-inches.
2. We anticipate the backfill soils will predominately consist of clay materials. Therefore, backfill should be moisture conditioned to within -1 to +3% of optimum moisture content prior to being placed. Any granular material encountered and re-used should be moisture conditioned to within  $\pm 3\%$  prior to use.
3. All backfill should be placed in loose lift thicknesses of 8-inches or less. If hand-operated compaction equipment is used, the loose lift thickness should be reduced to 4-inches or less.
4. Each lift should be compacted to at least 92% of maximum proctor density. Within the street alignments and under sidewalks/driveways, the top 1-foot lift of backfill should be compacted to at least 95% of maximum proctor density.
5. Compaction density tests should be performed on alternating lifts to ensure the minimum density is maintained.

Should additional fill be required, the proposed imported backfill should be submitted to the geotechnical engineer for approval prior to use.

## **6.7 Jacking Bore & Receiving Pits**

We understand that horizontal borings for crossings at the railroad tracks and Box Elder Creek, on the north end of the proposed West Gate Road alignment, will be required. To complete the horizontal borings, excavation of jacking pits will be required in the vicinity of Borings B-1 through B-3. Based on the plan and profile sheets provided, anticipated depths of the required excavations for the jacking bore and receiving pits at the railroad crossing will be on the order of approximately 22 feet below existing grade, with excavations on the order of about 16 feet required at the Box Elder Creek crossing. Based on the boring log information, this will place the bottom of the pits at or within the shale bedrock, and medium dense to very dense sand/gravel materials through which the new casing will be bored/jacked below the crossing.

Groundwater was encountered at depths of about 7½ to 8½ feet below grade, and therefore, groundwater should be expected to be encountered during the required excavations. Where groundwater is encountered, conventional construction dewatering equipment can be used to maintain a workable area. If soft and/or wet soils are exposed at the base of the pits, a gravel cushion may be required to provide a firm working base for equipment. Additionally, cobble to potential boulder sized material should be expected within the site gravel soils and may make excavation difficult where encountered. The earthwork contractor should be made aware of these potentials during the bidding process.

If the trench layback recommendations provided in Section 6.5 of this report are not feasible for the jacking bore and receiving pits, due to space limitations or other factors, the OSHA rules should be consulted for alternative trench stabilization methods. Trench boxes or shoring in compliance with OSHA rules may be acceptable alternatives.

## **6.8 Pavements**

### **6.8.1 Considerations**

The following pavement sections were designed based on the City of Box Elder Infrastructure Design Standards (current edition), and the procedures outlined in the 1993 AASHTO Empirical Equation for Flexible Pavements and Rigid Pavements.

It is expected that residential and commercial/retail growth will continue along the corridor between Rapid City and Box Elder Reservoir Road, and the Cheyenne Boulevard street alignment will eventually serve as a minor arterial for the existing and new developments. Therefore, for design purposes, a 20-year design E-18 (ESAL) value of 600,000 was utilized in the pavement design analysis.

Additionally, it is expected that the West Gate Road alignment will eventually serve as a collector street from Cheyenne Boulevard northward to the intersection with US Highway 14/16. Therefore, for design purposes, a 20-year design E-18 (ESAL) value of 325,000 was utilized in the pavement design analysis for West Gate Boulevard.

The 20-year design period is considered to be the interval over which, with proper maintenance, the pavement will not require major repairs. A continuing regular maintenance program should be implemented to maintain satisfactory serviceability over the design life. The maintenance program should include sealing cracks and repairing minor deficiencies. Please notify us if any of the parameters used in the pavement design do not adequately define the anticipated conditions.

It is anticipated that pavement subgrade soils will predominately consist of lean to fat clay soils and shale bedrock. Based on the laboratory tests results, an average CBR value of 2.4 was used for the pavement design analysis. In addition to the calculated laboratory CBR value, we have used the following design parameters:

| Design Criteria                   | Asphaltic Concrete (AC)                               | Portland Cement Concrete (PCC) |
|-----------------------------------|-------------------------------------------------------|--------------------------------|
| Modulus of Subgrade Reaction (k)  | --                                                    | 110                            |
| Overall Design Standard Deviation | 0.45                                                  | 0.35                           |
| Soil Resilient Modulus            | CBR x 1500                                            | --                             |
| Initial Serviceability            | 4.2                                                   | 4.5                            |
| Terminal Serviceability           | 2.5                                                   | 2.5                            |
| Reliability, %                    | 90                                                    | 90                             |
| Drainage Coefficient              | 0.75 (without edge drains)<br>1.00 (with edge drains) | --                             |
| Load Transfer Coefficient         | --                                                    | 4.2                            |

### 6.8.2 Pavement Section Recommendations

Based on the above stated information and our analysis, we recommend the following pavement section be used for this project:

| Recommended Pavement Section Thickness (inches) |                 |                  |                               |               |             |
|-------------------------------------------------|-----------------|------------------|-------------------------------|---------------|-------------|
| Traffic Area                                    | Asphalt, inches | Concrete, inches | Aggregate Base Course, inches | Total, inches | Edge Drains |
| Cheyenne Boulevard                              | 5               | ---              | 15                            | 20            | Yes         |
|                                                 |                 |                  | 20                            | 25            | No          |
|                                                 | 6               | ---              | 12                            | 18            | Yes         |
|                                                 |                 |                  | 16                            | 22            | No          |
|                                                 | ---             | 9                | 8                             | 17            | na          |

| Recommended Pavement Section Thickness (inches) |                 |                  |                               |               |             |
|-------------------------------------------------|-----------------|------------------|-------------------------------|---------------|-------------|
| Traffic Area                                    | Asphalt, inches | Concrete, inches | Aggregate Base Course, inches | Total, inches | Edge Drains |
| West Gate Road                                  | 5               | ---              | 13                            | 18            | Yes         |
|                                                 |                 |                  | 17                            | 22            | No          |
|                                                 | 6               | ---              | 10                            | 16            | Yes         |
|                                                 |                 |                  | 13                            | 19            | No          |
|                                                 | ---             | 8                | 10                            | 18            | na          |

The asphalt should be obtained from an approved mix design conforming to Section 32.12.16 'Asphaltic Paving' of the City of Box Elder Standard Construction Specifications and Details, current edition. Mix designs should be submitted prior to construction to verify their adequacy. Asphalt material should be placed in maximum 3-inch lifts and compacted to the minimum standards outlined in the City of Box Elder Specifications.

Aggregate base course used in the asphalt pavement section can typically be reduced by about 25% when utilizing a geotextile separation/stabilization fabric or a geogrid. We recommend the geotextile manufacturer, such as Tensar or Mirafi, be contacted for design parameters and additional considerations for the pavement sections.

The Portland Cement Concrete (PCC) should be obtained from an approved mix design conforming to Section 32.13.13 'Concrete Paving' of the City of Box Elder Standard Construction Specifications and Details, current edition. Mix designs should be submitted prior to construction to verify their adequacy.

Longitudinal and transverse joints should be provided as needed in concrete pavements for expansion/contraction and isolation. The location and extent of joints should be based upon the final pavement geometry. Sawed joints should be cut within 24-hours of concrete placement. All joints should be sealed to prevent entry of foreign material and dowelled where necessary for load transfer.

### **6.8.3 Aggregate Base Course**

Aggregate base course should be moisture conditioned to within  $\pm 3\%$  of optimum and compacted to a minimum of 95% of maximum density as determined by the modified proctor method (ASTM D1557) and should meet the requirements as outlined in Section 32.11.23.04 'Subbase, Base, Gravel Cushion, and Gravel Surfacing' of the City of Box Elder Standard Construction Specifications and Details, current edition.

### **6.9 Pavement Maintenance**

The pavement section provided in this report represents a minimum recommended thickness and, as such, periodic maintenance should be anticipated. Therefore, preventive maintenance should be planned and provided for through an on-going pavement management program. Preventive maintenance activities are intended to slow the rate of pavement deterioration. Pavement maintenance consists of both localized maintenance (crack and joint sealing and patching) and global maintenance (surface sealing).

Preventive maintenance is usually the first priority when implementing a planned pavement maintenance program and provides the highest return on investment for pavements. Prior to implementing any maintenance program, additional engineering input is recommended to determine the type and extent of preventive maintenance appropriate. Even with periodic maintenance, some movements and related cracking may still occur and repairs may be required.

## **7.0 CONSTRUCTION CONSIDERATIONS**

### **7.1 Potential Difficulties**

#### **7.1.1 Soft Subgrade Soils**

Depending on the time of year in which construction takes place, unstable subgrade soils could be encountered during the site grading operations, especially once the existing topsoil is removed. Soft, unstable soils may also be encountered within low-lying/drainage areas of the alignments. If encountered, additional conditioning of the soils may be required to obtain moisture contents which allow for firm and unyielding subgrade and/or compaction.

Localized areas of soft wet subgrades can be remedied with additional excavation to expose firmer soils, placement of coarse rock to provide a solid base on which to place additional fill and/or the use of geotextiles between the soft soils and the overlying fill and/or pavement sections. The appropriate means of subgrade stabilization should be evaluated by the geotechnical engineer at the time of construction.

#### **7.1.2 Bedrock, Large Cobbles and Boulders**

The subgrade terrace deposit sand/gravel soils at this site may include cobble and potential boulder sized material. This may make excavating procedures somewhat more difficult than normal where they are encountered. Large excavating equipment may be necessary to achieve the required excavation where the oversized materials are encountered.

#### **7.1.3 Runoff Water in Excavation**

Water can be expected to collect in the excavation bottom during times of inclement weather or snow melt. To allow observation of the excavation bottom, to reduce the potential for soil disturbance, and to facilitate filling operations, we recommend water be removed from within the excavation during construction. Based on the soils encountered, we anticipate the groundwater can be handled with conventional sump pumping.

#### **7.1.4 Disturbance of Soils**

The on-site soils can be disturbed under construction traffic, especially if the soils are wet. If soils become disturbed, they should be subcut to the underlying undisturbed soils. The subcut soils can then be dried and recompact back into place, or they should be removed and replaced with drier imported fill.

## 7.2 Excavation Backsloping

If excavation faces are not retained, the excavations should maintain maximum allowable slopes in accordance with *OSHA Regulations (Standards 29 CFR), Part 1926, Subpart P, "Excavations"* (can be found on [www.osha.gov](http://www.osha.gov)). Even with the required OSHA sloping, water seepage or surface runoff can potentially induce sideslope erosion or sloughing which could require slope maintenance.

## 7.3 Observation and Testing

The recommendations in this report are based on the subsurface conditions found at our test boring locations. Since the soil conditions can be expected to vary away from the soil boring locations, we recommend on-site observation by a geotechnical engineer or his representative during construction to evaluate these potential changes. Soil density testing should also be performed on the exposed subgrade and any new fill placed in order to document that project specifications for compaction have been satisfied.

## 8.0 LIMITATIONS

Within the limitations of scope, budget, and schedule, we have endeavored to provide our services according to generally accepted geotechnical engineering practices at this time and location. Other than this, no warranty, expressed or implied, is intended. Important information regarding risk management and proper use of this report is given in Appendix B entitled "Geotechnical Report Limitations and Guidelines for Use."



# Appendix A

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Geotechnical Field Exploration and Testing  
Boring Log Notes  
Unified Soil Classification System  
Figure 1: Site Location Map  
Figure 2: Cheyenne Blvd Boring Location Map  
Figure 3: West Gate Rd Boring Location Map  
Subsurface Boring Logs  
Gradation Curves  
Moisture-Density Relationship (Proctor) Reports  
California Bearing Ratio (CBR) Test Reports

# **Appendix A**

## **Geotechnical Field Exploration and Testing**

### **AET Project No. P-0032141**

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#### **A.1 FIELD EXPLORATION**

The subsurface conditions at the site were explored by drilling and sampling standard penetration test (SPT) borings. The locations of the borings appear on Figure 2, preceding the Subsurface Boring Logs in this appendix.

#### **A.2 SAMPLING METHODS**

##### **A.2.1 Split-Spoon Samples (SS) - Calibrated to $N_{60}$ Values**

Standard penetration (split-spoon) samples were collected in general accordance with ASTM: D1586 with one primary modification. The ASTM test method consists of driving a 2-inch O.D. split-barrel sampler into the in-situ soil with a 140-pound hammer dropped from a height of 30 inches. The sampler is driven a total of 18 inches into the soil. After an initial set of 6 inches, the number of hammer blows to drive the sampler the final 12 inches is known as the standard penetration resistance or N-value. Our method uses a modified hammer weight, which is determined by measuring the system energy using a Pile Driving Analyzer (PDA) and an instrumented rod.

In the past, standard penetration N-value tests were performed using a rope and cathead for the lift and drop system. The energy transferred to the split-spoon sampler was typically limited to about 60% of its potential energy due to the friction inherent in this system. This converted energy then provides what is known as an  $N_{60}$  blow count.

The most recent drill rigs incorporate an automatic hammer lift and drop system, which has higher energy efficiency and subsequently results in lower N-values than the traditional  $N_{60}$  values. By using the PDA energy measurement equipment, we are able to determine actual energy generated by the drop hammer. With the various hammer systems available, we have found highly variable energies ranging from 55% to over 100%. Therefore, the intent of AET's hammer calibrations is to vary the hammer weight such that hammer energies lie within about 60% to 65% of the theoretical energy of a 140-pound weight falling 30 inches. The current ASTM procedure acknowledges the wide variation in N-values, stating that N-values of 100% or more have been observed. Although we have not yet determined the statistical measurement uncertainty of our calibrated method to date, we can state that the accuracy deviation of the N-values using this method is significantly better than the standard ASTM Method.

##### **A.2.2 Disturbed Samples (DS)/Spin-up Samples (SU)**

Sample types described as "DS" or "SU" on the boring logs are disturbed samples, which are taken from the flights of the auger. Because the auger disturbs the samples, possible soil layering and contact depths should be considered approximate.

##### **A.2.3 Sampling Limitations**

Unless actually observed in a sample, contacts between soil layers are estimated based on the spacing of samples and the action of drilling tools. Cobbles, boulders, and other large objects generally cannot be recovered from test borings, and they may be present in the ground even if they are not noted on the boring logs.

Determining the thickness of "topsoil" layers is usually limited, due to variations in topsoil definition, sample recovery, and other factors. Visual-manual description often relies on color for determination and transitioning changes can account for significant variation in thickness judgment. Accordingly, the topsoil thickness presented on the logs should not be the sole basis for calculating topsoil stripping depths and volumes. If more accurate information is needed relating to thickness and topsoil quality definition, alternate methods of sample retrieval and testing should be employed.

#### **A.3 CLASSIFICATION METHODS**

Soil descriptions shown on the boring logs are based on the Unified Soil Classification (USC) system. The USC system is described in ASTM: D2487 and D2488. Where laboratory classification tests (sieve analysis or Atterberg Limits) have been performed, accurate classifications per ASTM: D2487 are possible. Otherwise, soil descriptions shown on the boring logs are visual-manual judgments. Charts are attached which provide information on the USC system, the descriptive terminology, and the symbols used on the boring logs.

The boring logs include descriptions of apparent geology. The geologic depositional origin of each soil layer is interpreted primarily by observation of the soil samples, which can be limited. Observations of the surrounding topography, vegetation, and development can sometimes aid this judgment.

## **Appendix A**

### **Geotechnical Field Exploration and Testing**

#### **AET Project No. P-0032141**

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#### **A.4 WATER LEVEL MEASUREMENTS**

The ground water level measurements are shown at the bottom of the boring logs. The following information appears under “Water Level Measurements” on the logs:

- ♦ Date and Time of measurement
- ♦ Sampled Depth: lowest depth of soil sampling at the time of measurement
- ♦ Casing Depth: depth to bottom of casing or hollow-stem auger at time of measurement
- ♦ Cave-in Depth: depth at which measuring tape stops in the borehole
- ♦ Water Level: depth in the borehole where free water is encountered
- ♦ Drilling Fluid Level: same as Water Level, except that the liquid in the borehole is drilling fluid

The true location of the water table at the boring locations may be different than the water levels measured in the boreholes. This is possible because there are several factors that can affect the water level measurements in the borehole. Some of these factors include: permeability of each soil layer in profile, presence of perched water, amount of time between water level readings, presence of drilling fluid, weather conditions, and use of borehole casing.

#### **A.5 LABORATORY TEST METHODS**

##### **A.5.1 Water Content Tests**

Conducted per AET Procedure 01-LAB-010, which is performed in general accordance with ASTM: D2216 and AASHTO: T265.

##### **A.5.2 Atterberg Limits Tests**

Conducted per AET Procedure 01-LAB-030, which is performed in general accordance with ASTM: D4318 and AASHTO: T89, T90.

##### **A.5.3 Sieve Analysis of Soils (thru #200 Sieve)**

Conducted per AET Procedure 01-LAB-040, which is performed in general conformance with ASTM: D6913, Method A.

##### **A.5.4 Particle Size Analysis of Soils (with hydrometer)**

Conducted per AET Procedure 01-LAB-050, which is performed in general accordance with ASTM: D422 and AASHTO: T88.

##### **A.5.5 Unconfined Compressive Strength of Cohesive Soil**

Conducted per AET Procedure 01-LAB-080, which is performed in general accordance with ASTM: D2166 and AASHTO: T208.

##### **A.5.6 Laboratory Soil Resistivity using the Wenner Four-Electrode Method**

Conducted per AET Procedure 01-LAB-090, which is performed using Soil Box apparatus in the laboratory in general accordance with ASTM: G57

#### **A.6 TEST STANDARD LIMITATIONS**

Field and laboratory testing is done in general conformance with the described procedures. Compliance with any other standards referenced within the specified standard is neither inferred nor implied.

#### **A.7 SAMPLE STORAGE**

Unless notified to do otherwise, we routinely retain representative samples of the soils recovered from the borings for a period of 30 days.

## BORING LOG NOTES

### DRILLING AND SAMPLING SYMBOLS

| Symbol   | Definition                                                                                                                                                                                                                                        |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AR:      | Sample of material obtained from cuttings blown out the top of the borehole during air rotary procedure.                                                                                                                                          |
| B, H, N: | Size of flush-joint casing                                                                                                                                                                                                                        |
| CAS:     | Pipe casing, number indicates nominal diameter in inches                                                                                                                                                                                          |
| COT:     | Clean-out tube                                                                                                                                                                                                                                    |
| DC:      | Drive casing; number indicates diameter in inches                                                                                                                                                                                                 |
| DM:      | Drilling mud or bentonite slurry                                                                                                                                                                                                                  |
| DR:      | Driller (initials)                                                                                                                                                                                                                                |
| DS:      | Disturbed sample from auger flights                                                                                                                                                                                                               |
| DP:      | Direct push drilling; a 2.125 inch OD outer casing with an inner 1½ inch ID plastic tube is driven continuously into the ground.                                                                                                                  |
| FA:      | Flight auger; number indicates outside diameter in inches                                                                                                                                                                                         |
| HA:      | Hand auger; number indicates outside diameter                                                                                                                                                                                                     |
| HSA:     | Hollow stem auger; number indicates inside diameter in inches                                                                                                                                                                                     |
| LG:      | Field logger (initials)                                                                                                                                                                                                                           |
| MC:      | Column used to describe moisture condition of samples and for the ground water level symbols                                                                                                                                                      |
| N (BPF): | Standard penetration resistance (N-value) in blows per foot (see notes)                                                                                                                                                                           |
| NQ:      | NQ wireline core barrel                                                                                                                                                                                                                           |
| PQ:      | PQ wireline core barrel                                                                                                                                                                                                                           |
| RDA:     | Rotary drilling with compressed air and roller or drag bit.                                                                                                                                                                                       |
| RDF:     | Rotary drilling with drilling fluid and roller or drag bit                                                                                                                                                                                        |
| REC:     | In split-spoon (see notes), direct push and thin-walled tube sampling, the recovered length (in inches) of sample. In rock coring, the length of core recovered (expressed as percent of the total core run). Zero indicates no sample recovered. |
| SS:      | Standard split-spoon sampler (steel; 1.5" is inside diameter; 2" outside diameter); unless indicated otherwise                                                                                                                                    |
| SU       | Spin-up sample from hollow stem auger                                                                                                                                                                                                             |
| TW:      | Thin-walled tube; number indicates inside diameter in inches                                                                                                                                                                                      |
| WASH:    | Sample of material obtained by screening returning rotary drilling fluid or by which has collected inside the borehole after "falling" through drilling fluid                                                                                     |
| WH:      | Sampler advanced by static weight of drill rod and hammer                                                                                                                                                                                         |
| WR:      | Sampler advanced by static weight of drill rod                                                                                                                                                                                                    |
| 94mm:    | 94 millimeter wireline core barrel                                                                                                                                                                                                                |
| ▼:       | Water level directly measured in boring                                                                                                                                                                                                           |
| ▽:       | Estimated water level based solely on sample appearance                                                                                                                                                                                           |

### TEST SYMBOLS

| Symbol           | Definition                                                                                                                              |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| CONS:            | One-dimensional consolidation test                                                                                                      |
| DEN:             | Dry density, pcf                                                                                                                        |
| DST:             | Direct shear test                                                                                                                       |
| E:               | Pressuremeter Modulus, tsf                                                                                                              |
| HYD:             | Hydrometer analysis                                                                                                                     |
| LL:              | Liquid Limit, %                                                                                                                         |
| LP:              | Pressuremeter Limit Pressure, tsf                                                                                                       |
| OC:              | Organic Content, %                                                                                                                      |
| PERM:            | Coefficient of permeability (K) test; F - Field; L - Laboratory                                                                         |
| PL:              | Plastic Limit, %                                                                                                                        |
| q <sub>p</sub> : | Pocket Penetrometer strength, tsf ( <u>approximate</u> )                                                                                |
| q <sub>c</sub> : | Static cone bearing pressure, tsf                                                                                                       |
| q <sub>u</sub> : | Unconfined compressive strength, psf                                                                                                    |
| R:               | Electrical Resistivity, ohm-cms                                                                                                         |
| RQD:             | Rock Quality Designation of Rock Core, in percent (aggregate length of core pieces 4" or more in length as a percent of total core run) |
| SA:              | Sieve analysis                                                                                                                          |
| TRX:             | Triaxial compression test                                                                                                               |
| VSR:             | Vane shear strength, remolded (field), psf                                                                                              |
| VSU:             | Vane shear strength, undisturbed (field), psf                                                                                           |
| WC:              | Water content, as percent of dry weight                                                                                                 |
| %-200:           | Percent of material finer than #200 sieve                                                                                               |

### STANDARD PENETRATION TEST NOTES

#### (Calibrated Hammer Weight)

The standard penetration test consists of driving a split-spoon sampler with a drop hammer (calibrated weight varies to provide N<sub>60</sub> values) and counting the number of blows applied in each of three 6" increments of penetration. If the sampler is driven less than 18" (usually in highly resistant material), permitted in ASTM: D1586, the blows for each complete 6" increment and for each partial increment is on the boring log. For partial increments, the number of blows is shown to the nearest 0.1' below the slash.

The length of sample recovered, as shown on the "REC" column, may be greater than the distance indicated in the N column. The disparity is because the N-value is recorded below the initial 6" set (unless partial penetration defined in ASTM: D1586 is encountered) whereas the length of sample recovered is for the entire sampler drive (which may even extend more than 18").



# UNIFIED SOIL CLASSIFICATION SYSTEM

## ASTM Designations: D 2487, D2488

AMERICAN  
ENGINEERING TESTING,  
INC.

| Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests <sup>A</sup>    |                                                               |                                                     |                                                              | Soil Classification |                                   | Notes                                                                                                                       |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------------------------------------------|--------------------------------------------------------------|---------------------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
|                                                                                             |                                                               |                                                     |                                                              | Group Symbol        | Group Name <sup>B</sup>           |                                                                                                                             |
| Coarse-Grained Soils More than 50% retained on No. 200 sieve                                | Gravels More than 50% coarse fraction retained on No. 4 sieve | Clean Gravels Less than 5% fines <sup>C</sup>       | $Cu \geq 4$ and $1 < Cc \leq 3^E$                            | GW                  | Well graded gravel <sup>F</sup>   | <sup>A</sup> Based on the material passing the 3-in (75-mm) sieve.                                                          |
|                                                                                             |                                                               |                                                     | $Cu < 4$ and/or $1 > Cc > 3^E$                               | GP                  | Poorly graded gravel <sup>F</sup> | <sup>B</sup> If field sample contained cobbles or boulders, or both, add “with cobbles or boulders, or both” to group name. |
|                                                                                             |                                                               | Gravels with Fines more than 12% fines <sup>C</sup> | Fines classify as ML or MH                                   | GM                  | Silty gravel <sup>F,G,H</sup>     | <sup>C</sup> Gravels with 5 to 12% fines require dual symbols:                                                              |
|                                                                                             | Sands 50% or more of coarse fraction passes No. 4 sieve       | Clean Sands Less than 5% fines <sup>D</sup>         | $Cu \geq 6$ and $1 < Cc \leq 3^E$                            | SW                  | Well-graded sand <sup>I</sup>     | GW-GM well-graded gravel with silt                                                                                          |
|                                                                                             |                                                               |                                                     | $Cu < 6$ and $1 > Cc > 3^E$                                  | SP                  | Poorly-graded sand <sup>I</sup>   | GW-GC well-graded gravel with clay                                                                                          |
|                                                                                             |                                                               | Sands with Fines more than 12% fines <sup>D</sup>   | Fines classify as ML or MH                                   | SM                  | Silty sand <sup>G,H,I</sup>       | GP-GM poorly graded gravel with silt                                                                                        |
| Fine-Grained Soils 50% or more passes the No. 200 sieve<br><br>(see Plasticity Chart below) | Sils and Clays Liquid limit less than 50                      | inorganic                                           | $PI > 7$ and plots on or above “A” line <sup>J</sup>         | CL                  | Lean clay <sup>K,L,M</sup>        | GP-GC poorly graded gravel with clay                                                                                        |
|                                                                                             |                                                               |                                                     | $PI < 4$ or plots below “A” line <sup>J</sup>                | ML                  | Silt <sup>K,L,M</sup>             | <sup>D</sup> Sands with 5 to 12% fines require dual symbols:                                                                |
|                                                                                             |                                                               | organic                                             | Liquid limit—oven dried $< 0.75$<br>Liquid limit – not dried | OL                  | Organic clay <sup>K,L,M,N</sup>   | SW-SM well-graded sand with silt                                                                                            |
|                                                                                             | Sils and Clays Liquid limit 50 or more                        | inorganic                                           | $PI$ plots on or above “A” line                              | CH                  | Fat clay <sup>K,L,M</sup>         | SW-SC well-graded sand with clay                                                                                            |
|                                                                                             |                                                               |                                                     | $PI$ plots below “A” line                                    | MH                  | Elastic silt <sup>K,L,M</sup>     | SP-SM poorly graded sand with silt                                                                                          |
|                                                                                             |                                                               | organic                                             | Liquid limit—oven dried $< 0.75$<br>Liquid limit – not dried | OH                  | Organic clay <sup>K,L,M,P</sup>   | SP-SC poorly graded sand with clay                                                                                          |
| Highly organic soil                                                                         |                                                               |                                                     | PT                                                           | Peat <sup>R</sup>   |                                   |                                                                                                                             |

**SIEVE ANALYSIS**

$C_u = \frac{D_{60}}{D_{10}} = \frac{15}{0.075} = 200$      $C_c = \frac{(D_{60})^2}{D_{10} \times D_{30}} = \frac{2.5^2}{0.075 \times 15} = 5.6$

**Plasticity Chart**

For classification of fine-grained soils and fine-grained fraction of coarse-grained soils.

Equation of “A”-line  
Horizontal at  $PI = 4$  to  $LL = 25.5$ , then  $PI = 0.73 (LL - 20)$

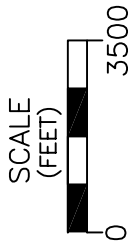
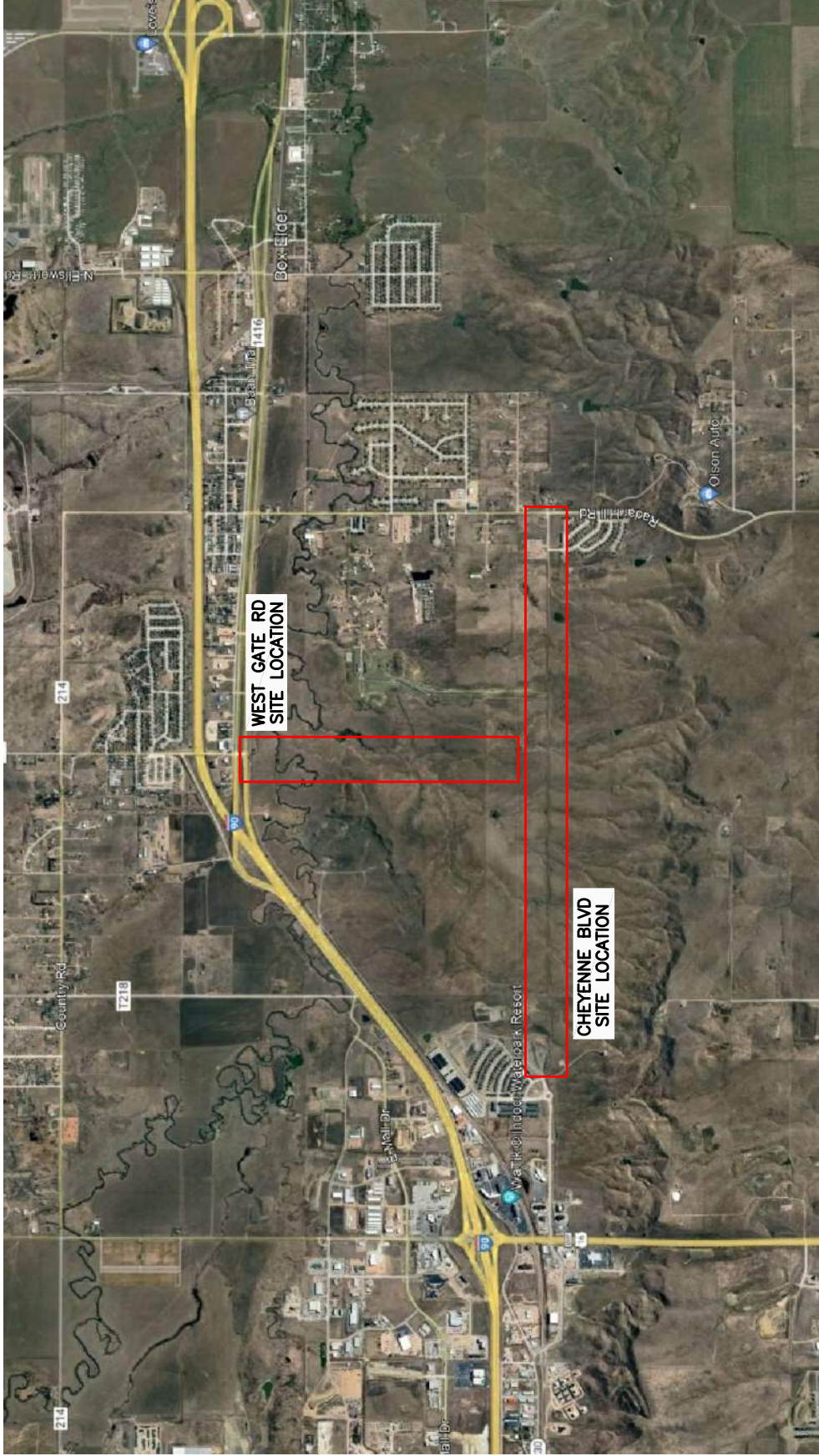
Equation of “U”-line  
Vertical at  $LL = 16$  to  $PI = 7$ , then  $PI = 0.9 (LL - 8)$

Plasticity Chart

### ADDITIONAL TERMINOLOGY NOTES USED BY AET FOR SOIL IDENTIFICATION AND DESCRIPTION

| Grain Size               |                                                                                                                      | Gravel Percentages |                                                                           | Consistency of Plastic Soils    |                  | Relative Density of Non-Plastic Soils                                                                                                                                                                   |                                                                                                           |
|--------------------------|----------------------------------------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------|---------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Term                     | Particle Size                                                                                                        | Term               | Percent                                                                   | Term                            | N-Value, BPF     | Term                                                                                                                                                                                                    | N-Value, BPF                                                                                              |
| Boulders                 | Over 12"                                                                                                             | A Little Gravel    | 3% - 14%                                                                  | Very Soft                       | less than 2      | Very Loose                                                                                                                                                                                              | 0 - 4                                                                                                     |
| Cobbles                  | 3" to 12"                                                                                                            | With Gravel        | 15% - 29%                                                                 | Soft                            | 2 - 4            | Loose                                                                                                                                                                                                   | 5 - 10                                                                                                    |
| Gravel                   | #4 sieve to 3"                                                                                                       | Gravelly           | 30% - 50%                                                                 | Firm                            | 5 - 8            | Medium Dense                                                                                                                                                                                            | 11 - 30                                                                                                   |
| Sand                     | #200 to #4 sieve                                                                                                     |                    |                                                                           | Stiff                           | 9 - 15           | Dense                                                                                                                                                                                                   | 31 - 50                                                                                                   |
| Fines (silt & clay)      | Pass #200 sieve                                                                                                      |                    |                                                                           | Very Stiff                      | 16 - 30          | Very Dense                                                                                                                                                                                              | Greater than 50                                                                                           |
|                          |                                                                                                                      |                    |                                                                           | Hard                            | Greater than 30  |                                                                                                                                                                                                         |                                                                                                           |
| Moisture/Frost Condition |                                                                                                                      | Layering Notes     |                                                                           | Fiber Content of Peat           |                  | Organic/Roots Description (if no lab tests)                                                                                                                                                             |                                                                                                           |
| (MC Column)              |                                                                                                                      |                    |                                                                           | Fiber Content (Visual Estimate) |                  | Soils are described as <i>organic</i> , if soil is not peat and is judged to have sufficient organic fines content to influence the soil properties. <i>Slightly organic</i> used for borderline cases. |                                                                                                           |
| D (Dry):                 | Absence of moisture, dusty, dry to touch.                                                                            | Laminations:       | Layers less than 1/2" thick of differing material or color.               | Fibric Peat:                    | Greater than 67% | With roots:                                                                                                                                                                                             | Judged to have sufficient quantity of roots to influence the soil properties.                             |
| M (Moist):               | Damp, although free water not visible. Soil may still have a high water content (over "optimum").                    | Lenses:            | Pockets or layers greater than 1/2" thick of differing material or color. | Hemic Peat:                     | 33 - 67%         | Trace roots:                                                                                                                                                                                            | Small roots present, but not judged to be in sufficient quantity to significantly affect soil properties. |
| W (Wet/ Waterbearing):   | Free water visible intended to describe non-plastic soils. Waterbearing usually relates to sands and sand with silt. |                    |                                                                           | Sapric Peat:                    | Less than 33%    |                                                                                                                                                                                                         |                                                                                                           |
| F (Frozen):              | Soil frozen                                                                                                          |                    |                                                                           |                                 |                  |                                                                                                                                                                                                         |                                                                                                           |



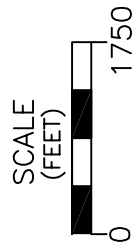
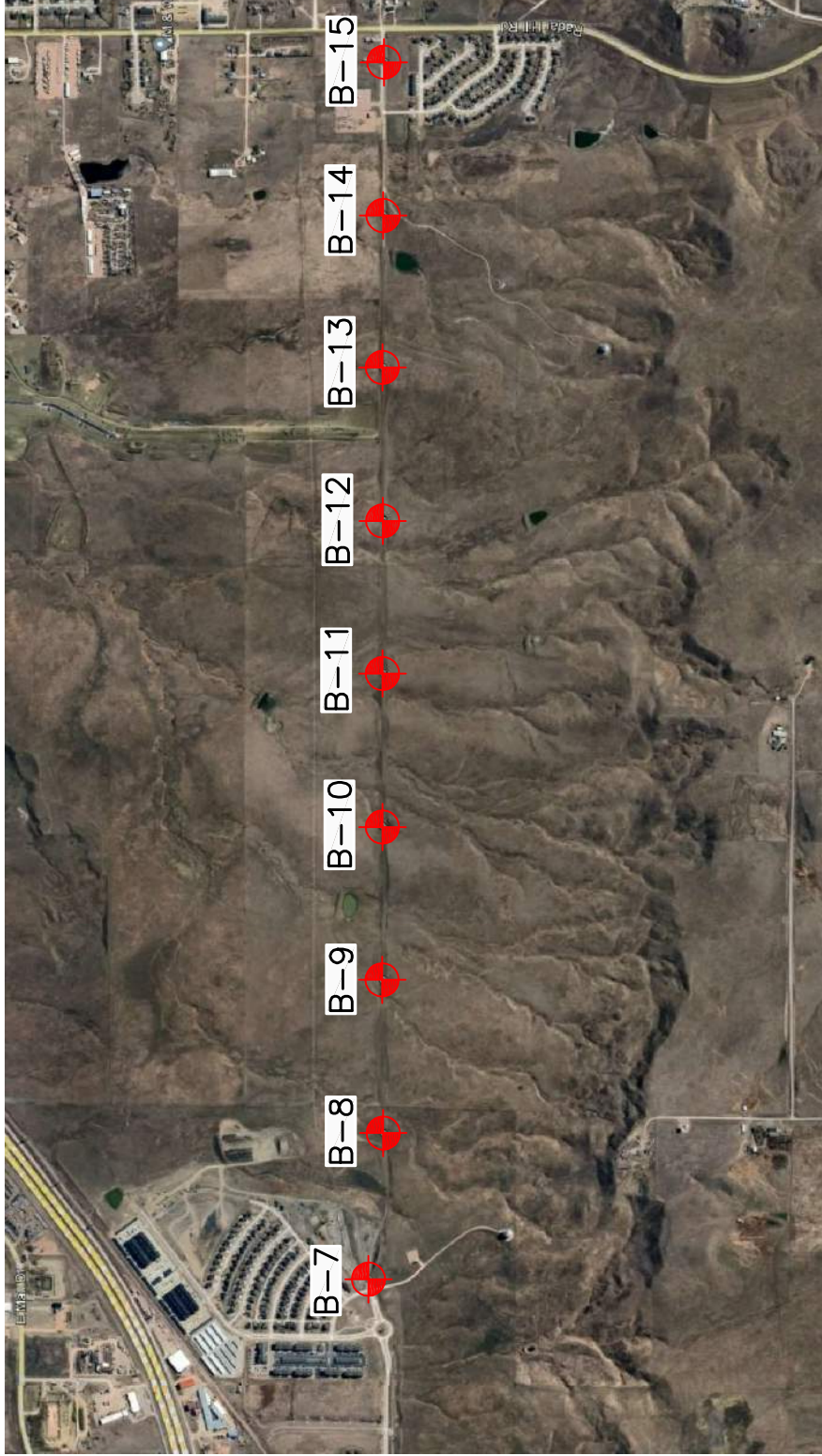


|                                                                                              |  |                          |  |
|----------------------------------------------------------------------------------------------|--|--------------------------|--|
| PROJECT: CHEYENNE BLVD & WEST GATE RD SANITARY SEWER IMPROVEMENTS<br>BOX ELDER, SOUTH DAKOTA |  | PROJECT NO.<br>P-0032141 |  |
| SUBJECT: FIGURE 1: SITE LOCATION MAP                                                         |  | DATE:<br>MAY 2, 2024     |  |
| SCALE: 1 INCH = 3500 FEET                                                                    |  | REVIEWED BY:<br>KK       |  |
|                                                                                              |  | WF                       |  |





|                                                                                              |  |                          |  |
|----------------------------------------------------------------------------------------------|--|--------------------------|--|
| PROJECT: CHEYENNE BLVD & WEST GATE RD SANITARY SEWER IMPROVEMENTS<br>BOX ELDER, SOUTH DAKOTA |  | PROJECT NO.<br>P-0032141 |  |
| SUBJECT: FIGURE 3: WEST GATE RD BORING LOCATION MAP                                          |  | DATE:<br>MAY 2, 2024     |  |
| SCALE: 1 INCH = 1750 FEET                                                                    |  | REVIEWED BY:<br>KK       |  |
|                                                                                              |  | WF                       |  |



|                                                                                              |  |                          |  |
|----------------------------------------------------------------------------------------------|--|--------------------------|--|
| PROJECT: CHEYENNE BLVD & WEST GATE RD SANITARY SEWER IMPROVEMENTS<br>BOX ELDER, SOUTH DAKOTA |  | PROJECT NO.<br>P-0032141 |  |
| SUBJECT: FIGURE 2: CHEYENNE BLVD BORING LOCATION MAP                                         |  | DATE:<br>MAY 2, 2024     |  |
| SCALE: 1 INCH = 1750 FEET                                                                    |  | REVIEWED BY:<br>KK       |  |
|                                                                                              |  | WF                       |  |





# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B- 1 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3064.0</b><br>MATERIAL DESCRIPTION                                                            | GEOLOGY                 | N    | MC | SAMPLE<br>TYPE | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------|------|----|----------------|------------|--------------------------|-----|----|----|--------|
|                     |                                                                                                                    |                         |      |    |                |            | WC                       | DEN | LL | PL | %-#200 |
| 1                   | <b>TOPSOIL</b>                                                                                                     | <b>TOPSOIL</b>          | 6    | M  | SS             | 18         |                          |     |    |    |        |
| 2                   | <b>SANDY LEAN to FAT CLAY</b> , brown, soft to firm, trace gravel present (CL-CH)                                  | <b>TERRACE DEPOSITS</b> |      |    |                |            |                          |     |    |    |        |
| 3                   |                                                                                                                    |                         | 7    | M  | SS             | 18         | 24                       |     | 43 | 16 |        |
| 4                   |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 5                   |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 6                   |                                                                                                                    |                         | 3    | W  | SS             | 18         | 24                       |     |    |    |        |
| 7                   |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 8                   | <b>WELL GRADED GRAVEL with CLAY and SAND</b> , brown, medium dense to very dense, possible cobbles present (GW-GC) |                         | 35   | W  | SS             | 18         | 12                       |     |    |    |        |
| 9                   |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 10                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 11                  |                                                                                                                    |                         | 73/8 | W  | SS             | 14         | 8                        |     |    |    |        |
| 12                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 13                  |                                                                                                                    |                         | 17   | W  | SS             | 18         | 10                       |     |    |    | 6      |
| 14                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 15                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 16                  |                                                                                                                    |                         | 31   | W  | SS             | 18         |                          |     |    |    |        |
| 17                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 18                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 19                  | <b>SHALE</b> , Fat Clay, grey, very stiff to hard (CH)                                                             | <b>PIERRE SHALE</b>     |      |    |                |            |                          |     |    |    |        |
| 20                  |                                                                                                                    |                         | 26   | W  | SS             | 18         |                          |     |    |    |        |
| 21                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 22                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 23                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 24                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 25                  |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |
| 26                  |                                                                                                                    |                         | 52   | W  | SS             | 18         |                          |     |    |    |        |
| Bottom of Boring    |                                                                                                                    |                         |      |    |                |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD                     |              | WATER LEVEL MEASUREMENTS |              |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|--------------------------------------------|--------------|--------------------------|--------------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
|                                            |              | DATE                     | TIME         | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
| <b>25.0</b>                                | <b>4" FA</b> | <b>4/10/24</b>           | <b>10:44</b> | <b>26.5</b>   | --           | --            | --                   | <b>7.5</b>  |                                                                                  |
|                                            |              |                          |              |               |              |               |                      |             |                                                                                  |
| BORING COMPLETED: <b>4/10/24</b>           |              |                          |              |               |              |               |                      |             |                                                                                  |
| DR: <b>JS</b> LG: <b>KV</b> Rig: <b>99</b> |              |                          |              |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141**

Log of Boring No. **B- 2 (p. 1 of 1)**

Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3066.6</b>                                                         | GEOLOGY                                                                            | N                                                                                   | MC | SAMPLE<br>TYPE                                                                      | REC<br>IN. | FIELD & LABORATORY TESTS |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
|---------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------|------------|--------------------------|---------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----|----|--|-------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----|----|--|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------|---|-------------------------------------------------------------------------------------|----|----|----|--|----|--|--|---------------------------------------------------------------------------------------|--|--|--|--|--|--|----|---|---------------------------------------------------------------------------------------|
|                     | MATERIAL DESCRIPTION                                                                    |                                                                                    |                                                                                     |    |                                                                                     |            | WC                       | DEN                                                                                   | LL | PL                                                                                    | %-#200 |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 1                   | <b>TOPSOIL</b>                                                                          |   | 6                                                                                   | M  |  | SS         | 18                       |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 2                   | <b>SANDY LEAN to FAT CLAY</b> , brown, firm to very stiff, trace gravel present (CL-CH) |  |                                                                                     |    |  |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 3                   |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        | 15                                                                                  | M |  | SS                                                                                    | 18 | 15 |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 4                   |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |  |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 5                   |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 6                   |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  | 17                                                                                  | M |  | SS                                                                                    | 18 | 17 |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 7                   |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |  |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 8                   |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  | 6                                                                                   |  | SS | 18                                                                                    | 24 |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 9                   |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |  |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 10                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 11                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    | 7                                                                                     | W |  | SS | 18 | 24 |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 12                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |    |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 13                  | 25                                                                                      | W                                                                                  |  | SS | 18                                                                                  |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 14                  |      |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 15                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          | 8                                                                                     | W  |  | SS     | 18                                                                                  |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 16                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |  |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 17                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 18                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |  |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 19                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 20                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |  |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 21                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    | 21                                                                                    | W  |  | SS |                                                                                       |   |                                                                                     |    |    |    |  | 18 |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 22                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |  |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 23                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |  |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 24                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |  |  |  |  |  |  |  |    |   |                                                                                       |
| 25                  |    |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |
| 26                  |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  | 30 | W |  |
| Bottom of Boring    |                                                                                         |                                                                                    |                                                                                     |    |                                                                                     |            |                          |                                                                                       |    |                                                                                       |        |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |   |                                                                                     |                                                                                       |    |    |  |                                                                                     |                                                                                     |    |                                                                                       |    |                                                                                       |    |                                                                                       |   |                                                                                     |    |    |    |  |    |  |  |                                                                                       |  |  |  |  |  |  |    |   |                                                                                       |

| DEPTH: DRILLING METHOD                     |              | WATER LEVEL MEASUREMENTS |              |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|--------------------------------------------|--------------|--------------------------|--------------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
|                                            |              | DATE                     | TIME         | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
| <b>25.0</b>                                | <b>4" FA</b> | <b>4/10/24</b>           | <b>12:48</b> | <b>26.5</b>   | --           | --            | --                   | <b>8.6</b>  |                                                                                  |
| BORING COMPLETED: <b>4/10/24</b>           |              |                          |              |               |              |               |                      |             |                                                                                  |
| DR: <b>JS</b> LG: <b>KV</b> Rig: <b>99</b> |              |                          |              |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET-CPT-WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141**

Log of Boring No. **B-3 (p. 1 of 1)**

Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3070.2</b>                                                                           | GEOLOGY                                                                             | N                                                                                     | MC                                                                                                        | SAMPLE<br>TYPE                                                                      | REC<br>IN.                                                                            | FIELD & LABORATORY TESTS |                                                                                       |    |    |        |    |  |
|---------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------|----|----|--------|----|--|
|                     | MATERIAL DESCRIPTION                                                                                      |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |                                                                                       | WC                       | DEN                                                                                   | LL | PL | %-#200 |    |  |
| 1                   | <b>TOPSOIL</b>                                                                                            |    | 8                                                                                     | M                                                                                                         |  | SS                                                                                    | 18                       |                                                                                       |    |    |        |    |  |
| 2                   | <b>SANDY LEAN to FAT CLAY</b> , brown to reddish brown, stiff to very stiff, trace gravel present (CL-CH) |   | TERRACE<br>DEPOSITS                                                                   |                                                                                                           |  |                                                                                       |                          |                                                                                       |    |    |        |    |  |
| 3                   |                                                                                                           |                                                                                     |                                                                                       | 13                                                                                                        | M                                                                                   |    | SS                       | 18                                                                                    | 17 |    |        |    |  |
| 4                   |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |    |                          |                                                                                       |    |    |        |    |  |
| 5                   |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |    | SS                       | 18                                                                                    | 18 |    | 57     | 21 |  |
| 6                   |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |    |                          |                                                                                       |    |    |        |    |  |
| 7                   |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |    | SS                       | 18                                                                                    | 8  |    |        |    |  |
| 8                   |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |    |                          |                                                                                       |    |    |        |    |  |
| 9                   |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |    | SS                       | 18                                                                                    | 9  |    |        |    |  |
| 10                  |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |   |                          |                                                                                       |    |    |        |    |  |
| 11                  |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |  | SS                       | 18                                                                                    | 10 |    |        |    |  |
| 12                  |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |  |                          |                                                                                       |    |    |        |    |  |
| 13                  |                                                                                                           |                                                                                     |                                                                                       | <b>CLAYEY GRAVEL with SAND</b> , brown, loose to medium dense, clayey sand seams and cobbles present (GC) |  | 22                                                                                    | M                        |  | SS | 18 | 10     |    |  |
| 14                  |                                                                                                           |                                                                                     |  |                                                                                                           |                                                                                     |                                                                                       |                          |                                                                                       |    |    |        |    |  |
| 15                  |                                                                                                           |                                                                                     |  |                                                                                                           |                                                                                     | SS                                                                                    | 18                       |                                                                                       |    |    |        |    |  |
| 16                  | 9                                                                                                         | M                                                                                   |  |                                                                                                           |                                                                                     |                                                                                       |                          |                                                                                       |    |    |        |    |  |
| 17                  |                                                                                                           |                                                                                     |  |                                                                                                           |                                                                                     |                                                                                       |                          |                                                                                       |    |    |        |    |  |
| 18                  |                                                                                                           |                                                                                     |  |                                                                                                           |                                                                                     |                                                                                       |                          |                                                                                       |    |    |        |    |  |
| 19                  |                                                                                                           |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |                                                                                       |                          |                                                                                       |    |    |        |    |  |
| 20                  | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, stiff (CH)                                        |  | PIERRE<br>SHALE                                                                       |                                                                                                           |                                                                                     |                                                                                       |                          |                                                                                       |    |    |        |    |  |
| 21                  |                                                                                                           |                                                                                     |                                                                                       | 10                                                                                                        | M                                                                                   |  | SS                       | 18                                                                                    |    |    |        |    |  |
|                     | Bottom of Boring                                                                                          |                                                                                     |                                                                                       |                                                                                                           |                                                                                     |                                                                                       |                          |                                                                                       |    |    |        |    |  |

| DEPTH: DRILLING METHOD                     |              | WATER LEVEL MEASUREMENTS |              |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|--------------------------------------------|--------------|--------------------------|--------------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
|                                            |              | DATE                     | TIME         | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
| <b>20.0</b>                                | <b>4" FA</b> | <b>4/14/24</b>           | <b>13:42</b> | <b>21.5</b>   | --           | --            | --                   | <b>None</b> |                                                                                  |
|                                            |              |                          |              |               |              |               |                      |             |                                                                                  |
|                                            |              |                          |              |               |              |               |                      |             |                                                                                  |
| BORING COMPLETED: <b>4/14/24</b>           |              |                          |              |               |              |               |                      |             |                                                                                  |
| DR: <b>JS</b> LG: <b>KV</b> Rig: <b>99</b> |              |                          |              |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B-4 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3082.8</b><br>MATERIAL DESCRIPTION                                  | GEOLOGY                                                                                            | N  | MC | SAMPLE<br>TYPE                                                                           | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----|----|------------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|
|                     |                                                                                          |                                                                                                    |    |    |                                                                                          |            | WC                       | DEN | LL | PL | %-#200 |
| 1                   | <b>TOPSOIL</b>                                                                           |  TOPSOIL          | 7  | M  |  SS   | 18         |                          |     |    |    |        |
| 2                   | <b>SANDY LEAN to FAT CLAY</b> , brown, stiff to very stiff, trace gravel present (CL-CH) |  TERRACE DEPOSITS |    |    |       |            |                          |     |    |    |        |
| 3                   |                                                                                          |                                                                                                    | 23 | M  |  SS   | 18         | 21                       |     |    |    |        |
| 4                   |                                                                                          |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 5                   |                                                                                          |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 6                   |                                                                                          |                                                                                                    | 11 | M  |  SS   | 18         | 22                       |     |    |    |        |
| 7                   |                                                                                          |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 8                   |                                                                                          |                                                                                                    | 11 | M  |  SS   | 18         | 16                       |     |    |    | 32     |
| 9                   | <b>CLAYEY SAND with GRAVEL</b> , brown, medium dense (SC)                                |                  |    |    |       |            |                          |     |    |    |        |
| 10                  |                                                                                          |                                                                                                    | 24 | M  |  SS   | 18         | 5                        |     |    |    |        |
| 11                  |                                                                                          |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 12                  |                                                                                          |                                                                                                    |    |    |      |            |                          |     |    |    |        |
| 13                  | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, very stiff to hard (CH)          |  PIERRE SHALE   | 18 | M  |  SS | 18         | 27                       |     |    |    |        |
| 14                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 15                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 16                  |                                                                                          |                                                                                                    | 17 | W  |  SS | 18         |                          |     |    |    |        |
| 17                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 18                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 19                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 20                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 21                  |                                                                                          |                                                                                                    | 37 | W  |  SS | 18         |                          |     |    |    |        |
|                     | Bottom of Boring                                                                         |                                                                                                    |    |    |                                                                                          |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD    |       | WATER LEVEL MEASUREMENTS |       |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|---------------------------|-------|--------------------------|-------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
| 20.0                      | 4" FA | DATE                     | TIME  | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
|                           |       | 4/14/24                  | 12:15 | 21.5          | --           | --            | --                   | 14.5        |                                                                                  |
|                           |       |                          |       |               |              |               |                      |             |                                                                                  |
|                           |       |                          |       |               |              |               |                      |             |                                                                                  |
| BORING COMPLETED: 4/14/24 |       |                          |       |               |              |               |                      |             |                                                                                  |
| DR: JS LG: KV Rig: 99     |       |                          |       |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET-CPT-WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B- 5 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3107.6</b>                                                         | GEOLOGY                                                                             | N                                                                                    | MC | SAMPLE<br>TYPE                                                                        | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|-----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|
|                     | MATERIAL DESCRIPTION                                                                    |                                                                                     |                                                                                      |    |                                                                                       |            | WC                       | DEN | LL | PL | %-#200 |
|                     | <b>TOPSOIL</b>                                                                          |    |                                                                                      |    |    |            |                          |     |    |    |        |
| 1                   | <b>SANDY LEAN to FAT CLAY</b> , brown, very stiff to hard, trace gravel present (CL-CH) |   | 15                                                                                   | M  |    | 18         |                          |     |    |    |        |
| 2                   |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 3                   |                                                                                         |                                                                                     | 22                                                                                   | M  |    | 18         | 14                       |     |    |    |        |
| 4                   |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 5                   |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 6                   |                                                                                         |                                                                                     | 29                                                                                   | M  |    | 18         | 19                       |     |    |    | 95     |
| 7                   |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 8                   |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 9                   |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 10                  |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 11                  |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 12                  |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 13                  |                                                                                         |                                                                                     |                                                                                      |    |    |            |                          |     |    |    |        |
| 14                  |                                                                                         |                                                                                     |  |    |                                                                                       |            |                          |     |    |    |        |
| 15                  | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, stiff to very stiff (CH)        |  |                                                                                      |    |  |            |                          |     |    |    |        |
| 16                  |                                                                                         |                                                                                     | 13                                                                                   | M  |  | 18         |                          |     |    |    |        |
| 17                  |                                                                                         |                                                                                     |                                                                                      |    |  |            |                          |     |    |    |        |
| 18                  |                                                                                         |                                                                                     |                                                                                      |    |  |            |                          |     |    |    |        |
| 19                  |                                                                                         |                                                                                     |                                                                                      |    |  |            |                          |     |    |    |        |
| 20                  |                                                                                         |                                                                                     |                                                                                      |    |  |            |                          |     |    |    |        |
| 21                  |                                                                                         |                                                                                     |                                                                                      |    |  |            |                          |     |    |    |        |
|                     | Bottom of Boring                                                                        |                                                                                     |                                                                                      |    |                                                                                       |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD    |       | WATER LEVEL MEASUREMENTS |       |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|---------------------------|-------|--------------------------|-------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
| 20.0                      | 4" FA | DATE                     | TIME  | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
|                           |       | 4/14/24                  | 10:54 | 21.5          | --           | --            | --                   | None        |                                                                                  |
| BORING COMPLETED: 4/14/24 |       |                          |       |               |              |               |                      |             |                                                                                  |
| DR: JS LG: KV Rig: 99     |       |                          |       |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141**

Log of Boring No. **B- 6 (p. 1 of 1)**

Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3139.1</b><br>MATERIAL DESCRIPTION                            | GEOLOGY                                                                                             | N  | MC | SAMPLE<br>TYPE                                                                           | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|----|----|------------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|
|                     |                                                                                    |                                                                                                     |    |    |                                                                                          |            | WC                       | DEN | LL | PL | %-#200 |
| 1                   | <b>TOPSOIL</b>                                                                     |  TOPSOIL           | 6  | M  |  SS   | 18         |                          |     |    |    |        |
| 2                   | <b>SANDY LEAN to FAT CLAY</b> , brown, stiff to hard, trace gravel present (CL-CH) |  TERRACE DEPOSITS |    |    |       |            |                          |     |    |    |        |
| 3                   |                                                                                    |                                                                                                     | 28 | M  |  SS   | 18         | 17                       |     |    |    |        |
| 4                   |                                                                                    |                                                                                                     |    |    |       |            |                          |     |    |    |        |
| 5                   |                                                                                    |                                                                                                     |    |    |       |            |                          |     |    |    |        |
| 6                   |                                                                                    |                                                                                                     | 33 | M  |  SS   | 18         | 14                       |     |    |    |        |
| 7                   |                                                                                    |                                                                                                     |    |    |       |            |                          |     |    |    |        |
| 8                   |                                                                                    |                                                                                                     | 17 | M  |  SS   | 18         | 19                       |     | 50 | 17 |        |
| 9                   |                                                                                    |                                                                                                     |    |    |       |            |                          |     |    |    |        |
| 10                  |                                                                                    |                                                                                                     |    |    |      |            |                          |     |    |    |        |
| 11                  |                                                                                    |                                                                                                     | 11 | M  |  SS | 18         | 21                       |     |    |    |        |
| 12                  |                                                                                    |                                                                                                     |    |    |     |            |                          |     |    |    |        |
| 13                  | <b>CLAYEY SAND</b> , brown, medium dense, gravel and cobbles present (SC)          |                  | 22 | M  |  SS | 18         |                          |     |    |    |        |
| 14                  |                                                                                    |                                                                                                     |    |    |     |            |                          |     |    |    |        |
| 15                  |                                                                                    |                                                                                                     |    |    |     |            |                          |     |    |    |        |
| 16                  | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, stiff to very stiff (CH)   |  PIERRE SHALE    | 13 | M  |  SS | 18         |                          |     |    |    |        |
| 17                  |                                                                                    |                                                                                                     |    |    |     |            |                          |     |    |    |        |
| 18                  |                                                                                    |                                                                                                     |    |    |     |            |                          |     |    |    |        |
| 19                  |                                                                                    |                                                                                                     |    |    |     |            |                          |     |    |    |        |
| 20                  |                                                                                    |                                                                                                     |    |    |     |            |                          |     |    |    |        |
| 21                  | Bottom of Boring                                                                   |                  | 6  | M  |  SS | 18         |                          |     |    |    |        |
|                     |                                                                                    |                                                                                                     |    |    |                                                                                          |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD                     |              | WATER LEVEL MEASUREMENTS |             |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|--------------------------------------------|--------------|--------------------------|-------------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
|                                            |              | DATE                     | TIME        | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
| <b>20.0</b>                                | <b>4" FA</b> | <b>4/14/24</b>           | <b>9:46</b> | <b>21.5</b>   | --           | --            | --                   | <b>None</b> |                                                                                  |
|                                            |              |                          |             |               |              |               |                      |             |                                                                                  |
|                                            |              |                          |             |               |              |               |                      |             |                                                                                  |
| BORING COMPLETED: <b>4/14/24</b>           |              |                          |             |               |              |               |                      |             |                                                                                  |
| DR: <b>JS</b> LG: <b>KV</b> Rig: <b>99</b> |              |                          |             |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B- 7 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3199.8</b><br>MATERIAL DESCRIPTION                            | GEOLOGY           | N  | MC | SAMPLE<br>TYPE | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|------------------------------------------------------------------------------------|-------------------|----|----|----------------|------------|--------------------------|-----|----|----|--------|
|                     |                                                                                    |                   |    |    |                |            | WC                       | DEN | LL | PL | %-#200 |
| 1                   | <b>GRAVEL SURFACING</b>                                                            | SURFACING<br>FILL | 24 | M  | SS             | 18         |                          |     |    |    |        |
| 2                   | <b>FILL</b> , Sandy Lean to Fat Clay with Gravel,<br>mottled brown to grey (CL-CH) |                   |    |    |                |            |                          |     |    |    |        |
| 3                   | <b>SHALE</b> , Fat Clay, dark grey, very stiff to hard<br>(CH)                     | PIERRE<br>SHALE   | 26 | M  | SS             | 18         | 17                       |     |    |    |        |
| 4                   |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 5                   |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 6                   |                                                                                    |                   | 43 | M  | SS             | 18         | 17                       |     |    |    |        |
| 7                   |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 8                   |                                                                                    |                   | 76 | M  | SS             | 18         | 17                       |     |    |    |        |
| 9                   |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 10                  |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 11                  |                                                                                    |                   | 59 | M  | SS             | 18         | 16                       |     |    |    |        |
| 12                  |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 13                  |                                                                                    |                   | 78 | M  | SS             | 18         |                          |     |    |    |        |
| 14                  |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 15                  |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 16                  |                                                                                    |                   | 54 | M  | SS             | 18         |                          |     |    |    |        |
| 17                  |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 18                  |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 19                  |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 20                  |                                                                                    |                   |    |    |                |            |                          |     |    |    |        |
| 21                  |                                                                                    |                   | 74 | M  | SS             | 18         |                          |     |    |    |        |
|                     | Bottom of Boring                                                                   |                   |    |    |                |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD                     |              | WATER LEVEL MEASUREMENTS |              |                  |                 |                  |                         |                | NOTE: REFER TO<br>THE ATTACHED<br>SHEETS FOR AN<br>EXPLANATION OF<br>TERMINOLOGY ON<br>THIS LOG |
|--------------------------------------------|--------------|--------------------------|--------------|------------------|-----------------|------------------|-------------------------|----------------|-------------------------------------------------------------------------------------------------|
|                                            |              | DATE                     | TIME         | SAMPLED<br>DEPTH | CASING<br>DEPTH | CAVE-IN<br>DEPTH | DRILLING<br>FLUID LEVEL | WATER<br>LEVEL |                                                                                                 |
| <b>20.0</b>                                | <b>4" FA</b> | <b>4/11/24</b>           | <b>18:06</b> | <b>21.5</b>      | --              | --               | --                      | <b>None</b>    |                                                                                                 |
|                                            |              |                          |              |                  |                 |                  |                         |                |                                                                                                 |
|                                            |              |                          |              |                  |                 |                  |                         |                |                                                                                                 |
| BORING<br>COMPLETED: <b>4/11/24</b>        |              |                          |              |                  |                 |                  |                         |                |                                                                                                 |
| DR: <b>JS</b> LG: <b>KV</b> Rig: <b>99</b> |              |                          |              |                  |                 |                  |                         |                |                                                                                                 |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B- 8 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3197.4</b>                                                                    | GEOLOGY                                                                             | N                                                                                     | MC | SAMPLE<br>TYPE                                                                        | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----|---------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|
|                     | MATERIAL DESCRIPTION                                                                               |                                                                                     |                                                                                       |    |                                                                                       |            | WC                       | DEN | LL | PL | %-#200 |
|                     | <b>TOPSOIL</b>                                                                                     |    |                                                                                       |    |    |            |                          |     |    |    |        |
| 1                   | <b>SANDY LEAN to FAT CLAY</b> , brown to mottled grey, firm to stiff, trace gravel present (CL-CH) |   | 7                                                                                     | M  |    | 18         |                          |     |    |    |        |
| 2                   |                                                                                                    |                                                                                     |                                                                                       |    |    |            |                          |     |    |    |        |
| 3                   |                                                                                                    |                                                                                     | 8                                                                                     | M  |    | 18         | 18                       |     |    |    |        |
| 4                   |                                                                                                    |                                                                                     |                                                                                       |    |    |            |                          |     |    |    |        |
| 5                   |                                                                                                    |                                                                                     |                                                                                       |    |    |            |                          |     |    |    |        |
| 6                   |                                                                                                    |                                                                                     | 11                                                                                    | M  |    | 18         | 20                       |     | 63 | 20 |        |
| 7                   |                                                                                                    |                                                                                     |                                                                                       |    |    |            |                          |     |    |    |        |
| 8                   |                                                                                                    |                                                                                     |                                                                                       |    |    | 18         | 13                       |     |    |    |        |
| 9                   |                                                                                                    |                                                                                     |                                                                                       |    |    |            |                          |     |    |    |        |
| 10                  |                                                                                                    |                                                                                     |                                                                                       |    |    |            |                          |     |    |    |        |
| 11                  |                                                                                                    |                                                                                     | 10                                                                                    | M  |    | 18         | 17                       |     |    |    |        |
| 12                  |                                                                                                    |                                                                                     |                                                                                       |    |    |            |                          |     |    |    |        |
| 13                  |                                                                                                    |                                                                                     |                                                                                       |    |   | 18         | 24                       |     |    |    | 74     |
| 14                  |                                                                                                    |                                                                                     |  |    |                                                                                       |            |                          |     |    |    |        |
| 15                  | <b>CLAYEY SAND</b> , mottled brown to grey, loose, trace gravel present (SC)                       |  | 5                                                                                     | M  |  | 18         |                          |     |    |    |        |
| 16                  |                                                                                                    |                                                                                     |                                                                                       |    |  |            |                          |     |    |    |        |
| 17                  |                                                                                                    |                                                                                     |                                                                                       |    |  |            |                          |     |    |    |        |
| 18                  |                                                                                                    |                                                                                     |                                                                                       |    |  |            |                          |     |    |    |        |
| 19                  |                                                                                                    |                                                                                     |  |    |                                                                                       |            |                          |     |    |    |        |
| 20                  | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, very stiff (CH)                            |  |                                                                                       |    |  |            |                          |     |    |    |        |
| 21                  |                                                                                                    |                                                                                     | 19                                                                                    | M  |  | 18         |                          |     |    |    |        |
|                     | Bottom of Boring                                                                                   |                                                                                     |                                                                                       |    |                                                                                       |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD    |       | WATER LEVEL MEASUREMENTS |       |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|---------------------------|-------|--------------------------|-------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
| 20.0                      | 4" FA | DATE                     | TIME  | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
|                           |       | 4/11/24                  | 16:40 | 21.5          | --           | --            | --                   | None        |                                                                                  |
| BORING COMPLETED: 4/11/24 |       |                          |       |               |              |               |                      |             |                                                                                  |
| DR: JS LG: KV Rig: 99     |       |                          |       |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24





# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B- 9 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3179.1</b><br>MATERIAL DESCRIPTION                         |                                                                                   | GEOLOGY                                                                               | N                                                                                                          | MC                                                                                | SAMPLE<br>TYPE                                                                      | REC<br>IN. | FIELD & LABORATORY TESTS |                                                                                     |    |    |        |  |
|---------------------|---------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------|--------------------------|-------------------------------------------------------------------------------------|----|----|--------|--|
|                     |                                                                                 |                                                                                   |                                                                                       |                                                                                                            |                                                                                   |                                                                                     |            | WC                       | DEN                                                                                 | LL | PL | %-#200 |  |
| 1                   | <b>TOPSOIL</b>                                                                  |  | TOPSOIL                                                                               | 6                                                                                                          | M                                                                                 |  | SS         | 18                       |                                                                                     |    |    |        |  |
| 2                   | <b>SANDY LEAN to FAT CLAY</b> , brown, very stiff, trace gravel present (CL-CH) |  | TERRACE DEPOSITS                                                                      |                                                                                                            |                                                                                   |  |            |                          |                                                                                     |    |    |        |  |
| 3                   |                                                                                 |                                                                                   |                                                                                       | 19                                                                                                         | M                                                                                 |  | SS         | 18                       | 20                                                                                  |    |    |        |  |
| 4                   |                                                                                 |                                                                                   |                                                                                       |                                                                                                            |                                                                                   |  |            |                          |                                                                                     |    |    |        |  |
| 5                   |                                                                                 |                                                                                   |                                                                                       | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, very stiff to hard (CH)<br><br>concretions present |  | PIERRE SHALE                                                                        | 18         | M                        |  | SS | 18 | 19     |  |
| 6                   |                                                                                 |                                                                                   |    |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 7                   |                                                                                 |                                                                                   |    |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 8                   | 33                                                                              | M                                                                                 |    |                                                                                                            |                                                                                   |                                                                                     | SS         | 18                       | 21                                                                                  |    |    |        |  |
| 9                   |                                                                                 |                                                                                   |    |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 10                  |                                                                                 |                                                                                   |   |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 11                  | 25                                                                              | M                                                                                 |  |                                                                                                            |                                                                                   |                                                                                     | SS         | 18                       | 22                                                                                  |    |    |        |  |
| 12                  |                                                                                 |                                                                                   |  |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 13                  | 31                                                                              | M                                                                                 |  |                                                                                                            |                                                                                   |                                                                                     | SS         | 18                       |                                                                                     |    |    |        |  |
| 14                  |                                                                                 |                                                                                   |  |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 15                  |                                                                                 |                                                                                   |  |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 16                  | 22                                                                              | M                                                                                 |  |                                                                                                            |                                                                                   |                                                                                     | SS         | 18                       |                                                                                     |    |    |        |  |
| 17                  |                                                                                 |                                                                                   |  |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 18                  |                                                                                 |                                                                                   |  |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 19                  |                                                                                 |                                                                                   |  |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 20                  |                                                                                 |                                                                                   |  |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |
| 21                  | 31                                                                              | M                                                                                 |  |                                                                                                            |                                                                                   |                                                                                     | SS         | 18                       |                                                                                     |    |    |        |  |
| Bottom of Boring    |                                                                                 |                                                                                   |                                                                                       |                                                                                                            |                                                                                   |                                                                                     |            |                          |                                                                                     |    |    |        |  |

| DEPTH: DRILLING METHOD    |       | WATER LEVEL MEASUREMENTS |       |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|---------------------------|-------|--------------------------|-------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
| 20.0                      | 4" FA | DATE                     | TIME  | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
|                           |       | 4/11/24                  | 15:27 | 21.5          | --           | --            | --                   | None        |                                                                                  |
| BORING COMPLETED: 4/11/24 |       |                          |       |               |              |               |                      |             |                                                                                  |
| DR: JS LG: KV Rig: 99     |       |                          |       |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET-CPT-WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141**

Log of Boring No. **B-10 (p. 1 of 1)**

Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3169.2</b>                                                                 |                                                                                     | GEOLOGY                                                                               | N  | MC | SAMPLE<br>TYPE                                                                        | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |    |  |
|---------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----|----|---------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|----|--|
|                     | MATERIAL DESCRIPTION                                                                            |                                                                                     |                                                                                       |    |    |                                                                                       |            | WC                       | DEN | LL | PL | %-#200 |    |  |
|                     | <b>TOPSOIL</b>                                                                                  |    | TOPSOIL                                                                               |    |    |                                                                                       |            |                          |     |    |    |        |    |  |
| 1                   | <b>SANDY LEAN to FAT CLAY</b> , brown, stiff,<br>trace gravel present (CL-CH)                   |   | TERRACE<br>DEPOSITS                                                                   | 5  | M  |    | SS         | 18                       |     |    |    |        |    |  |
| 2                   |                                                                                                 |                                                                                     |                                                                                       |    |    |    |            |                          |     |    |    |        |    |  |
| 3                   |                                                                                                 |                                                                                     |                                                                                       | 13 | M  |    | SS         | 18                       | 17  |    |    |        |    |  |
| 4                   |                                                                                                 |                                                                                     |                                                                                       |    |    |    |            |                          |     |    |    |        |    |  |
| 5                   |                                                                                                 |                                                                                     |                                                                                       |    |    |    |            |                          |     |    |    |        |    |  |
| 6                   |                                                                                                 |                                                                                     |                                                                                       | 12 | M  |    | SS         | 18                       | 19  |    | 44 | 15     |    |  |
| 7                   |                                                                                                 |                                                                                     |                                                                                       |    |    |    |            |                          |     |    |    |        |    |  |
| 8                   |                                                                                                 |                                                                                     |                                                                                       |    |    |    |            |                          |     |    |    |        |    |  |
| 9                   |                                                                                                 |                                                                                     |                                                                                       |    |    |    |            |                          |     |    |    |        |    |  |
| 10                  |                                                                                                 |                                                                                     |                                                                                       |    |    |    |            |                          |     |    |    |        |    |  |
| 11                  |                                                                                                 |                                                                                     |                                                                                       |    |    |    |            |                          |     |    |    |        | 72 |  |
| 12                  |                                                                                                 |                                                                                     |                                                                                       |    |    |   |            |                          |     |    |    |        |    |  |
| 13                  |                                                                                                 |                                                                                     |  |    |    |                                                                                       |            |                          |     |    |    |        |    |  |
| 14                  | <b>CLAYEY SAND</b> , brown, loose to medium<br>dense, trace gravel present (SC)                 |  |                                                                                       | 9  | M  |  | SS         | 18                       | 21  |    |    |        |    |  |
| 15                  |                                                                                                 |                                                                                     |                                                                                       |    |    |  |            |                          |     |    |    |        |    |  |
| 16                  |                                                                                                 |                                                                                     |                                                                                       | 12 | M  |  | SS         | 18                       |     |    |    |        |    |  |
| 17                  | <b>WEATHERED SHALE</b> , Fat Clay, olive brown<br>to grey, very stiff, concretions present (CH) |  | PIERRE<br>SHALE                                                                       |    |    |  |            |                          |     |    |    |        |    |  |
| 18                  |                                                                                                 |                                                                                     |                                                                                       |    |    |  |            |                          |     |    |    |        |    |  |
| 19                  |                                                                                                 |                                                                                     |                                                                                       |    |    |  |            |                          |     |    |    |        |    |  |
| 20                  |                                                                                                 |                                                                                     |                                                                                       |    |    |  |            |                          |     |    |    |        |    |  |
| 21                  |                                                                                                 |                                                                                     |                                                                                       | 17 | M  |  | SS         | 18                       |     |    |    |        |    |  |
|                     | Bottom of Boring                                                                                |                                                                                     |                                                                                       |    |    |                                                                                       |            |                          |     |    |    |        |    |  |

| DEPTH: DRILLING METHOD    |       | WATER LEVEL MEASUREMENTS |       |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|---------------------------|-------|--------------------------|-------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
| 20.0                      | 4" FA | DATE                     | TIME  | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
|                           |       | 4/11/24                  | 14:10 | 21.5          | --           | --            | --                   | None        |                                                                                  |
| BORING COMPLETED: 4/11/24 |       |                          |       |               |              |               |                      |             |                                                                                  |
| DR: JS LG: KV Rig: 99     |       |                          |       |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24

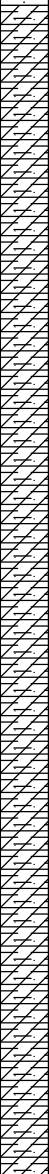


# SUBSURFACE BORING LOG

AET No: **P-0032141**

Log of Boring No. **B-11 (p. 1 of 1)**

Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3167.5</b><br>MATERIAL DESCRIPTION                         | GEOLOGY                                                                             | N  | MC | SAMPLE<br>TYPE                                                                        | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|----|---------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|
|                     |                                                                                 |                                                                                     |    |    |                                                                                       |            | WC                       | DEN | LL | PL | %-#200 |
|                     | <b>TOPSOIL</b>                                                                  |    |    |    |                                                                                       |            |                          |     |    |    |        |
| 1                   | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, very stiff to hard (CH) |   | 7  | M  |    | SS         | 18                       |     |    |    |        |
| 2                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 3                   |                                                                                 |                                                                                     | 17 | M  |    | SS         | 18                       | 21  |    |    |        |
| 4                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 5                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 6                   |                                                                                 |                                                                                     | 23 | M  |    | SS         | 18                       | 21  |    |    |        |
| 7                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 8                   |                                                                                 |                                                                                     | 29 | M  |    | SS         | 18                       | 21  |    |    |        |
| 9                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 10                  |                                                                                 |                                                                                     |    |    |   |            |                          |     |    |    |        |
| 11                  |                                                                                 |                                                                                     | 37 | M  |  | SS         | 18                       | 20  |    |    |        |
| 12                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 13                  |                                                                                 |                                                                                     | 24 | M  |  | SS         | 18                       |     |    |    |        |
| 14                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 15                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 16                  |                                                                                 |                                                                                     | 33 | M  |  | SS         | 18                       |     |    |    |        |
| 17                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 18                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 19                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 20                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 21                  | <b>SHALE</b> , Fat Clay, dark grey, hard (CH)                                   |  | 48 | M  |  | SS         | 18                       |     |    |    |        |
|                     | Bottom of Boring                                                                |                                                                                     |    |    |                                                                                       |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD                     |              | WATER LEVEL MEASUREMENTS |              |                  |                 |                  |                         |                | NOTE: REFER TO<br>THE ATTACHED<br>SHEETS FOR AN<br>EXPLANATION OF<br>TERMINOLOGY ON<br>THIS LOG |
|--------------------------------------------|--------------|--------------------------|--------------|------------------|-----------------|------------------|-------------------------|----------------|-------------------------------------------------------------------------------------------------|
|                                            |              | DATE                     | TIME         | SAMPLED<br>DEPTH | CASING<br>DEPTH | CAVE-IN<br>DEPTH | DRILLING<br>FLUID LEVEL | WATER<br>LEVEL |                                                                                                 |
| <b>20.0</b>                                | <b>4" FA</b> | <b>4/11/24</b>           | <b>12:17</b> | <b>21.5</b>      | --              | --               | --                      | <b>None</b>    |                                                                                                 |
|                                            |              |                          |              |                  |                 |                  |                         |                |                                                                                                 |
|                                            |              |                          |              |                  |                 |                  |                         |                |                                                                                                 |
| BORING COMPLETED: <b>4/11/24</b>           |              |                          |              |                  |                 |                  |                         |                |                                                                                                 |
| DR: <b>JS</b> LG: <b>KV</b> Rig: <b>99</b> |              |                          |              |                  |                 |                  |                         |                |                                                                                                 |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B-12 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3153.1</b>                                 |                                                                                    | GEOLOGY         | N  | MC                                                                                    | SAMPLE<br>TYPE                                                                      | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |  |
|---------------------|-----------------------------------------------------------------|------------------------------------------------------------------------------------|-----------------|----|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|--|
|                     | MATERIAL DESCRIPTION                                            |                                                                                    |                 |    |                                                                                       |                                                                                     |            | WC                       | DEN | LL | PL | %-#200 |  |
| 1                   | TOPSOIL                                                         |   | TOPSOIL         | 6  | M                                                                                     |  | SS         | 18                       |     |    |    |        |  |
| 2                   | WEATHERED SHALE, Fat Clay, olive brown to grey, very stiff (CH) |   | PIERRE<br>SHALE |    |                                                                                       |  |            |                          |     |    |    |        |  |
| 3                   |                                                                 |                                                                                    |                 | 17 | M                                                                                     |  | SS         | 18                       | 22  |    |    |        |  |
| 4                   |                                                                 |                                                                                    |                 |    |                                                                                       |  |            |                          |     |    |    |        |  |
| 5                   |                                                                 |                                                                                    |                 |    |                                                                                       |  |            |                          |     |    |    |        |  |
| 6                   |                                                                 |                                                                                    |                 | 19 | M                                                                                     |  | SS         | 18                       | 22  |    |    |        |  |
| 7                   | SHALE, Fat Clay, dark grey, very stiff to hard (CH)             |  |                 |    |                                                                                       |  |            |                          |     |    |    |        |  |
| 8                   |                                                                 |                                                                                    | 37              | M  |    | SS                                                                                  | 18         | 22                       |     |    |    |        |  |
| 9                   |                                                                 |                                                                                    |                 |    |    |                                                                                     |            |                          |     |    |    |        |  |
| 10                  |                                                                 |                                                                                    |                 |    |   |                                                                                     |            |                          |     |    |    |        |  |
| 11                  |                                                                 |                                                                                    | 31              | M  |  | SS                                                                                  | 18         | 23                       |     |    |    |        |  |
| 12                  |                                                                 |                                                                                    |                 |    |  |                                                                                     |            |                          |     |    |    |        |  |
| 13                  |                                                                 |                                                                                    | 36              | M  |  | SS                                                                                  | 18         |                          |     |    |    |        |  |
| 14                  |                                                                 |                                                                                    |                 |    |  |                                                                                     |            |                          |     |    |    |        |  |
| 15                  |                                                                 |                                                                                    |                 |    |  |                                                                                     |            |                          |     |    |    |        |  |
| 16                  |                                                                 |                                                                                    | 29              | M  |  | SS                                                                                  | 18         |                          |     |    |    |        |  |
| 17                  |                                                                 |                                                                                    |                 |    |  |                                                                                     |            |                          |     |    |    |        |  |
| 18                  |                                                                 |                                                                                    |                 |    |  |                                                                                     |            |                          |     |    |    |        |  |
| 19                  |                                                                 |                                                                                    |                 |    |  |                                                                                     |            |                          |     |    |    |        |  |
| 20                  |                                                                 |                                                                                    |                 |    |  |                                                                                     |            |                          |     |    |    |        |  |
| 21                  |                                                                 |                                                                                    | 32              | M  |  | SS                                                                                  | 18         |                          |     |    |    |        |  |
| Bottom of Boring    |                                                                 |                                                                                    |                 |    |                                                                                       |                                                                                     |            |                          |     |    |    |        |  |

| DEPTH: DRILLING METHOD       |       | WATER LEVEL MEASUREMENTS |       |                  |                 |                  |                         |                | NOTE: REFER TO<br>THE ATTACHED<br>SHEETS FOR AN<br>EXPLANATION OF<br>TERMINOLOGY ON<br>THIS LOG |
|------------------------------|-------|--------------------------|-------|------------------|-----------------|------------------|-------------------------|----------------|-------------------------------------------------------------------------------------------------|
| 20.0                         | 4" FA | DATE                     | TIME  | SAMPLED<br>DEPTH | CASING<br>DEPTH | CAVE-IN<br>DEPTH | DRILLING<br>FLUID LEVEL | WATER<br>LEVEL |                                                                                                 |
|                              |       | 4/11/24                  | 10:55 | 21.5             | --              | --               | --                      | None           |                                                                                                 |
| BORING<br>COMPLETED: 4/11/24 |       |                          |       |                  |                 |                  |                         |                |                                                                                                 |
| DR: JS LG: KV Rig: 99        |       |                          |       |                  |                 |                  |                         |                |                                                                                                 |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B-13 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3184.5</b>                                                 | GEOLOGY                                                                             | N  | MC | SAMPLE<br>TYPE                                                                        | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----|----|---------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|
|                     | MATERIAL DESCRIPTION                                                            |                                                                                     |    |    |                                                                                       |            | WC                       | DEN | LL | PL | %-#200 |
| 1                   | <b>TOPSOIL</b>                                                                  |    | 14 | M  |    | 18         |                          |     |    |    |        |
| 2                   | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, firm to very stiff (CH) |   |    |    |    |            |                          |     |    |    |        |
| 3                   |                                                                                 |                                                                                     | 13 | M  |    | 18         | 23                       |     |    |    |        |
| 4                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 5                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 6                   |                                                                                 |                                                                                     | 18 | M  |    | 18         | 23                       |     | 84 | 24 |        |
| 7                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 8                   |                                                                                 |                                                                                     | 7  | M  |    | 18         | 21                       |     |    |    |        |
| 9                   |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 10                  |                                                                                 |                                                                                     |    |    |    |            |                          |     |    |    |        |
| 11                  |                                                                                 |                                                                                     | 22 | M  |    | 18         | 26                       |     |    |    |        |
| 12                  |                                                                                 |                                                                                     |    |    |   |            |                          |     |    |    |        |
| 13                  |                                                                                 |                                                                                     | 20 | M  |  | 18         |                          |     |    |    |        |
| 14                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 15                  | <b>SHALE</b> , Fat Clay, grey, very stiff to hard (CH)                          |  | 38 | M  |  | 18         |                          |     |    |    |        |
| 16                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 17                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 18                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 19                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 20                  |                                                                                 |                                                                                     |    |    |  |            |                          |     |    |    |        |
| 21                  |                                                                                 |                                                                                     | 28 | M  |  | 18         |                          |     |    |    |        |
|                     | Bottom of Boring                                                                |                                                                                     |    |    |                                                                                       |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD       |       | WATER LEVEL MEASUREMENTS |      |                  |                 |                  |                         |                | NOTE: REFER TO<br>THE ATTACHED<br>SHEETS FOR AN<br>EXPLANATION OF<br>TERMINOLOGY ON<br>THIS LOG |
|------------------------------|-------|--------------------------|------|------------------|-----------------|------------------|-------------------------|----------------|-------------------------------------------------------------------------------------------------|
| 20.0                         | 4" FA | DATE                     | TIME | SAMPLED<br>DEPTH | CASING<br>DEPTH | CAVE-IN<br>DEPTH | DRILLING<br>FLUID LEVEL | WATER<br>LEVEL |                                                                                                 |
|                              |       | 4/11/24                  | 9:43 | 21.5             | --              | --               | --                      | None           |                                                                                                 |
| BORING<br>COMPLETED: 4/11/24 |       |                          |      |                  |                 |                  |                         |                |                                                                                                 |
| DR: JS LG: KV Rig: 99        |       |                          |      |                  |                 |                  |                         |                |                                                                                                 |

AET CORP P-0032141.GPJ AET+CPT+WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141** Log of Boring No. **B-14 (p. 1 of 1)**  
 Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3153.2</b><br>MATERIAL DESCRIPTION                    | GEOLOGY                                                                                            | N  | MC | SAMPLE<br>TYPE                                                                           | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----|----|------------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|
|                     |                                                                            |                                                                                                    |    |    |                                                                                          |            | WC                       | DEN | LL | PL | %-#200 |
| 1                   | <b>TOPSOIL</b>                                                             |  TOPSOIL          | 4  |    |  SS   | NSR        |                          |     |    |    |        |
| 2                   | <b>FILL</b> , Sandy Lean to Fat Clay with Gravel, brown (CH)               |  FILL             |    |    |       |            |                          |     |    |    |        |
| 3                   | <b>SANDY LEAN to FAT CLAY</b> , brown, stiff, trace gravel present (CL-CH) |  TERRACE DEPOSITS | 15 | M  |  SS   | 18         | 18                       |     |    |    |        |
| 4                   | <b>WEATHERED SHALE</b> , Fat Clay, olive brown, very stiff (CH)            |  PIERRE SHALE     | 23 | M  |  SS   | 18         | 21                       |     |    |    |        |
| 5                   |                                                                            |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 6                   |                                                                            |                                                                                                    | 36 | M  |  SS   | 18         | 20                       |     |    |    |        |
| 7                   | <b>SHALE</b> , Fat Clay, grey, very stiff to hard (CH)                     |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 8                   |                                                                            |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 9                   |                                                                            |                                                                                                    | 45 | M  |  SS   | 18         | 22                       |     |    |    |        |
| 10                  |                                                                            |                                                                                                    |    |    |      |            |                          |     |    |    |        |
| 11                  |                                                                            |                                                                                                    | 34 | M  |  SS | 18         |                          |     |    |    |        |
| 12                  |                                                                            |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 13                  |                                                                            |                                                                                                    | 31 | M  |  SS | 18         |                          |     |    |    |        |
| 14                  |                                                                            |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 15                  |                                                                            |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 16                  |                                                                            |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 17                  |                                                                            |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 18                  |                                                                            |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 19                  |                                                                            |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 20                  |                                                                            |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 21                  |                                                                            |                                                                                                    | 28 | M  |  SS | 18         |                          |     |    |    |        |
|                     | Bottom of Boring                                                           |                                                                                                    |    |    |                                                                                          |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD    |       | WATER LEVEL MEASUREMENTS |       |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|---------------------------|-------|--------------------------|-------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
| 20.0                      | 4" FA | DATE                     | TIME  | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
|                           |       | 4/10/24                  | 16:09 | 21.5          | --           | --            | --                   | None        |                                                                                  |
|                           |       |                          |       |               |              |               |                      |             |                                                                                  |
|                           |       |                          |       |               |              |               |                      |             |                                                                                  |
| BORING COMPLETED: 4/10/24 |       |                          |       |               |              |               |                      |             |                                                                                  |
| DR: JS LG: KV Rig: 99     |       |                          |       |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET-CPT-WELL.GDT 6/4/24



# SUBSURFACE BORING LOG

AET No: **P-0032141**

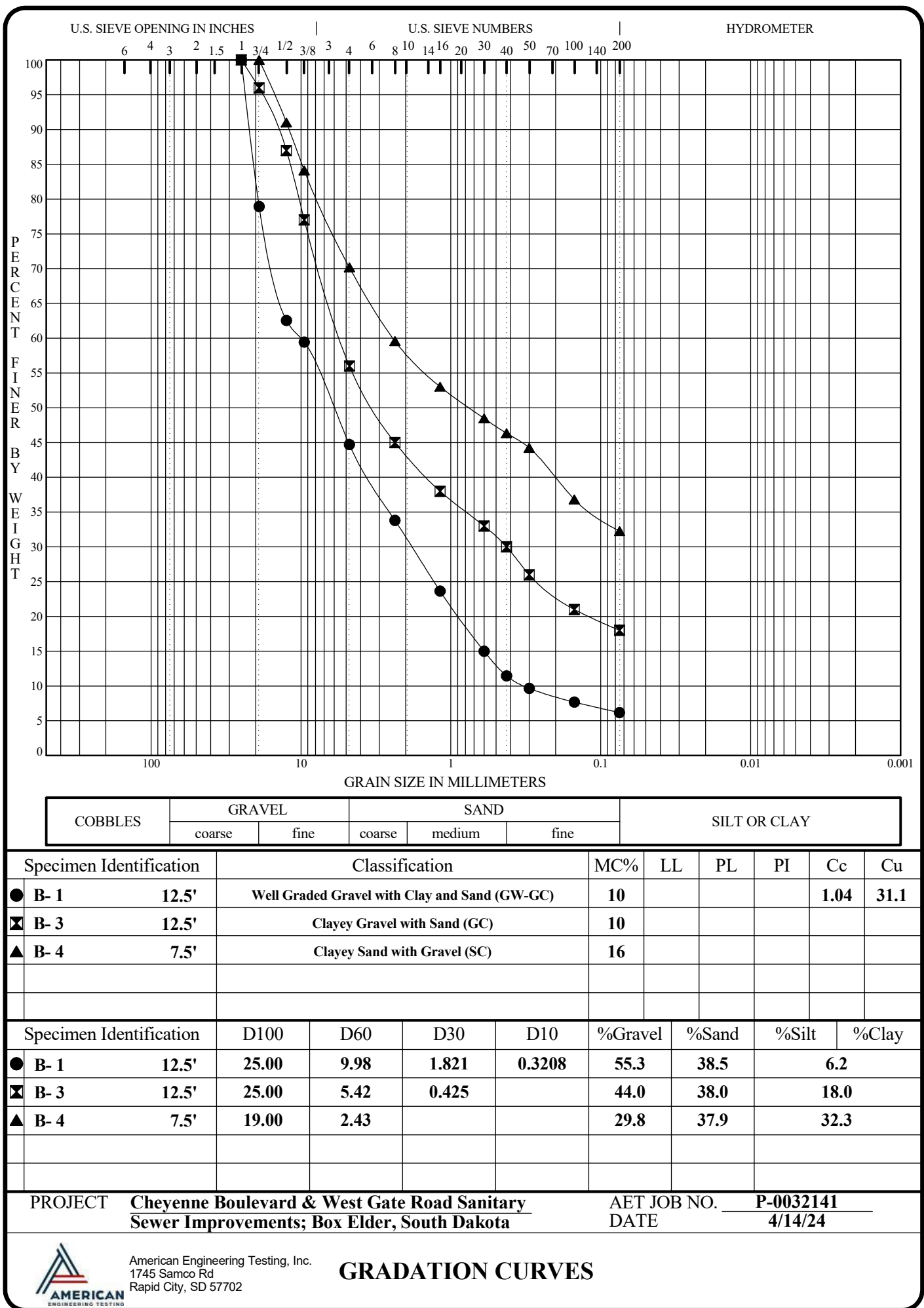
Log of Boring No. **B-15 (p. 1 of 1)**

Project: **Cheyenne Boulevard & West Gate Road Sanitary Sewer Improvements; Box Elder, South Dakota**

| DEPTH<br>IN<br>FEET | Surface Elevation <b>3167.3</b><br>MATERIAL DESCRIPTION                                  | GEOLOGY                                                                                            | N  | MC | SAMPLE<br>TYPE                                                                           | REC<br>IN. | FIELD & LABORATORY TESTS |     |    |    |        |
|---------------------|------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|----|----|------------------------------------------------------------------------------------------|------------|--------------------------|-----|----|----|--------|
|                     |                                                                                          |                                                                                                    |    |    |                                                                                          |            | WC                       | DEN | LL | PL | %-#200 |
| 1                   | <b>TOPSOIL</b>                                                                           |  TOPSOIL          | 6  | M  |  SS   | 18         |                          |     |    |    |        |
| 2                   | <b>SANDY LEAN to FAT CLAY</b> , brown, stiff to very stiff, trace gravel present (CL-CH) |  TERRACE DEPOSITS |    |    |       |            |                          |     |    |    |        |
| 3                   |                                                                                          |                                                                                                    | 20 | M  |  SS   | 18         | 21                       |     |    |    |        |
| 4                   |                                                                                          |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 5                   |                                                                                          |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 6                   |                                                                                          |                                                                                                    | 13 | M  |  SS   | 18         | 20                       |     | 61 | 19 |        |
| 7                   |                                                                                          |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 8                   | <b>CLAYEY SAND</b> , brown, medium dense, trace gravel present (SC)                      |                  | 25 | M  |  SS   | 18         | 13                       |     |    |    | 39     |
| 9                   |                                                                                          |                                                                                                    |    |    |       |            |                          |     |    |    |        |
| 10                  |                                                                                          |                                                                                                    |    |    |      |            |                          |     |    |    |        |
| 11                  |                                                                                          |                                                                                                    | 24 | M  |  SS | 18         | 12                       |     |    |    |        |
| 12                  | <b>WEATHERED SHALE</b> , Fat Clay, olive brown to grey, very stiff (CH)                  |  PIERRE SHALE   |    |    |     |            |                          |     |    |    |        |
| 13                  |                                                                                          |                                                                                                    | 21 | M  |  SS | 18         | 23                       |     |    |    |        |
| 14                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 15                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 16                  |                                                                                          |                                                                                                    | 27 | M  |  SS | 18         |                          |     |    |    |        |
| 17                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 18                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 19                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 20                  |                                                                                          |                                                                                                    |    |    |     |            |                          |     |    |    |        |
| 21                  |                                                                                          |                                                                                                    | 30 | M  |  SS | 18         |                          |     |    |    |        |
|                     | Bottom of Boring                                                                         |                                                                                                    |    |    |                                                                                          |            |                          |     |    |    |        |

| DEPTH: DRILLING METHOD    |       | WATER LEVEL MEASUREMENTS |       |               |              |               |                      |             | NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG |
|---------------------------|-------|--------------------------|-------|---------------|--------------|---------------|----------------------|-------------|----------------------------------------------------------------------------------|
| 20.0                      | 4" FA | DATE                     | TIME  | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |                                                                                  |
|                           |       | 4/10/24                  | 14:48 | 21.5          | --           | --            | --                   | None        |                                                                                  |
|                           |       |                          |       |               |              |               |                      |             |                                                                                  |
|                           |       |                          |       |               |              |               |                      |             |                                                                                  |
| BORING COMPLETED: 4/10/24 |       |                          |       |               |              |               |                      |             |                                                                                  |
| DR: JS LG: KV Rig: 99     |       |                          |       |               |              |               |                      |             |                                                                                  |

AET CORP P-0032141.GPJ AET-CPT-WELL.GDT 6/4/24







American Engineering Testing, Inc.  
Rapid City  
1745 Samco Road  
Rapid City, SD 57702  
(605) 388-0029  
www.teamAET.com

Report No: PTR:AET-155204-S4

# Proctor Report

**Client:** Towey Design Group, Inc.

**CC:**

**Project:** Cheyenne Blvd & Westgate Rd Sanitary  
Sewer Improvements

Box Elder SD

**Job No:** P-0032141

Date of Issue:

4/26/2024

## Sample Details

**Sample ID:** AET-155204-S4

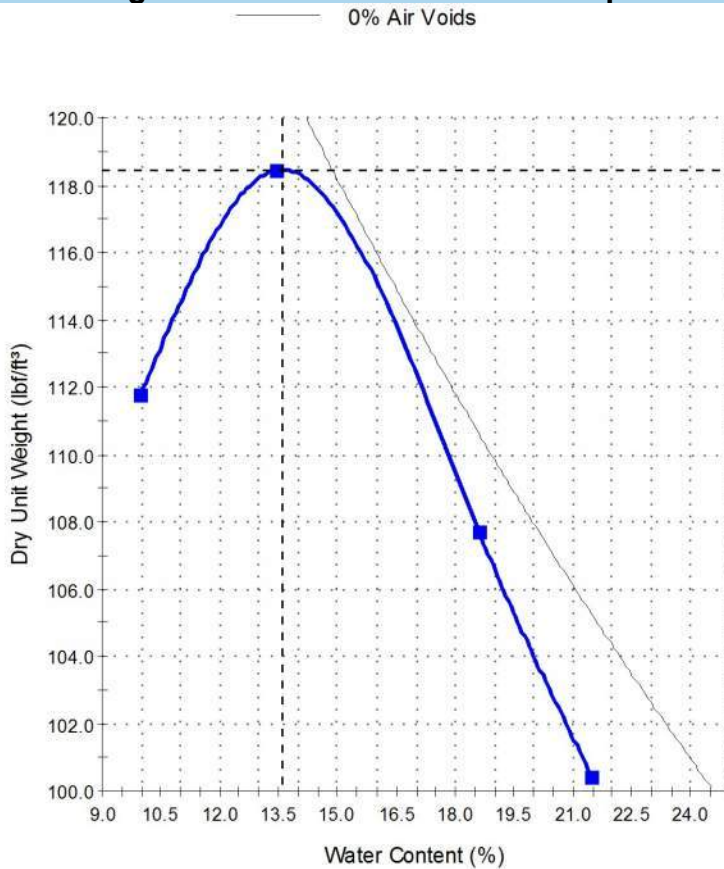
**Field ID:** Bulk B-1 1-5'

**Date Sampled:** 4/11/2024

**Material:** Sandy Lean to Fat Clay (CL-CH)

**Location:** Boring B-1

## Dry Unit Weight - Water Content Relationship



## Test Results

ASTM D 1557

**Maximum Dry Unit Weight (lb/ft³):** 118.5

**Optimum Water Content (%):** 13.6

Method:

A

Preparation Method:

Moist

Specific Gravity (Fines):

2.65

Specific Gravity Method:

Assumed

Retained Sieve No 4 (4.75mm) (%):

0

Passing Sieve No 4 (4.75mm) (%):

100

Tested By:

Christine Olson

Date Tested:

4/25/2024

## Comments



American Engineering Testing, Inc.  
Rapid City  
1745 Samco Road  
Rapid City, SD 57702  
(605) 388-0029  
www.teamAET.com

Report No: PTR:AET-155204-S1

## Proctor Report

**Client:** Towey Design Group, Inc.

**CC:**

**Project:** Cheyenne Blvd & Westgate Rd Sanitary  
Sewer Improvements

Box Elder SD

**Job No:** P-0032141

Draft Report - Subject to  
change pending final review

Date of Issue:

4/25/2024

### Sample Details

**Sample ID:** AET-155204-S1

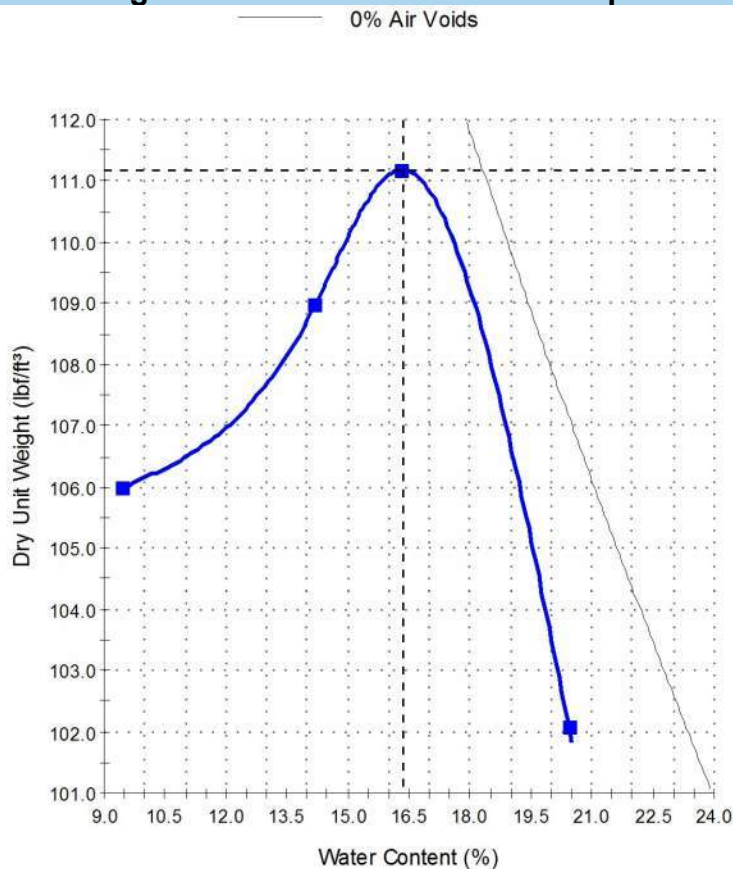
**Field ID:** Bulk B-4 & B-5 (combined) 1-5'

**Date Sampled:** 4/11/2024

**Material:** Sandy Lean to Fat Clay (CL-CH)

**Location:** Boring B-4 & B-5

### Dry Unit Weight - Water Content Relationship



### Test Results

ASTM D 1557

**Maximum Dry Unit Weight (lb/ft³):** 111.2

**Optimum Water Content (%):** 16.3

Method:

A

Preparation Method:

Moist

Specific Gravity (Fines):

2.65

Specific Gravity Method:

Assumed

Retained Sieve No 4 (4.75mm) (%):

1

Passing Sieve No 4 (4.75mm) (%):

99

Tested By:

Christine Olson

Date Tested:

4/24/2024

### Comments



American Engineering Testing, Inc.  
Rapid City  
1745 Samco Road  
Rapid City, SD 57702  
(605) 388-0029  
www.teamAET.com

Report No: PTR:AET-155204-S5

# Proctor Report

**Client:** Towey Design Group, Inc.

**CC:**

**Project:** Cheyenne Blvd & Westgate Rd Sanitary  
Sewer Improvements

Box Elder SD

**Job No:** P-0032141

Date of Issue:

4/26/2024

## Sample Details

**Sample ID:** AET-155204-S5

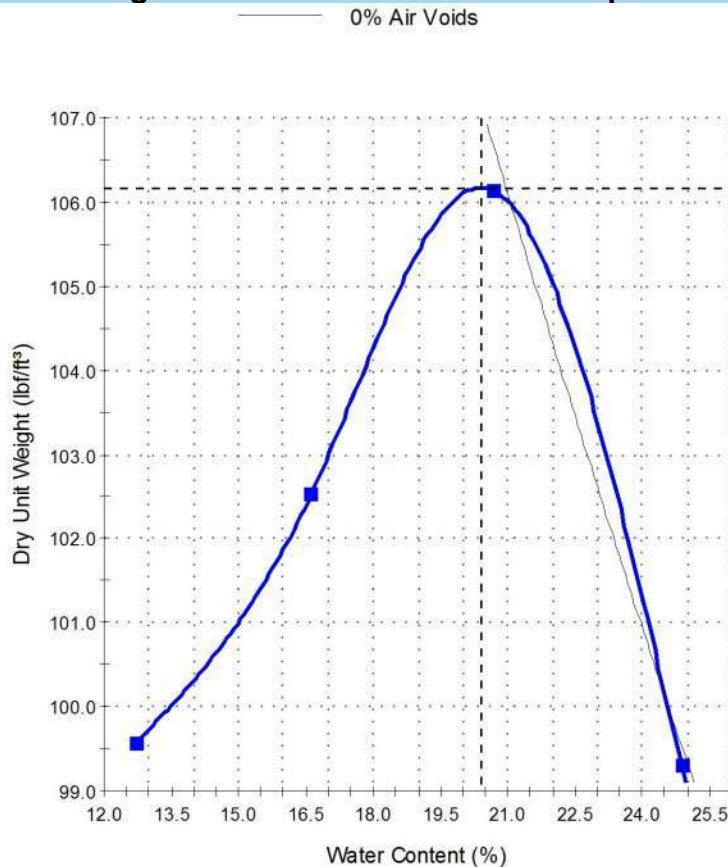
**Field ID:** Bulk B-8 & B-9 (combined) 1-5'

**Date Sampled:** 4/11/2024

**Material:** Sandy Lean to Fat Clay (CL-CH)

**Location:** Boring B-8 & B-9

## Dry Unit Weight - Water Content Relationship



## Test Results

ASTM D 1557

**Maximum Dry Unit Weight (lb/ft³):** 106.2

**Optimum Water Content (%):** 20.4

Method:

A

Preparation Method:

Moist

Specific Gravity (Fines):

2.65

Specific Gravity Method:

Assumed

Retained Sieve No 4 (4.75mm) (%):

1

Passing Sieve No 4 (4.75mm) (%):

99

Tested By:

Christine Olson

Date Tested:

4/25/2024

## Comments



American Engineering Testing, Inc.  
Rapid City  
1745 Samco Road  
Rapid City, SD 57702  
(605) 388-0029  
www.teamAET.com

Report No: PTR:AET-155204-S3

## Proctor Report

**Client:** Towey Design Group, Inc.

**CC:**

**Project:** Cheyenne Blvd & Westgate Rd Sanitary  
Sewer Improvements

Box Elder SD

**Job No:** P-0032141

Date of Issue:

4/25/2024

### Sample Details

**Sample ID:** AET-155204-S3

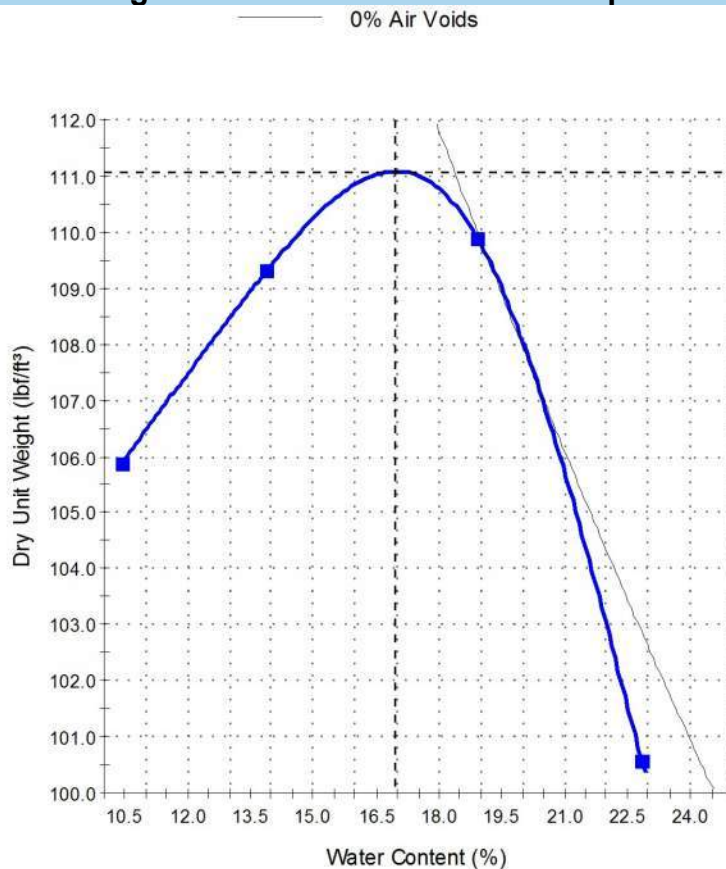
**Field ID:** Bulk B-13 & B-14 (combined) 1-5'

**Date Sampled:** 4/11/2024

**Material:** Sandy Fat Clay with a little gravel (CH)

**Location:** Boring B-13 & B-14

### Dry Unit Weight - Water Content Relationship



### Test Results

ASTM D 1557

**Maximum Dry Unit Weight (lb/ft³):** 111.1

**Optimum Water Content (%):** 17.0

Method:

A

Preparation Method:

Moist

Specific Gravity (Fines):

2.65

Specific Gravity Method:

Assumed

Retained Sieve No 4 (4.75mm) (%):

6

Passing Sieve No 4 (4.75mm) (%):

94

Tested By:

Christine Olson

Date Tested:

4/24/2024

ASTM D 4718

**Corrected Maximum Dry Unit Weight (lb/ft³):** 113.2

**Corrected Optimum Water Content (%):** 16.0

Specific Gravity (Oversize):

2.65

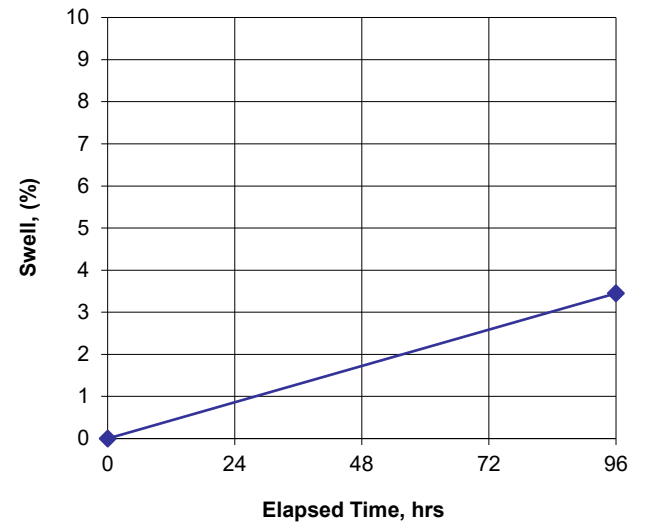
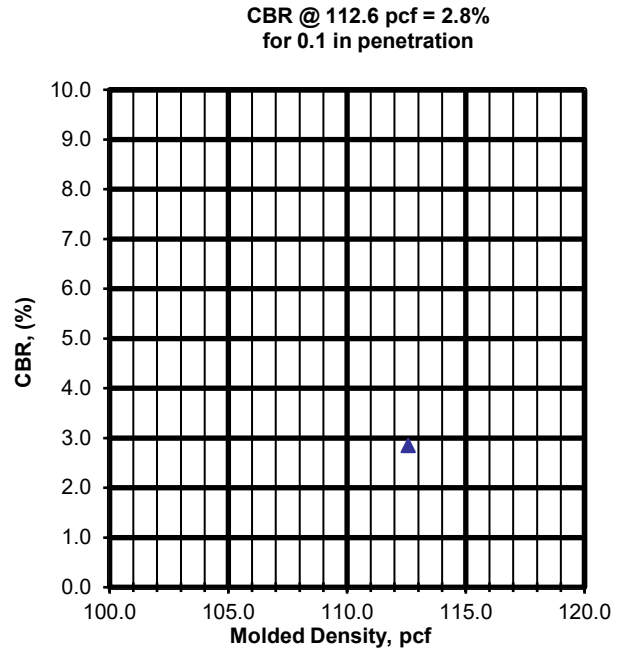
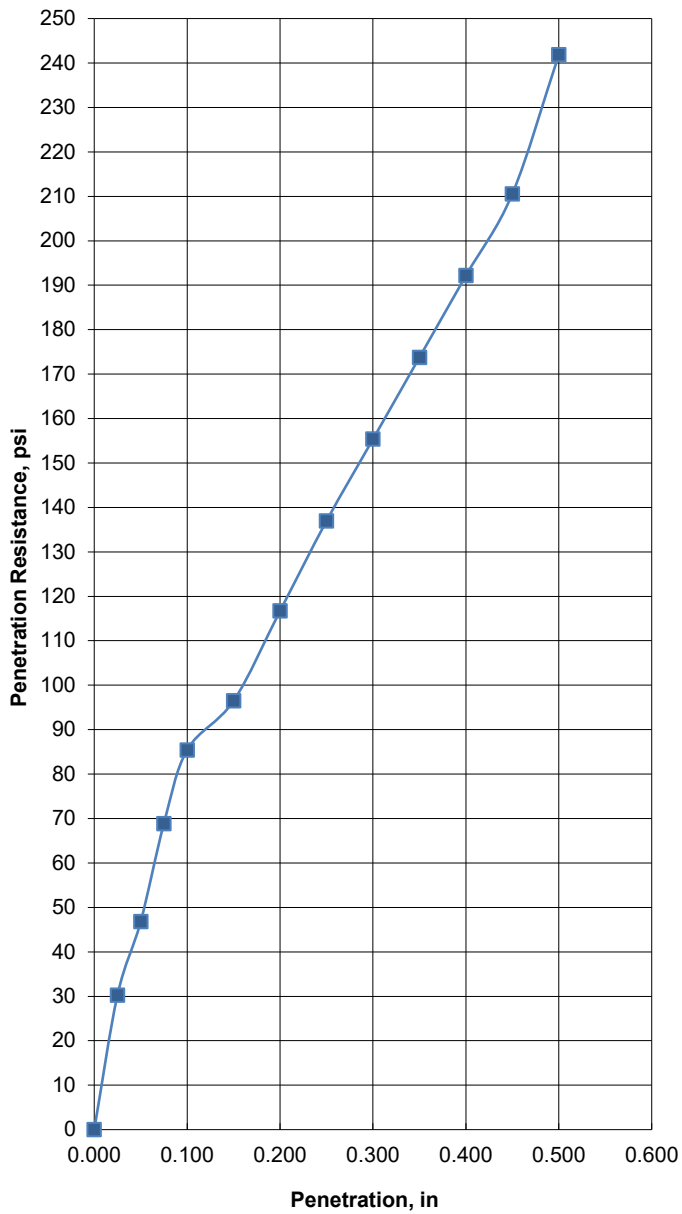
Sieve Size (Oversize):

No 4

Oversize Particles (%):

6

### Comments



| Molded                 |        |            | Soaked |        |            | CBR, (%)   |            | Pen.      | Swell |
|------------------------|--------|------------|--------|--------|------------|------------|------------|-----------|-------|
| Dens.                  | % Max. | % Moisture | Dens.  | % Max. | % Moisture | 0.1 in     | 0.2 in     | Surcharge | %     |
| 112.6                  | 95.0   | 13.6       | 109.0  | 92.0   | 17.1       | 2.8        | 2.6        | 10lb      | 3.4   |
| MATERIAL DESCRIPTION   |        |            |        |        | USCS       | Max. Dens. | Opt. Mois. | LL        | PI    |
| Sandy Lean to Fat Clay |        |            |        |        | CL-CH      | 118.5      | 13.6       |           |       |

Project No: P-0032141 Bulk B-1 1'-5'

Project: Cheyenne Blvd & West Gate Road SS Improvements  
Box Elder, South Dakota

Date: 5/29/2024

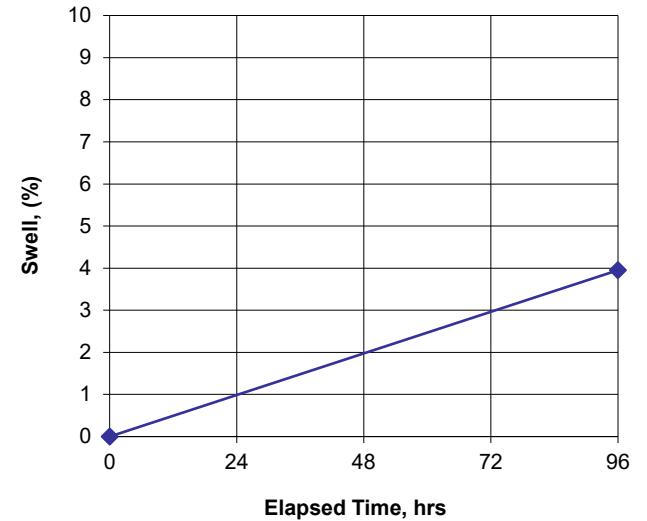
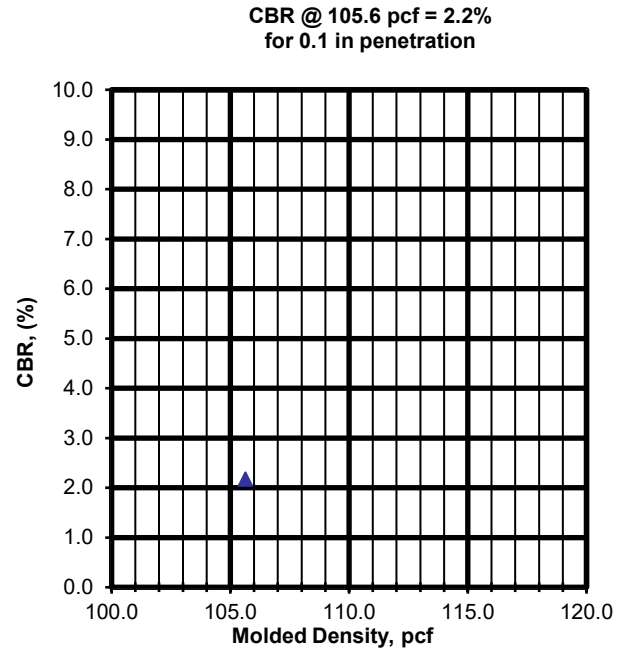
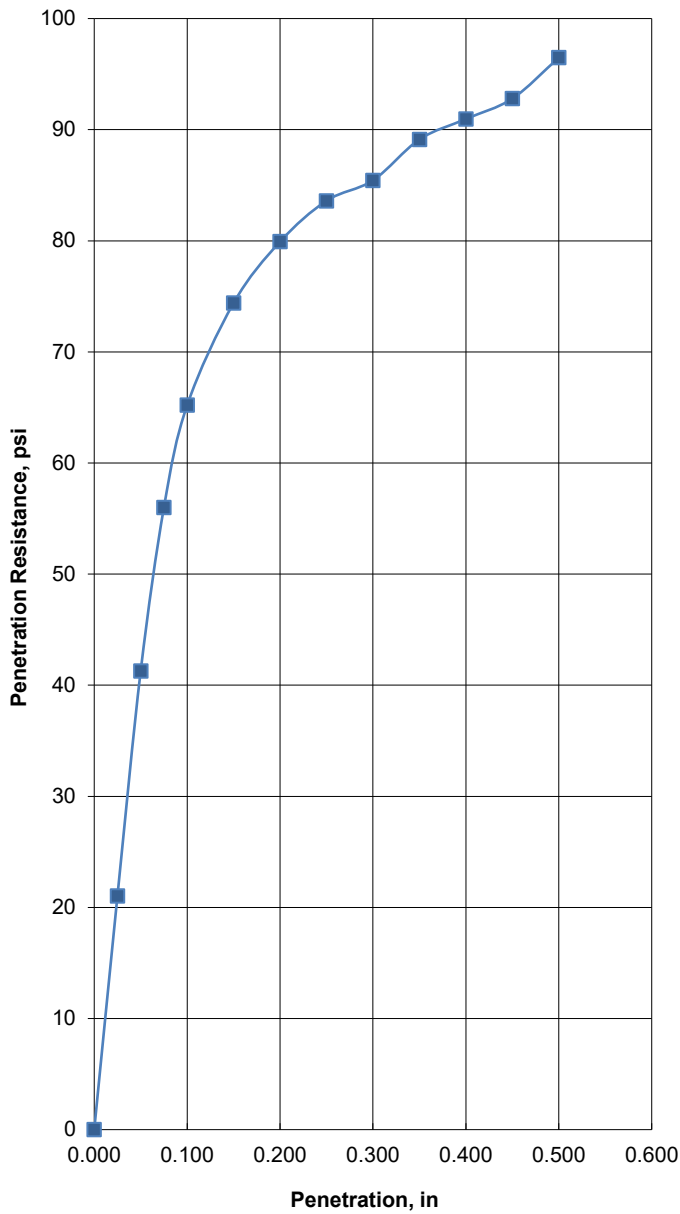
Test Descr. / Remarks

CBR: ASTM: D1883

Proctor: ASTM: D1557 A



## BEARING RATIO TEST REPORT

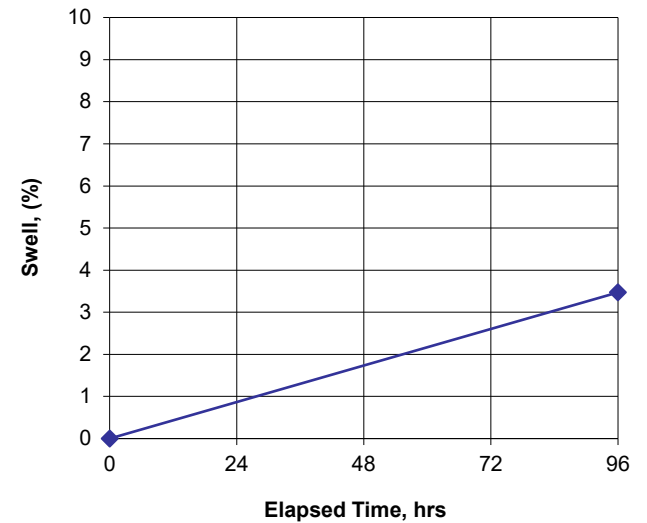
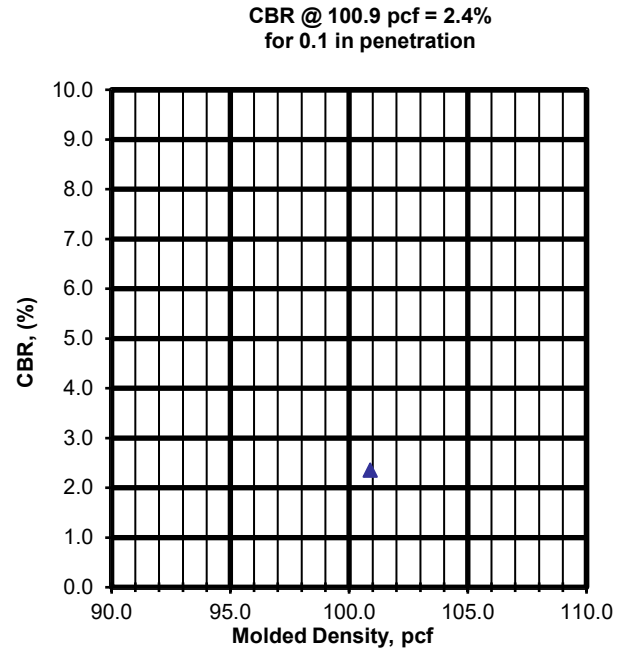
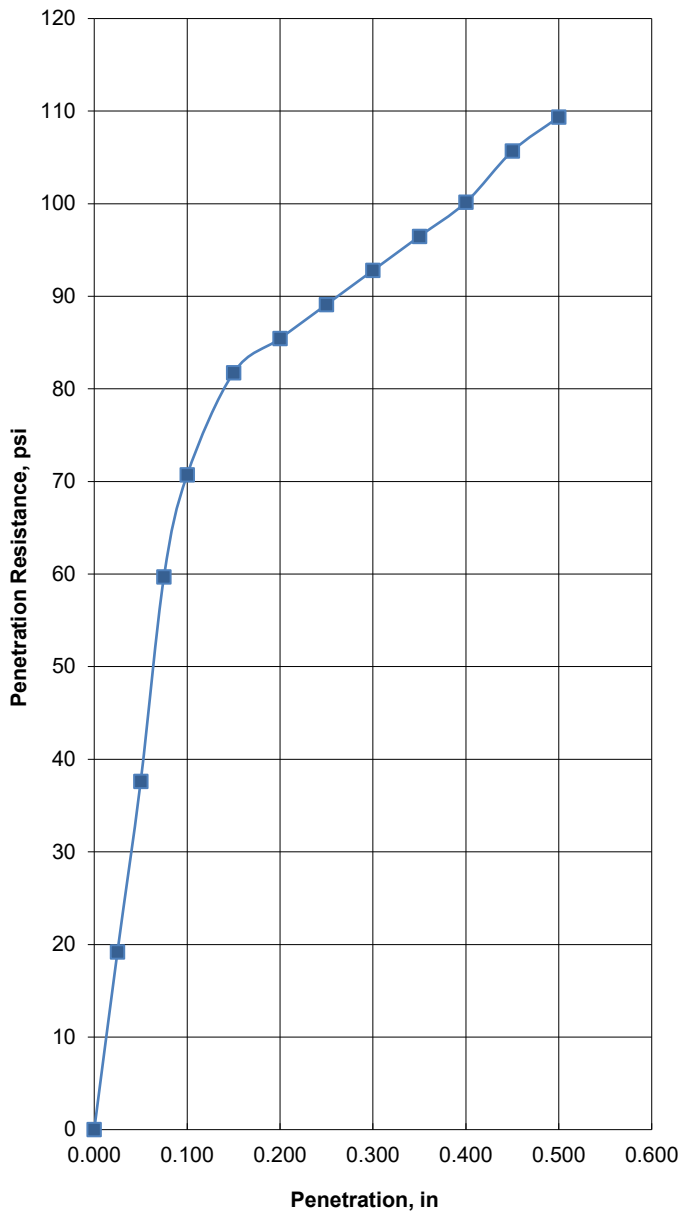


| Molded                 |        |            | Soaked |        |            | CBR, (%)   |            | Pen.      | Swell |
|------------------------|--------|------------|--------|--------|------------|------------|------------|-----------|-------|
| Dens.                  | % Max. | % Moisture | Dens.  | % Max. | % Moisture | 0.1 in     | 0.2 in     | Surcharge | %     |
| 105.6                  | 95.0   | 16.3       | 101.8  | 91.5   | 24.5       | 2.2        | 1.8        | 10lb      | 4.0   |
| MATERIAL DESCRIPTION   |        |            |        |        | USCS       | Max. Dens. | Opt. Mois. | LL        | PI    |
| Sandy Lean to Fat Clay |        |            |        |        | CL-CH      | 111.2      | 16.3       |           |       |

|                                                         |                      |                        |
|---------------------------------------------------------|----------------------|------------------------|
| Project No: P-0032141                                   | Bulk B-4 & B-5 1'-5' | Test Descr. / Remarks  |
| Project: Cheyenne Blvd & West Gate Road SS Improvements |                      | CBR: ASTM: D1883       |
| Date: 5/29/2024                                         |                      | Proctor: ASTM: D1557 A |



## BEARING RATIO TEST REPORT



| Molded                 |        |            | Soaked |        |            | CBR, (%)   |            | Pen.      | Swell |
|------------------------|--------|------------|--------|--------|------------|------------|------------|-----------|-------|
| Dens.                  | % Max. | % Moisture | Dens.  | % Max. | % Moisture | 0.1 in     | 0.2 in     | Surcharge | %     |
| 100.9                  | 95.0   | 20.4       | 97.6   | 91.9   | 23.0       | 2.4        | 1.9        | 10lb      | 3.5   |
| MATERIAL DESCRIPTION   |        |            |        |        | USCS       | Max. Dens. | Opt. Mois. | LL        | PI    |
| Sandy Lean to Fat Clay |        |            |        |        | CL-CH      | 106.2      | 20.4       |           |       |

Project No: P-0032141 Bulk B-8 & B-9 1'-5'

Project: Cheyenne Blvd & West Gate Road SS Improvements  
Box Elder, South Dakota

Date: 5/29/2024

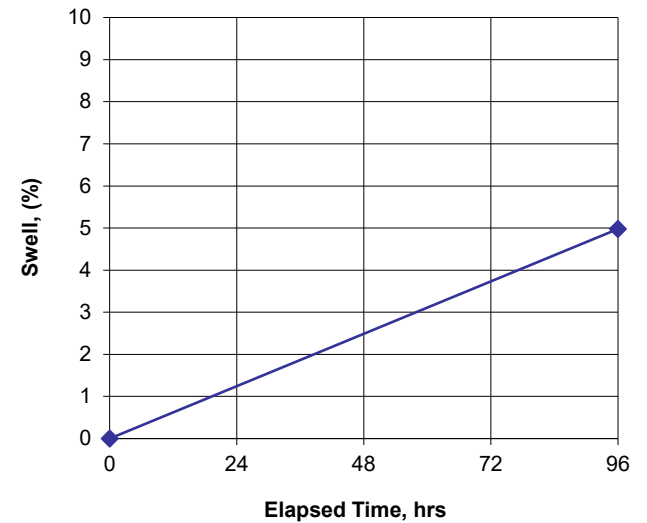
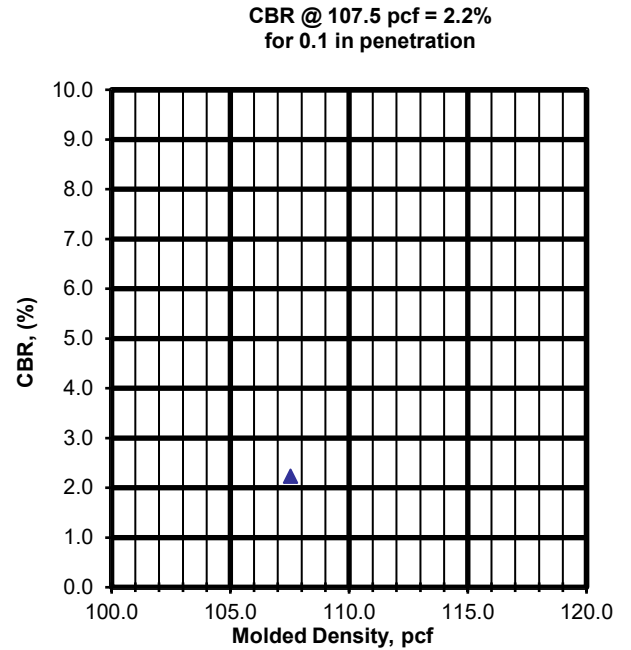
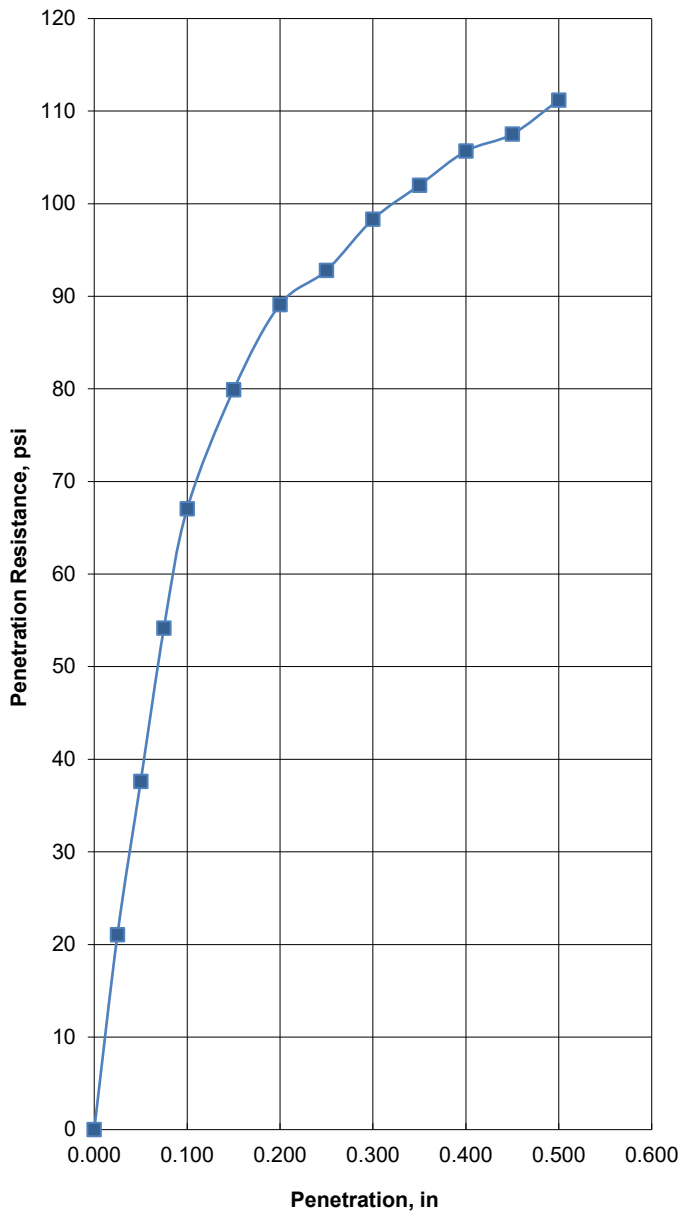
Test Descr. / Remarks

CBR: ASTM: D1883

Proctor: ASTM: D1557 A



## BEARING RATIO TEST REPORT



| Molded                   |        |            | Soaked |        |            | CBR, (%)   |            | Pen.      | Swell |
|--------------------------|--------|------------|--------|--------|------------|------------|------------|-----------|-------|
| Dens.                    | % Max. | % Moisture | Dens.  | % Max. | % Moisture | 0.1 in     | 0.2 in     | Surcharge | %     |
| 107.5                    | 95.0   | 16.0       | 102.6  | 90.6   | 21.3       | 2.2        | 2.0        | 10lb      | 5.0   |
| MATERIAL DESCRIPTION     |        |            |        |        | USCS       | Max. Dens. | Opt. Mois. | LL        | PI    |
| Sandy Fat Clay w/ Gravel |        |            |        |        | CH         | 113.2      | 16.0       |           |       |

Project No: P-0032141 Bulk B-13 & B-14 1'-5'

Project: Cheyenne Blvd & West Gate Road SS Improvements  
Box Elder, South Dakota

Date: 5/29/2024

Test Descr. / Remarks

CBR: ASTM: D1883

Proctor: ASTM: D1557 A



## BEARING RATIO TEST REPORT



# **Appendix B**

---

## Geotechnical Report Limitations and Guidelines for Use

## Appendix B

### Geotechnical Report Limitations and Guidelines for Use

#### AET Project No. P-0032141

---

#### B.1 REFERENCE

This appendix provides information to help you manage your risks relating to subsurface problems which are caused by construction delays, cost overruns, claims, and disputes. This information was developed and provided by GBA<sup>1</sup>, of which we are a member firm.

#### B.2 RISK MANAGEMENT INFORMATION

##### B.2.1 Understand the Geotechnical Engineering Services Provided for this Report

Geotechnical engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical engineering services is typically a geotechnical engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

##### B.2.2 Geotechnical Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared solely for the client.

Likewise, geotechnical engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client;
- for a different project or purpose;
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it; e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. If you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

---

<sup>1</sup> Geoprofessional Business Association, 1300 Piccard Drive, LL14, Rockville, MD 20850  
Telephone: 301/565-2733: [www.geoprofessional.org](http://www.geoprofessional.org), 2019

##### B.2.3 Read the Full Report

Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. Read and refer to the report in full.

## **Appendix B**

### **Geotechnical Report Limitations and Guidelines for Use**

#### **AET Project No. P-0032141**

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#### **B.2.4 You Need to Inform Your Geotechnical Engineer About Change**

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape;
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria;
- the composition of the design team; or
- project ownership.

As a general rule, always inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

#### **B.2.5 Most of the “Findings” Related in This Report Are Professional Opinions**

Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed. The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

#### **B.2.6 This Report's Recommendations Are Confirmation-Dependent**

The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations only after observing actual subsurface conditions exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.

#### **B.2.7 This Report Could Be Misinterpreted**

Other design professionals' misinterpretation of geotechnical engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members;
- help develop specifications;
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

#### **B.2.8 Give Constructors a Complete Report and Guidance**

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical engineering report, along with any attachments or appendices, with your contract documents, but be certain to note conspicuously that you have included the material for information purposes only. To avoid misunderstanding, you may also want to note that “informational purposes” means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, only from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to and be sure to allow enough time to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

## **Appendix B**

### **Geotechnical Report Limitations and Guidelines for Use**

#### **AET Project No. P-0032141**

---

#### **B.2.9 Read Responsibility Provisions Closely**

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. Read these provisions closely. Ask questions. Your geotechnical engineer should respond fully and frankly.

#### **B.2.10 Geoenvironmental Concerns Are Not Covered**

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical engineering study. For that reason, a geotechnical engineering report does not usually provide environmental findings, conclusions, or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Unanticipated subsurface environmental problems have led to project failures. If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

#### **B.2.11 Obtain Professional Assistance to Deal with Moisture Infiltration and Mold**

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, proper implementation of the geotechnical engineer's recommendations will not of itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. Geotechnical engineers are not building-envelope or mold specialists.

## **Appendix C**

### **Environmental Report**

---

Wetland Delineation & Aquatic Resources Inventory  
Cheyenne Boulevard SD3924009



# Wetland Delineation & Aquatic Resources Inventory

Cheyenne Boulevard SD3924009

---

Towey Design Group  
475 Villa Drive, Suite #3  
Box Elder, SD 57719



Today's Date: 9/4/2024  
Copyright © 2024 Impact7G, Inc.

## Prepared By

Dr. Jesse Broce, Certified Wetland Delineator  
Geologist  
(515) 473-6256



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North Liberty, IA 52317  
515.473.6256 • [info@impact7g.com](mailto:info@impact7g.com)  
[www.impact7g.com](http://www.impact7g.com)

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## **1.0 Executive Summary**

### **1.1 Purpose & Need**

Impact7G was contracted by Towey Design Group to complete a wetland delineation investigation for a proposed sanitary sewer improvement project. The intent of this wetland investigation is to document existing site conditions at the time of delineation, as may be of consequence to any potential regulatory compliance needs.

### **1.2 Location**

|                  |                          |
|------------------|--------------------------|
| <b>Sections:</b> | <b>23-27 &amp; 34-36</b> |
| <b>Township:</b> | <b>2 N</b>               |
| <b>Range:</b>    | <b>8 E</b>               |
| <b>Meridian:</b> | <b>Black Hills</b>       |

*See Appendix A - Figure B for Location Map.*

Driver Directions: The majority of the project area can be accessed along an east-west two-track that connects from the eastern extremity of Cheyenne Boulevard to 228<sup>th</sup> St. The north part of the project area can also be accessed from Highway 14-16.

### **1.3 Summary Findings**

Impact7G delineated 0.055 acres of wetland within the Investigation Area, composed of 0.018 acres of emergent wetland and 0.036 acres of riparian streambed wetland (See Appendix A – Figure A). Additionally, Boxelder Creek, an intermittent stream, passes through the project area for 123 linear feet, an area of 0.085 acres within the OHWM.

Jurisdiction of wetlands by state or federal agencies is not determined in this report.

## **2.0 Methodology: Delineation of Wetlands & Other Waters of the U.S.**

### **2.1 Wetlands**

Field analysis was completed using the routine onsite determination method defined in the U.S. Army Corps of Engineers Wetland Delineation Manual (Environmental Laboratory, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (USACE, 2010). Delineation datapoints and wetland boundaries were recorded across the site and associated shapefiles are available upon request.

### **2.2 Streams & Tributaries**

For the purposes of this report, streams & tributaries are characterized by having both a defined bed and bank, and an ordinary high-water mark (OHWM). The terms “streams” and “tributaries” are not intended to reference any legal definitions of the same name; however, it is the intent of this document to provide sufficient information that such legal definitions can be applied to water features identified

herein. Stream types (i.e., ephemeral, intermittent, or perennial) are based on definitions provided by the Army Corps of Engineers (USACE 2022), according to best available knowledge of flow regime at the time of the field survey.

## **2.3 Ditches**

Any areas identified as Ditches within the Investigation Area were specifically designed and are maintained to promote roadway or other drainage. Ditches exhibiting wetland characteristics (hydrophytic vegetation, hydric soils, or wetland hydrology), that were constructed in upland areas are not identified as wetlands or other waters of the U.S. For the purposes of this report, ditches or portions of ditches meeting wetland characteristics that were likely constructed in pre-existing wetlands and/or intersect existing wetlands, or other waters of the U.S., are identified as wetlands. Furthermore, ditches are distinguished herein from streams or tributaries if they lack a defined bed and bank, ordinary high-water mark, and perennial or intermittent flow.

## **3.0 Discussion of Findings**

Wetland delineation fieldwork was completed between August 14 and August 24, 2024, by:

- Jesse Broce, Certified Wetland Delineator

## **3.1 Current Conditions**

### **Site Conditions and Use**

The Investigation Area consists of grassed rangeland. The two-track on the south boundary of the project area is on a constructed embankment. The main tributary intersected the project area is Boxelder Creek. Some areas are disturbed by vehicle traffic, interrupted by fences and electric transmission lines, or are deeply incised or ditched. The project area also is adjacent to three livestock pond impoundments.

### **Investigation Limitations and Atypical Conditions**

Access to the site was not limited and conditions were atypical only insofar as it has been an abnormally dry summer. However, the abnormally heavy rainfall in the spring has generally facilitated normal vegetative growth.

### **United States Geological Survey (USGS) Topographic Mapping**

USGS historical topographic mapping (1953, 1986 ed. of Rapid City East, and 1953, 1991 ed. of Boxelder 1:24000 topographic quadrangles) identifies that the project area intersects nine intermittent streams, one perennial stream, two dry drainages, and a ditch. These conditions were field verified, except that Boxelder Creek was found to be intermittent rather than perennial in the project area. Additionally, the embankment on the southern boundary of the project area that supports the two-track is not visible on the topo, indicating that it is a more recent construction. (Appendix A – Figure C).

### **Soil Survey Geographic Database (SSURGO) Hydric Soils**

Observed field conditions are supported by SSURGO hydric soils mapping with some expected local variability. The only area mapped as a soil unit that has a hydric component is part of the Pierre clay that has 2% hydric soils. There is also an area around a stock pond which is mapped as water on the soil survey, which is nearby datapoints D-04 and D-05. The area where the mapped water area intersects the area of potential effect is upland, based on the nearby datapoints. (Appendix A – Figure

D).

#### **National Wetland Inventory (NWI)**

Observed field conditions are mostly unsupported by NWI mapping with some local variability. Most of the mapped riverine intermittent stream beds were not found to contain wetlands. Most of the wetlands occurred only where some surface water ponding had occurred adjacent to culverts. Boxelder creek, however, was found to be a true riverine intermittent stream bed. The ditch on the north side of the project area was mapped as a palustrine forested wetland, but trees are sparse in the vicinity of the stream. (Appendix A – Figure E).

#### **Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL)**

National Flood Hazard Layer (NFHL) mapping indicates that only the part of the project area in and to the north of the Boxelder Creek channel has a 1 % annual flood hazard or greater (Appendix A - Figure F).

#### **LIDAR Surface Topography Map**

LIDAR mapped surface topography identifies that Boxelder Creek drains to the east, and most of the project area drains north into Boxelder Creek. (Appendix A – Figure G).

#### **Palmer Drought Severity Index (PDSI)**

Long term climatic and weather conditions consisted of mild wetness per the PDSI at the time of field work. The amount of precipitation preceding field work was inconsequential (See Appendix B).

#### **U.S. Army Corps of Engineers Antecedent Precipitation Tool**

The Antecedent Precipitation Tool (USACE 2023) indicates that at the project location (Latitude: 44.1054127 N, Longitude: 103.1163464 W – decimal degrees) the antecedent precipitation conditions prior to the wetland delineation field work were dry for the area, based upon a rolling 30-year normal range of adjacent weather station data (See Appendix B).

### **3.2 Wetland Determinations**

Emergent wetlands included low-landscape areas, dominated by *Polygonum aviculare*, *Hordeum jubatum*, and *Xanthium strumarium*, which are subject to frequent flooding and high-water tables (Datapoints D-01, D-04, D-09, D-11 & D-12). This wetland type is distinguished by a predominant aerial coverage of herbaceous, non-woody vegetation. Emergent wetland boundaries were determined by differences in vegetation and corresponding changes in geomorphic position (see Table 2 for associated upland datapoints).

The streambed consisted of the channel of an intermittent streams, dominated by *Spartina pectinata*, which is dry or partially dry for part of the year (Datapoint D-16). In this survey area, the only streambed wetland delineated was a ditch. Streambed boundaries were determined by differences in vegetation and geomorphic position (see Table 2 for associated upland datapoints).

*Table 1: Delineated Wetland Areas (Cowardin Classification)*

| Wetland Class            | Total Acres |
|--------------------------|-------------|
| Palustrine - Emergent    | 0.018       |
| Intermittent - Streambed | 0.036       |

*Table 2: Aquatic Resource Data Table*

| Aquatic Resource ID | Wetland Type | Area (Acres) | Corresponding Wetland Datapoint | Corresponding Upland Datapoint |
|---------------------|--------------|--------------|---------------------------------|--------------------------------|
| A                   | Emergent     | 0.002        | D-01                            | D-02                           |
| B                   | Emergent     | 0.003        | D-04                            | D-05                           |
| C                   | Emergent     | 0.006        | D-09                            | D-10                           |
| D                   | Emergent     | 0.008        | D-11 & D-12                     | D-13                           |
| E                   | Stream       | 0.085        | ST-01                           | -                              |
| F                   | Streambed    | 0.036        | D-16                            | D-15                           |

See also:

- Appendix A - Figure A: Wetland Delineation and Aquatic Resources Map
- Appendix C: Photos
- Appendix D: Wetland Delineation Datasheets

### 3.3 Streams & Tributaries

Tributary name information reflects data provided from the United States Geological Survey (USGS) 1:24,000 topographic maps.

#### Boxelder Creek

Boxelder Creek is located within the Investigation Area and is illustrated on Figure A (Datapoint St-01). Within the Investigation Area, Boxelder Creek can be generally described as follows:

- Length: 128 L.F. (total)
- Width at Top of Bank: 7'
- Width Low Flow Channel: 4'
- Width OHWM: 14'
- Depth from Top of Bank to Bed: 3-6'
- Depth from OHWM to Bed: 6-9'
- Water Depth at Thalweg: 3'
- Incised
- Bed material: Cobbles and pebbles on riffles. Elsewhere 1-2" of mud buries pebbles.
- Bank material: Sandy clay loam, 40 % comprised of rounded pebbles.

Noted evidence of the OHWM include: a natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; vegetation matted down, bent, or absent; bed and banks; and change in plant community.

## **4.0 Regulatory Review**

The information in this section is for informational purposes only and is based on current guidance and precedent at the time of this report. Information in this section may or may not apply, in part or in whole, to any proposed action related to the Investigation Area and findings of this report.

The U.S. Army Corps of Engineers (USACE) regulates the discharge of dredged or fill materials into all regulated waters of the United States (WATERS), including wetlands and streams, in Section 404 of the Clean Water Act (USAEWES Environmental Laboratory, 1987). The process of Jurisdictional Determination, conducted by the USACE, may determine that all or part of the WATERS delineated for this project are considered regulated. If wetlands or streams were identified within this report, then permits from the USACE and the South Dakota Department of Natural Resources (SDDNR) may be required prior to beginning work.

The USACE normally requires acquisition of a Section 404 permit and mitigation when any WATERS impact is proposed. In general, there are three types of permits as described below.

**Nationwide & Regional Permits:** Nationwide and regional permits are generally the simplest form of the 404 permits. Wetland loss of 1/2 acre or less and stream impacts of 300 linear feet or less are typically permitted under a Nationwide Permit. Wetland loss of up to 2 acres and/or 1000 linear feet of stream may be permitted under a Regional Permit, should appropriate conditions apply. These permits often require preconstruction notification to the USACE for impacts to as little as 1/10 of an acre, or less dependent upon the nature of the proposed activity. Generally, these permits take 30 to 45 days to obtain.

**Individual Permits:** An individual permit requires a full public interest review and an analysis of practicable alternatives to the proposed action. A Public Notice is distributed to all known interested persons. After evaluating comments and information received, a final decision on the application is made. The permit decision is generally based on the outcome of a public interest balancing process in which the benefits of the project are balanced against the detriments. A permit will be granted unless the proposal is found to be contrary to the public interest. Processing time usually takes 60 to 120 days unless a public hearing is required, or an environmental statement must be prepared.

During the permitting process for any type of permit, the USACE requires that applicants first establish that impacts to WATERS cannot be avoided. Permit applicants then must demonstrate that reasonable efforts to minimize impacts to WATERS have been made in the design and construction plans. Having taken the first two steps, applicants then must provide a plan for compensation to unavoidable impacts, typically through purchase of credit from a mitigation bank or establishment of a permittee responsible mitigation site. In general, our experience has been that the USACE requires in-kind mitigation be done at a minimum ratio of one (1) to one (1) but may require a compensation ratio of 1.5:1 to 2.5:1 (i.e., two and one-half acres of constructed wetland for every one acre of impact) in some circumstances. Additionally, respective mitigation credit purchase or a permittee responsible mitigation plan must be approved by USACE prior to commencement of potentially regulated project activities (fill placement, grading, tree removal, excavation, trenching, etc.).

## **5.0 Conclusions**

Impact7G delineated 0.055 acres of wetland within the Investigation Area, composed of 0.018 acres of emergent wetland and 0.036 acres of riparian streambed wetland (See Appendix A – Figure A). Additionally, Boxelder Creek, an intermittent stream, passes through the project area for 123 linear feet, an area of 0.085 acres within the OHWM.

If proposed activities will disturb these areas, consultation with the U.S. Army Corps of Engineers and the South Dakota Department of Natural resources is strongly recommended.

This report has been prepared for the exclusive use of our client, and for specific application to the project discussed. To the best of my knowledge the above statements, attachments, including those labeled and identified as enclosures, and all conclusions are true, accurate, and based on current environmental principles and science. No warranties, either expressed or implied, are intended or made. In the event that changes in the nature, design or location of the project as shown are planned, the conclusions and recommendations contained on this form shall not be considered valid unless Impact7G, Inc. reviews the changes and either verifies or modifies the conclusions of this form in writing. This report has been prepared by:

9/4/2024

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Prepared by: Dr. Jesse Broce

Date

Reviewed by: Will Downey, PWS

## **References**

- Deters, Jason, 2023. Antecedent Precipitation Tool (Version 1.0.23). U.S. Army Corps of Engineers. [Computer Application Software] Retrieved from: <https://github.com/erdc/Antecedent-Precipitation-Tool/releases>
- Hurt, G.W. (ed.), 2006. Field Indicators of Hydric Soils in the United States, Version 6.0. USDA, NRCS, Baltimore, MD.
- USAEWES Environmental Laboratory, 1987. Corps of Engineers Wetland Delineation Manual. Technical Report Y-87-1.
- U. S. Army Corps of Engineers (USACE), 2005. Subject: Ordinary High Water Mark Identification. Regulatory Guidance Letter No. 05-05. Date: 12/7/2005.
- U. S. Army Corps of Engineers (USACE), 2010. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region. ERDC/EL TR-10-1. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U. S. Army Corps of Engineers (USACE), 2022. National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams : Interim Version. ERDC/CRREL TR-22-26. Cold Regions Research and Engineering Laboratory. Army Engineer Research and Development Center. Retrieved from: <https://hdl.handle.net/11681/46102>

## **GIS & Mapping Layer Sources**

All field data shown on maps for wetlands, waterways, and datapoints field-collected and post-processed using ArcGIS by Impact7G Inc., 2024.

Aerial photography, National Wetlands Inventory, and USGS topographic basemap provided by ArcGIS Map Service

- Aerial source:  
[https://services.arcgisonline.com/ArcGIS/rest/services/World\\_Imagery/MapServer](https://services.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer)
- National Wetlands Inventory:  
[https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/USA\\_Wetlands/FeatureServer](https://services.arcgis.com/P3ePLMYs2RVChkJx/arcgis/rest/services/USA_Wetlands/FeatureServer)
- Topo source:  
[https://services.arcgisonline.com/ArcGIS/rest/services/USA\\_Topo\\_Maps/MapServer](https://services.arcgisonline.com/ArcGIS/rest/services/USA_Topo_Maps/MapServer)

LiDAR data obtained from the USGS National Map via: <https://apps.nationalmap.gov/lidar-explorer/#/>

National Flood Hazard Layer provided by FEMA via:  
<https://hazards.fema.gov/arcgis/rest/services/public/NFHL/MapServer>

Digital SSURGO Soils Data provided by USDA data gateway.

- Source: <http://datagateway.nrcs.usda.gov/>

Street map provided by OpenStreetMap.



## **Appendix A: Report Figures**

### List of Included Figures:

**Figure A1: Wetland Delineation & Aquatic Resources Map**

**Figure A2: Emergent Wetland A**

**Figure A3: Emergent Wetland B**

**Figure A4: Emergent Wetland C**

**Figure A5: Emergent Wetland D**

**Figure A6: Boxelder Creek (E)**

**Figure A7: Streambed Wetland F**

**Figure B: Location Map**

**Figure C: USGS Topo 7.5 Minute Quadrangle Map (1:24,000)**

**Figure D: Soil Survey Geographic Database (SSURGO) Hydric Soils Map**

**Figure E: National Wetland Inventory (NWI) Map**

**Figure F: FEMA National Flood Hazard Layer (NFHL) Map**

**Figure G: LIDAR Surface Topography Map**

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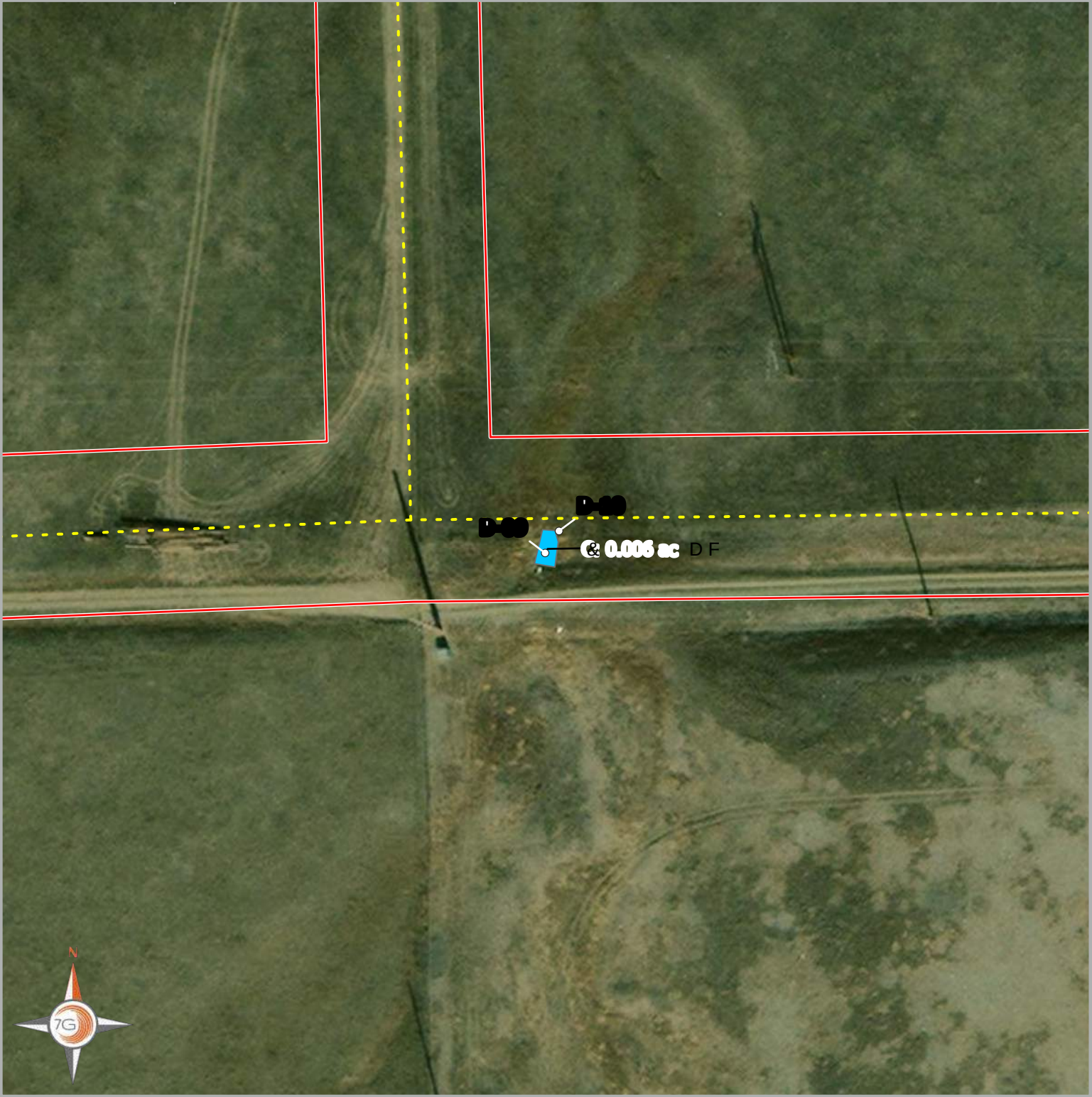




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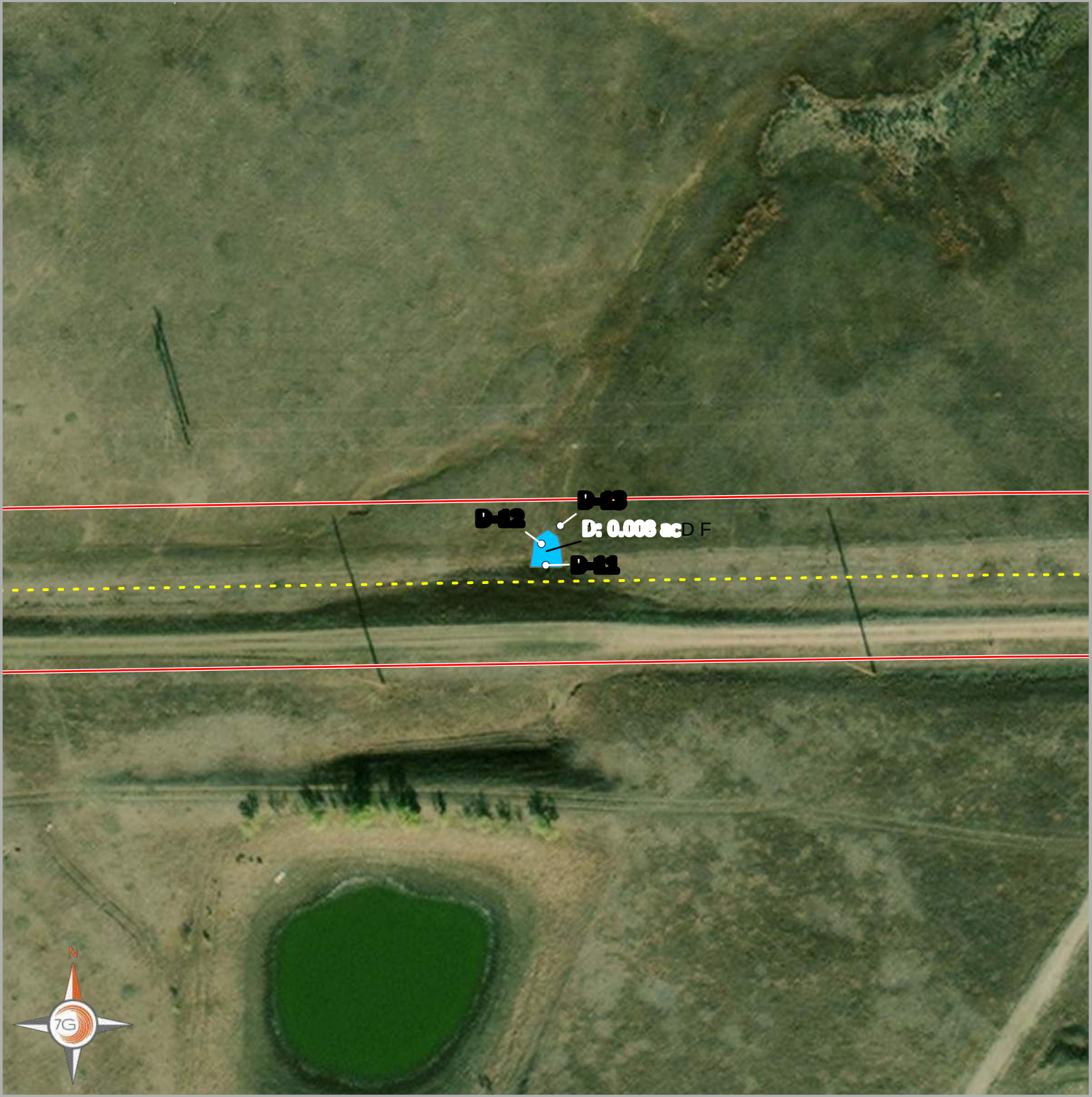
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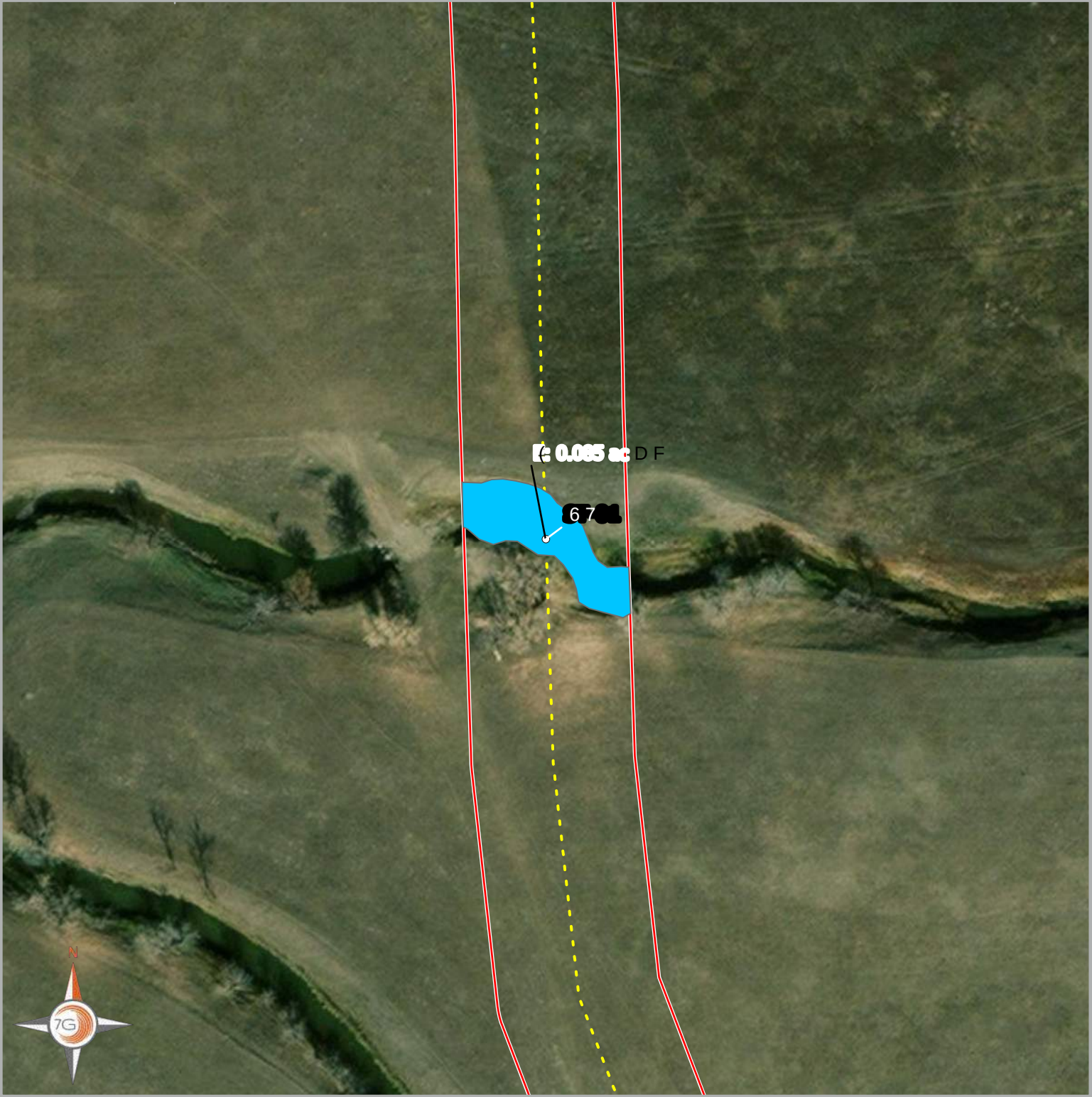
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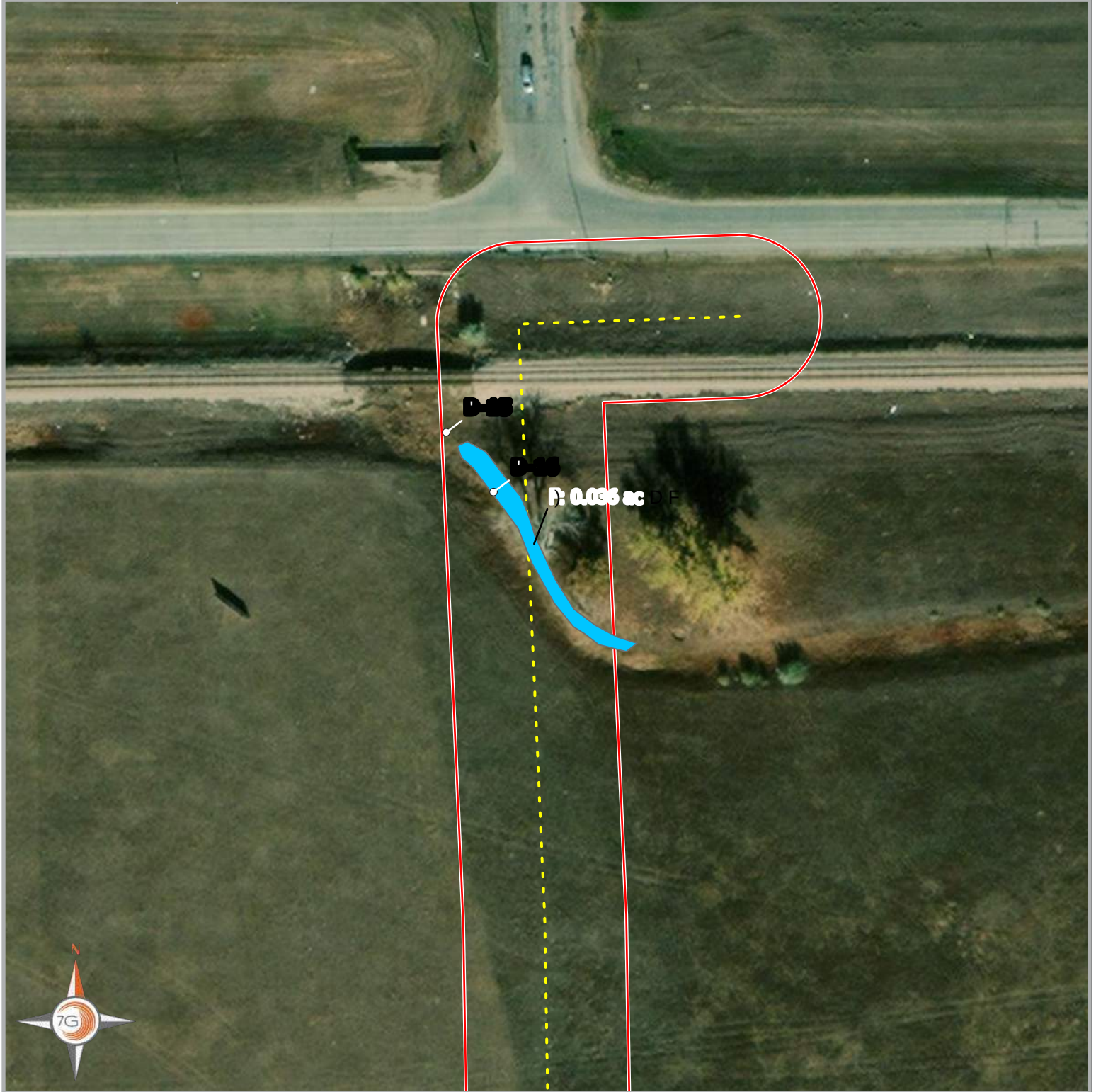
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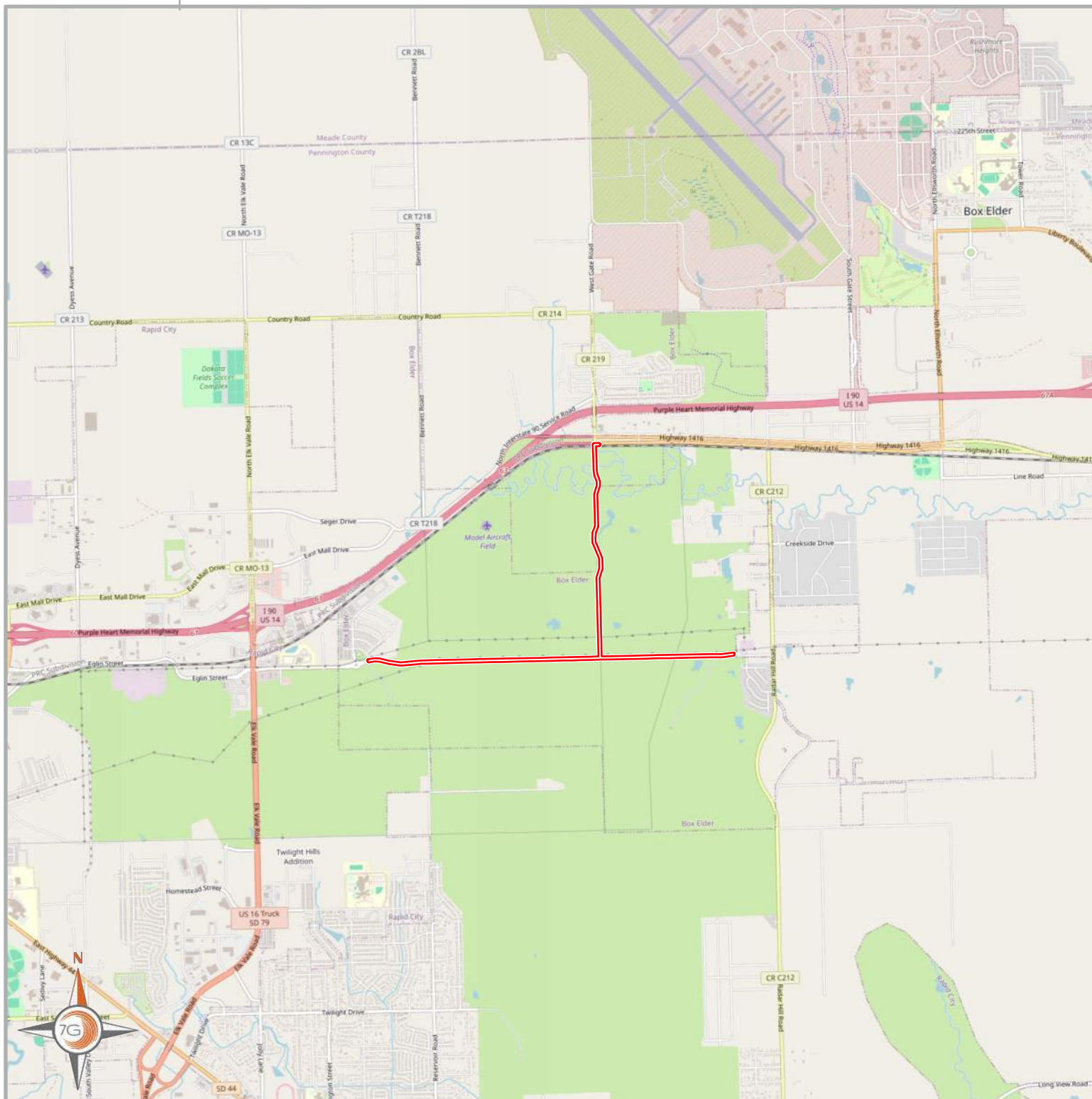
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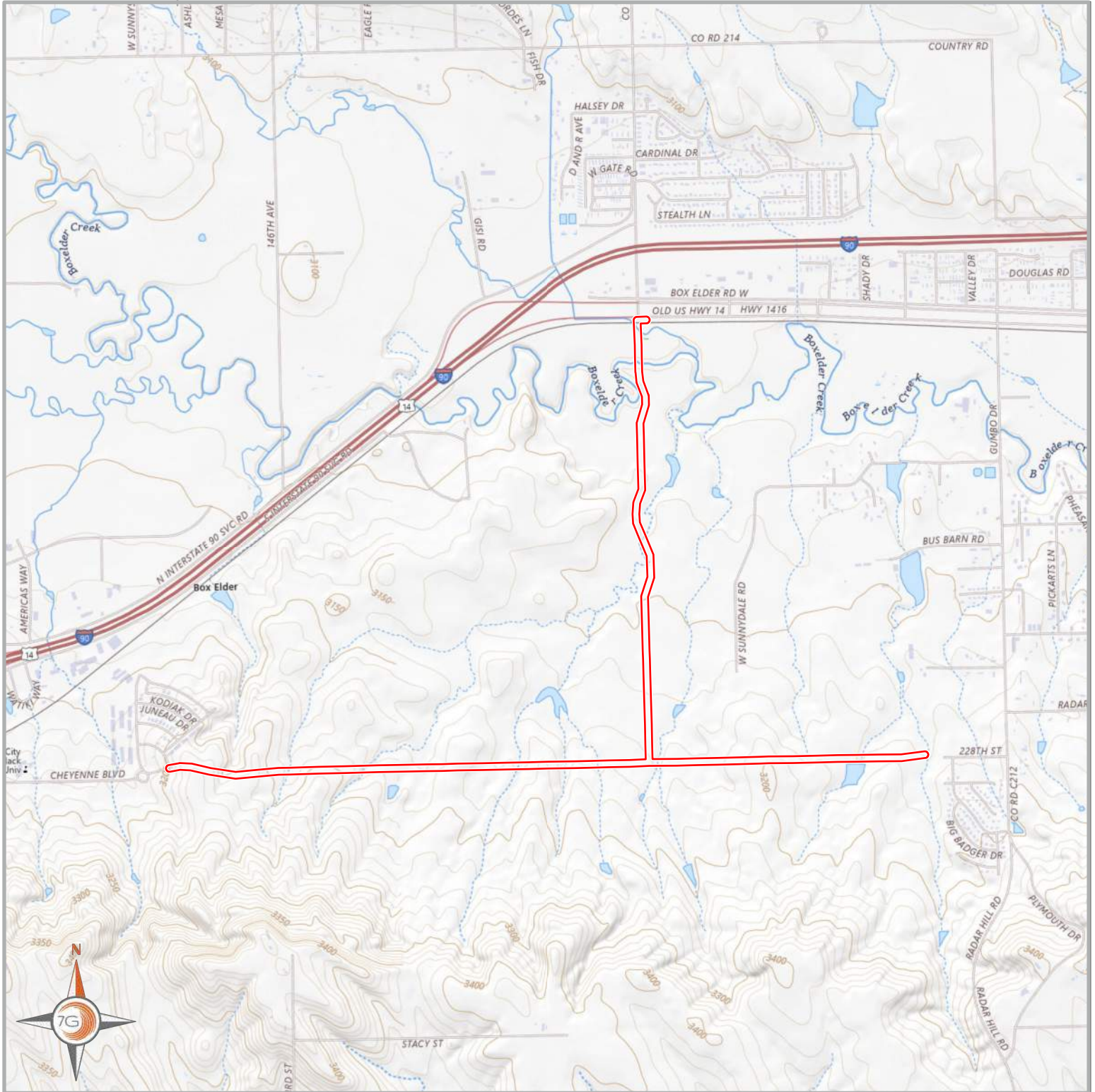
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)LOH 3DWK, 7,2\*,6?6RXWKB'DNRWD? 76' ~ ~ &B&KH\HQQH%/9?'

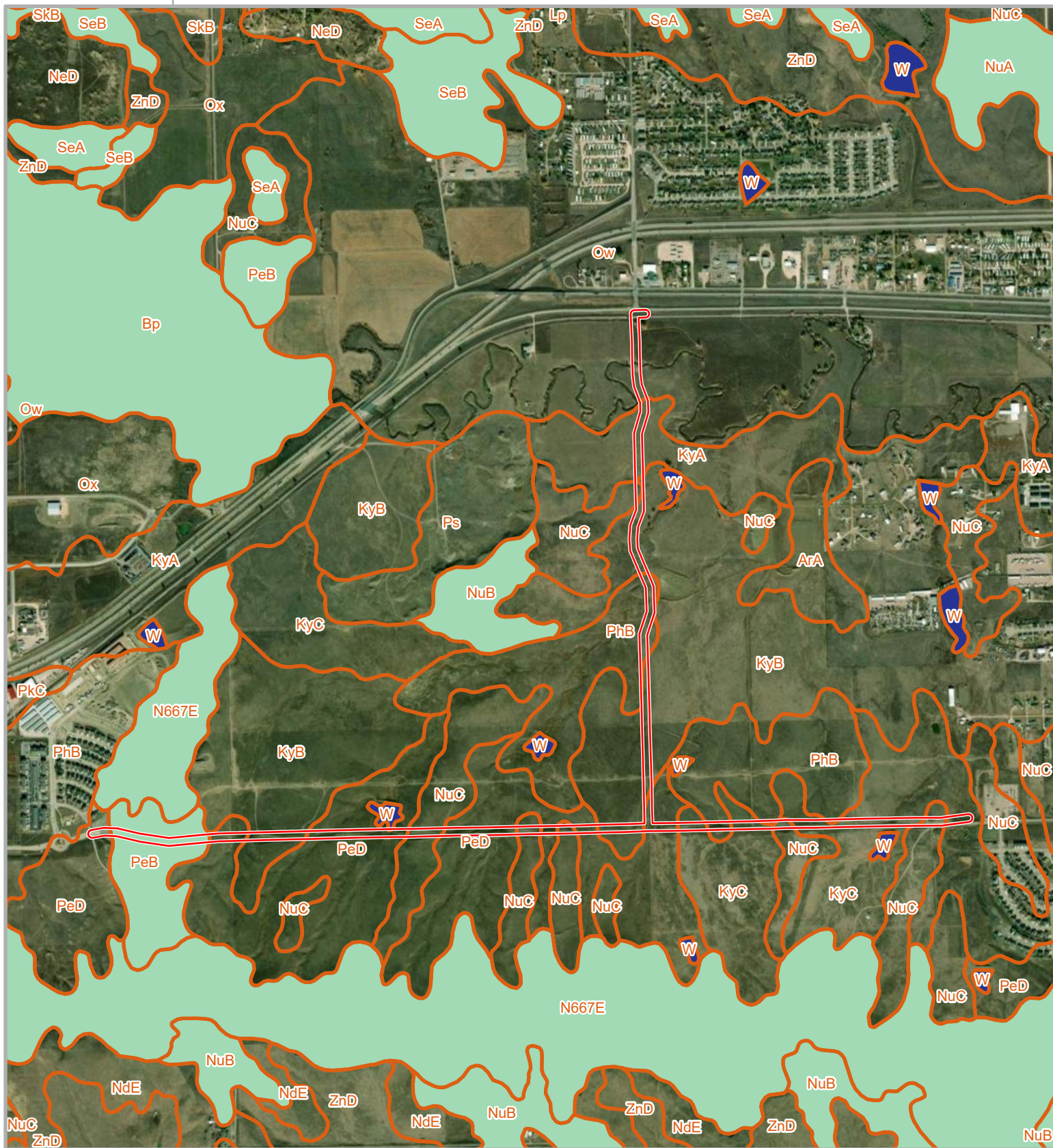
/ ( \* ( 1 '

%R[HOGHU 6'  
5DSLQ &LW\ (DVW 6'

 \$UHD RI 3RWHQWLDO (IIHFW

 0LOH





+IGULF 6RLOV \$UHD RI 3RWHQWLD0 (IHFV



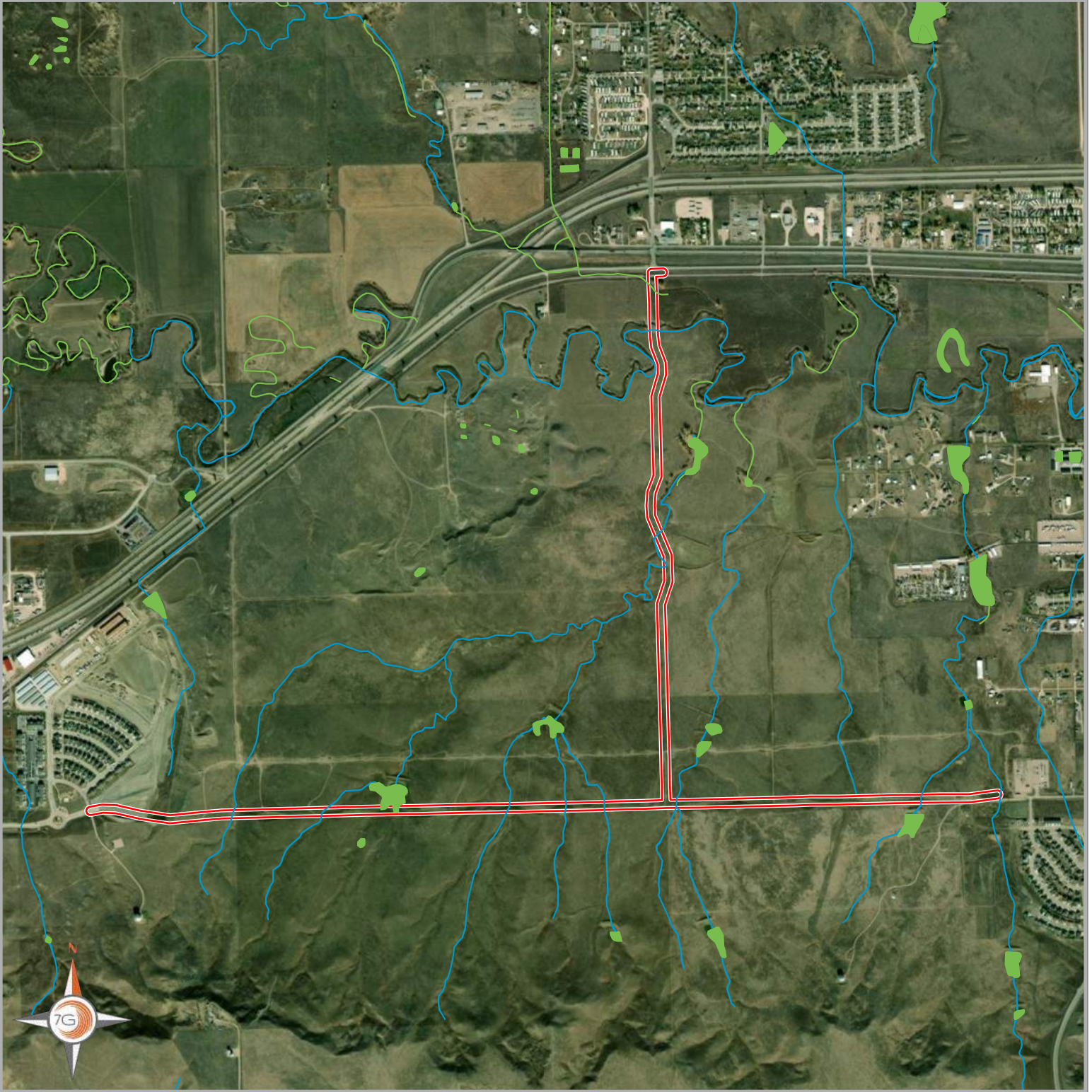
0 500 1,000 2,000 Feet





),\*85( (

1DWLRQDO :HWODQG ,QYHQWRU\ 1:, 0DS



'(6&5,37,21

&KH\HQQH %RXOHYDUG  
7RZH\ 'HVLJQ \*URXS  
3K\VLFDQ /RFDWLRQ  
0DS &UHDWRU, -%URFH

6HU\LFH /D\HU &UHGLWV, 0D[DU ,68 \* ,6 )DFLOLW\  
&RRUGLQDWH 6\WHP,1\$' ' 870 =RQH 1  
'DWH ([SRUWHG,  
)LOH 3DWK, 7,2\*,626RXWKB'DNRWD? 26' " " &B&KH\HQQH%

/(\*1'

:HWODQGV

\$UHD RI 3RWHQWL

0DULQH

(VWXDU\

0DUVK 6ZDPS %RJ  
3UDLULH

5LYHU

/DNH 5HVHUYRLU

)HHW



),\*85( )

)(0\$ 1DWLRQDO )ORRG +DJDUG /D\HU 1)

)ORRG +DJDUG =RQH V

- \$QQXDO &KDQFH )ORRG +DJDUG
- 5HJXODWRU\ )ORRGZD\
- 6SHFLDO )ORRGZD\
- \$UHD RI 8QGHWHUPLQHG )ORRG +DJDUG
- \$QQXDO &KDQFH )ORRG +DJDUG
- )XWXUH &RQGLWLRQV \$QQXDO &KDQFH )ORRG +DJDUG
- \$UHD ZLWK 5HGXFHG 5LVN 'XH WR /HYHH
- \$UHD ZLWK 5LVN 'XH WR /HYHH



'(6&5,37,21

&KH\HQQH %RXOHYDUG  
7RZH\ 'HVLJQ 6ROXWLRQV  
3KIVLFDO /RFDWLRQ  
f f  
ODS &UHDWRU -%URFH

6HUYLEH /D\HU &UHGLWV (DUWKVWDU \*HRJUDSKLFV  
&RRUGLQDWH 6\WHP 1\$' 870 =RQH 1  
'DWH ([SRUWHG  
)LOH 3DWK 7 ?\*,6?6RXWKB'DNRWD? 76' &B&KH\HQQH%/9'?

/(\*(1'

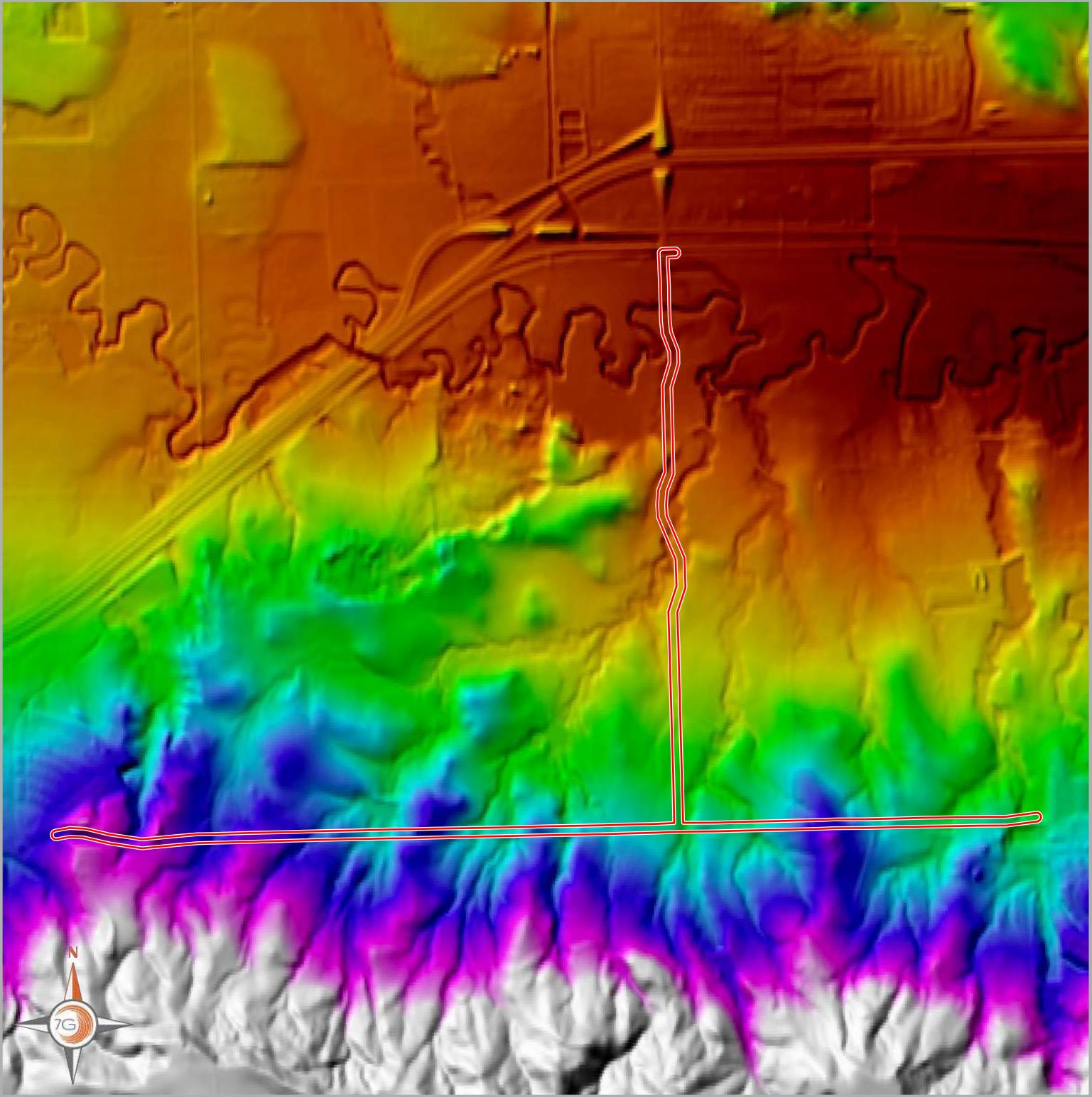
\$UHD RI 3RWHQWLDO (IIHFV

)HHW



),\*85( \*

/,'\$5 6XUIDFH 7RSRJUDSK\ 0DS



'(6&5,37,21

&KH\HQQH %RXOHYDUG  
7RZH\ 'HVLJQ \*URXS  
3K\VLFDQ /RFDWLRQ  
... ..  
0DS &UHDWRU, -%URFH

6HU\LFH /D\HU &UHGLWV, .,68 \*,6 )DFLOLW\  
&RRUGLQDWH 6\WHP,1\$' -' 870 =RQH 1  
'DWH ([SRUWHG,  
)LOH 3DWK, 7,2\*,6?6RXWKB'DNRWD? ?6' - - &B&KH\HQQH%/9'?

/(\*('1'

(OHYDWLRQ

P



\$UHD RI 3RWHQWL



"

"

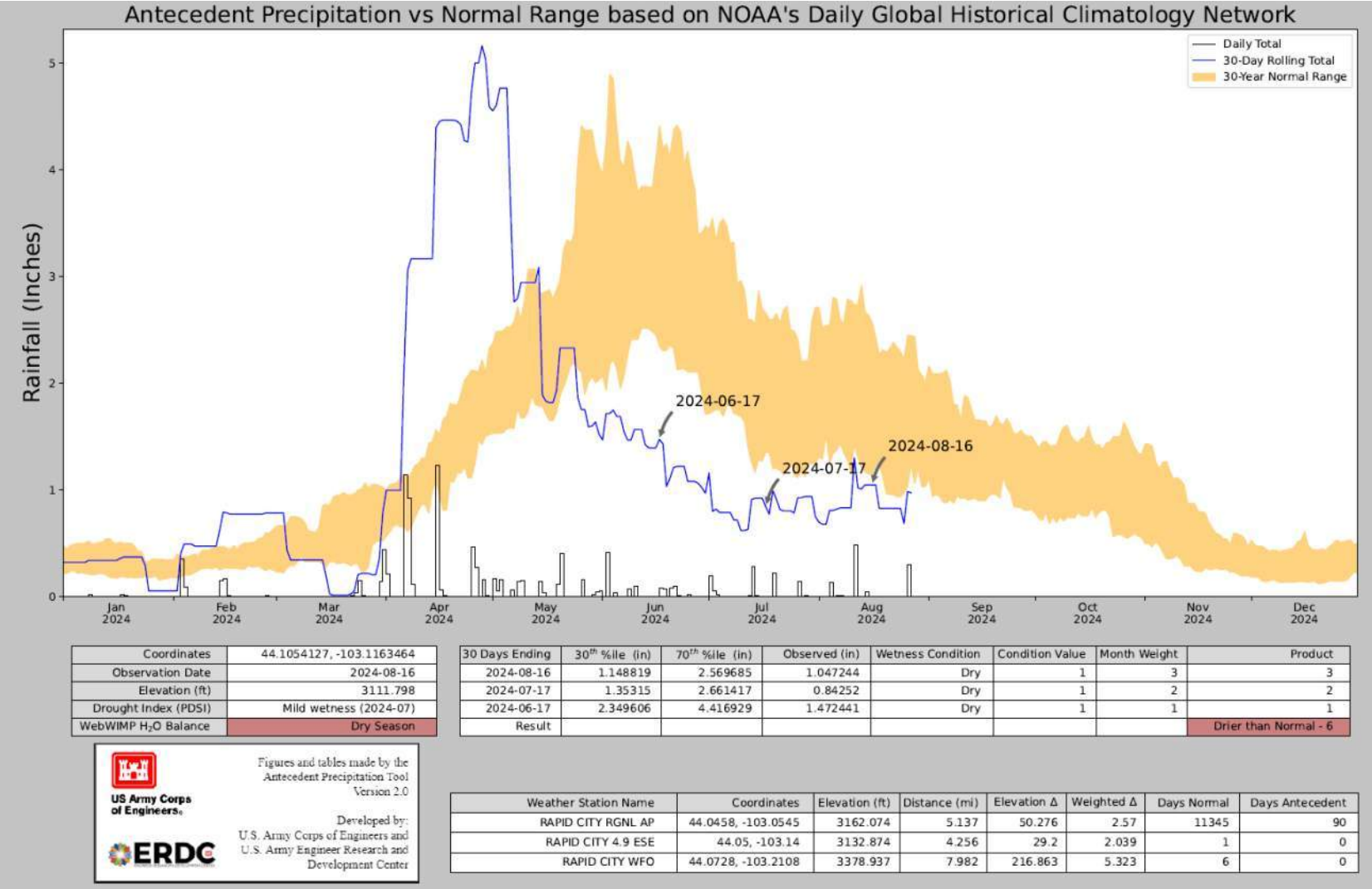


)HHW

Appendix B: USACE Antecedent Precipitation Graph

USACE Antecedent Precipitation Tool (Version 1.0.23, 2023)

Retrieved from <https://github.com/erdc/Antecedent-Precipitation-Tool/releases>





## Appendix C: Photos



**Photo 1: Project area**

Overview photo

Date: 8/15/24

Direction: Facing north



**Photo 2: Project area**

Overview photo

Date: 8/15/24

Direction: Facing east



**Photo 3: Project area**

Overview photo

Date: 8/15/24

Direction: Facing south





**Photo 4: Project area**

Overview photo

Date: 8/16/24

Direction: Facing west



**Photo 5: Emergent Wetland A**

Datapoint D-01

Date: 8/14/24

Direction: Facing east



**Photo 6: Upland Drainageway**

Datapoint D-02

Date: 8/14/24

Direction: Facing south



**Photo 7: Upland Culvert**

Datapoint D-03

Date: 8/14/24

Direction: Facing south



**Photo 8: Emergent Wetland B**

Datapoint D-04

Date: 8/14/24

Direction: Facing west



**Photo 9: Upland Swale**

Datapoint D-05

Date: 8/14/24

Direction: Facing south





**Photo 10: Upland Drainageway**

Datapoint D-06

Date: 8/14/24

Direction: Facing north



**Photo 11: Upland Embankment**

Area marked as intermittent stream on NWI

Location: 44.096590°, -103.115606°

Date: 8/15/24

Direction: Facing east



**Photo 12: Upland Swale**

Datapoint D-08

Date: 8/15/24

Direction: Facing south



**Photo 13: Emergent Wetland C**

Datapoint D-09

Date: 8/15/24

Direction: Facing east



**Photo 14: Upland Drainageway**

Datapoint D-10

Date: 8/15/24

Direction: Facing east



**Photo 15: Emergent Wetland D**

Datapoint D-11

Date: 8/15/24

Direction: Facing south





**Photo 16: Emergent Wetland D**

Datapoint D-12

Date: 8/15/24

Direction: Facing south



**Photo 17: Upland Drainageway**

Datapoint D-13

Date: 8/15/24

Direction: Facing south



**Photo 18: Culverts with Rip-Rap**

Area marked as intermittent stream on  
NWI

44.096742°, -103.095952°

Date: 8/16/24

Direction: Facing south





**Photo 19: Upland Drainageway**

Datapoint D-14

Date: 8/16/24

Direction: Facing south



**Photo 20: Boxelder Creek (E)**

Datapoint ST-01

Date: 8/16/24

Direction: Facing north



**Photo 21: Upland Stream Terrace**

Datapoint D-15

Date: 8/16/24

Direction: Facing north





**Photo 22: Streambed Wetland F**

Datapoint D-16

Date: 8/16/24

Direction: Facing south



**Photo 23: Emergent Wetland A**

Date: 8/14/24

Direction: Facing west



**Photo 24: Emergent Wetland B**

Date: 8/14/24

Direction: Facing north



**Photo 25: Emergent Wetland C**

Date: 8/14/24

Direction: Facing north



**Photo 26: Emergent Wetland D**

Date: 8/15/24

Direction: Facing west



**Photo 27: Boxelder Creek (E)**

Date: 8/16/24

Direction: Facing west





**Photo 28: Streambed Wetland F**

Date: 8/28/24

Direction: Facing north

## Appendix D: Wetland Delineation Datasheets

See Appendix A - Figure A: Wetland Delineation and Aquatic Resources Map for Datapoint Locations

Datapoint Summary Table:

| Date      | Sample Point ID | Lat        | Long       | Wetland | Wetland Type | Hydrophytic Vegetation Present? | Hydric Soil Present? | Wetland Hydrology Present? |
|-----------|-----------------|------------|------------|---------|--------------|---------------------------------|----------------------|----------------------------|
| 8/14/2024 | D-01            | 44.0965302 | -103.1309  | TRUE    | emergent     | TRUE                            | TRUE                 | TRUE                       |
| 8/14/2024 | D-02            | 44.0965302 | -103.13098 | FALSE   |              | FALSE                           | FALSE                | FALSE                      |
| 8/14/2024 | D-03            | 44.0965971 | -103.12686 | FALSE   |              | FALSE                           | FALSE                | TRUE                       |
| 8/14/2024 | D-04            | 44.0965170 | -103.12342 | TRUE    | emergent     | TRUE                            | TRUE                 | TRUE                       |
| 8/14/2024 | D-05            | 44.0965700 | -103.12341 | FALSE   |              | FALSE                           | FALSE                | FALSE                      |
| 8/14/2024 | D-06            | 44.0966897 | -103.11827 | FALSE   |              | FALSE                           | FALSE                | FALSE                      |
| 8/14/2024 | D-08            | 44.096621  | -103.11369 | FALSE   |              | FALSE                           | FALSE                | TRUE                       |
| 8/15/2024 | D-09            | 44.096544  | -103.11059 | TRUE    | emergent     | TRUE                            | TRUE                 | TRUE                       |
| 8/15/2024 | D-10            | 44.096580  | -103.11055 | FALSE   |              | FALSE                           | FALSE                | TRUE                       |
| 8/15/2024 | D-11            | 44.096658  | -103.09907 | TRUE    | emergent     | TRUE                            | TRUE                 | TRUE                       |
| 8/15/2024 | D-12            | 44.096657  | -103.09909 | TRUE    | emergent     | TRUE                            | TRUE                 | TRUE                       |
| 8/15/2024 | D-13            | 44.096678  | -103.99058 | FALSE   |              | FALSE                           | TRUE                 | TRUE                       |
| 8/15/2024 | D-14            | 44.105814  | -103.11093 | FALSE   |              | TRUE                            | FALSE                | TRUE                       |
| 8/16/2024 | D-15            | 44.114315  | -103.11118 | FALSE   |              | FALSE                           | FALSE                | FALSE                      |
| 8/16/2024 | D-16            | 44.114213  | -103.11107 | TRUE    | streambed    | TRUE                            | TRUE                 | TRUE                       |

|                                                                                                                                                                           |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                          |  |                                                      |                                                                   | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                        |  | City/County: <u>Rapid City, Pennington</u>           |                                                                   | Sampling Date: <u>08/14/2024</u>                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                |  | State: <u>SD</u>                                     |                                                                   | Sampling Point: <u>D-01</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                       |  | Section, Township, Range: <u>SE/SE S27 T2N R8E</u>   |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Landform (hillside, terrace, etc.): <u>Shallow drainage in hills</u>                                                                                                      |  | Local relief (concave, convex, none): <u>concave</u> |                                                                   | Slope (%): <u>2</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                              |  | Lat: <u>44.0965302</u>                               |                                                                   | Long: <u>-103.130989</u> Datum: <u>NAD83</u>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                                                    |  | NW1 classification: <u>None</u>                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>    </u> (If no, explain in Remarks.)                                  |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>    </u>         |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> naturally problematic? (If needed, explain any answers in Remarks.)                              |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                               |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u><br>Hydric Soil Present? Yes <u>X</u> No <u>    </u><br>Wetland Hydrology Present? Yes <u>X</u> No <u>    </u> |  |                                                      | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Remarks:                                                                                                                                                                  |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| VEGETATION – Use scientific names of plants.                                                                                                                              |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tree Stratum (Plot size: <u>    </u> )                                                                                                                                    |  | Absolute % Cover                                     | Dominant Species?                                                 | Indicator Status                                                                                                          | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>3</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66.7%</u> (A/B)                                                                                                                                                                                                                                                        |
| 1. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                           |  | =Total Cover                                         |                                                                   |                                                                                                                           | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>7</u> x 2 = <u>14</u><br>FAC species <u>1</u> x 3 = <u>3</u><br>FACU species <u>5</u> x 4 = <u>20</u><br>UPL species <u>0</u> x 5 = <u>0</u><br>Column Totals: <u>13</u> (A) <u>37</u> (B)<br>Prevalence Index = B/A = <u>2.85</u>                                                                                                                                                |
| Sapling/Shrub Stratum (Plot size: <u>    </u> )                                                                                                                           |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                           |  | =Total Cover                                         |                                                                   |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>    </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>X</u> 2 - Dominance Test is >50%<br><u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Herb Stratum (Plot size: <u>5ft radius</u> )                                                                                                                              |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1. <u>Polygonum aviculare</u>                                                                                                                                             |  | <u>5</u>                                             | <u>Yes</u>                                                        | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>Carex sp</u>                                                                                                                                                        |  | <u>4</u>                                             | <u>Yes</u>                                                        | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>Hordeum jubatum</u>                                                                                                                                                 |  | <u>3</u>                                             | <u>Yes</u>                                                        | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>Xanthium strumarium</u>                                                                                                                                             |  | <u>1</u>                                             | <u>No</u>                                                         | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 6. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 8. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 9. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 10. <u>    </u>                                                                                                                                                           |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                           |  | <u>13</u>                                            | =Total Cover                                                      |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Woody Vine Stratum (Plot size: <u>    </u> )                                                                                                                              |  |                                                      |                                                                   |                                                                                                                           | Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 1. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>    </u>                                                                                                                                                            |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                           |  | =Total Cover                                         |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| % Bare Ground in Herb Stratum <u>87</u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Remarks:<br>Dominance and prevalence test results depend on sedge species, but I only have the genus                                                                      |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## SOIL

Sampling Point: D-01

[illegible]

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                              |                                                                     |                                                                                                       |                      |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------|
| Primary Indicators (minimum of one is required; check all that apply)                                      |                                                                     | Secondary Indicators (minimum of two required)                                                        |                      |
| <input type="checkbox"/> Surface Water (A1)                                                                | <input type="checkbox"/> Salt Crust (B11)                           | <input checked="" type="checkbox"/> Surface Soil Cracks (B6)                                          |                      |
| <input type="checkbox"/> High Water Table (A2)                                                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                           |                      |
| <input type="checkbox"/> Saturation (A3)                                                                   | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                                                      |                      |
| <input type="checkbox"/> Water Marks (B1)                                                                  | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                   |                      |
| <input type="checkbox"/> Sediment Deposits (B2)                                                            | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                                                 |                      |
| <input type="checkbox"/> Drift Deposits (B3)                                                               | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                                                        |                      |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                           | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                    |                      |
| <input type="checkbox"/> Iron Deposits (B5)                                                                | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> Geomorphic Position (D2)                                          |                      |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                         | <input type="checkbox"/> Other (Explain in Remarks)                 | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                                             |                      |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                         |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                                            |                      |
| <b>Field Observations:</b>                                                                                 |                                                                     |                                                                                                       |                      |
| Surface Water Present?                                                                                     | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       | <input type="text"/> |
| Water Table Present?                                                                                       | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       | <input type="text"/> |
| Saturation Present?                                                                                        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       | <input type="text"/> |
| (includes capillary fringe)                                                                                |                                                                     | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                      |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                                     |                                                                                                       |                      |
| Remarks:<br>depression below culvert, is presumably inundated depending on season / rainfall               |                                                                     |                                                                                                       |                      |

|                                                                                                                                                  |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R |  |                                                      |                                                                   | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                               |  | City/County: <u>Rapid City, Pennington</u>           |                                                                   | Sampling Date: <u>08/14/2024</u>                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                       |  | State: <u>SD</u>                                     |                                                                   | Sampling Point: <u>D-02</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Investigator(s): <u>Jesse Broce</u>                                                                                                              |  | Section, Township, Range: <u>SE/SE S27 T2N R8E</u>   |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Landform (hillside, terrace, etc.): <u>Shallow Drainage in Hills</u>                                                                             |  | Local relief (concave, convex, none): <u>concave</u> |                                                                   | Slope (%): <u>4</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                     |  | Lat: <u>44.0965302</u>                               |                                                                   | Long: <u>-103.1309892</u> Datum: <u>NAD83</u>                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                           |  | NW1 classification: <u>None</u>                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>    </u> (If no, explain in Remarks.)         |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> significantly disturbed? Are "I X Yes <u>X</u> No <u>    </u>           |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> naturally problematic? (If needed, explain any answers in Remarks.)     |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SUMMARY OF FINDINGS – Attach site map showing sampling p <u>X</u>                                                                                |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>                                                                                      |  |                                                      | Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydric Soil Present? Yes <u>    </u> No <u>X</u>                                                                                                 |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>                                                                                           |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:<br>Just above area of low vegetation in depression downslope of culvert. Sort of the shoulder of the basin                              |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VEGETATION – Use scientific names of plants.                                                                                                     |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Tree Stratum (Plot size: <u>    </u> )                                                                                                           |  | Absolute % Cover                                     | Dominant Species?                                                 | Indicator Status                                                                                                          | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)                                                                                                                                                                                                                                                              |
| 1. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                         |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Sapling/Shrub Stratum (Plot size: <u>    </u> )                                                                                                  |  |                                                      |                                                                   |                                                                                                                           | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>23</u> x 2 = <u>46</u><br>FAC species <u>0</u> x 3 = <u>0</u><br>FACU species <u>45</u> x 4 = <u>180</u><br>UPL species <u>0</u> x 5 = <u>0</u><br>Column Totals: <u>68</u> (A) <u>226</u> (B)<br>Prevalence Index = B/A = <u>3.32</u>                                                                                                                                                  |
| 1. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                         |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Herb Stratum (Plot size: <u>5ft radius</u> )                                                                                                     |  |                                                      |                                                                   |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>    </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>    </u> 2 - Dominance Test is >50%<br><u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Polygonum aviculare</u>                                                                                                                    |  | <u>45</u>                                            | <u>Yes</u>                                                        | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>Hordeum jubatum</u>                                                                                                                        |  | <u>15</u>                                            | <u>Yes</u>                                                        | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>Carex sp</u>                                                                                                                               |  | <u>8</u>                                             | <u>No</u>                                                         | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>Xanthium strumarium (Trace)</u>                                                                                                            |  | <u>0</u>                                             |                                                                   | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>Ambrosia psilostachya (Trace)</u>                                                                                                          |  | <u>0</u>                                             |                                                                   | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 7. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 8. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 10. <u>    </u>                                                                                                                                  |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | <u>68</u>                                            | =Total Cover                                                      |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Woody Vine Stratum (Plot size: <u>    </u> )                                                                                                     |  |                                                      |                                                                   |                                                                                                                           | Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                         |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| % Bare Ground in Herb Stratum <u>87</u>                                                                                                          |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:                                                                                                                                         |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## SOIL

Sampling Point: D-02

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) |               |     |                |   |                   |                  |              |                                  |
|---------------------------------------------------------------------------------------------------------------------|---------------|-----|----------------|---|-------------------|------------------|--------------|----------------------------------|
| Depth<br>(inches)                                                                                                   | Matrix        |     | Redox Features |   |                   |                  | Texture      | Remarks                          |
|                                                                                                                     | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |              |                                  |
| 0-3.5                                                                                                               | 2.5Y 3/2      | 100 |                |   |                   |                  | Loamy/Clayey | CL                               |
| 3.5-15                                                                                                              | 2.5Y 4/3      | 97  | 7.5YR 4/4      | 3 | C                 | PL               | Loamy/Clayey | SiCL, 10% clasts, blocky texture |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                  |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                  |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                  |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                  |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                  |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                  |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                  |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                  |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |                                                        | Indicators for Problematic Hydric Soils <sup>3</sup> :   |
|---------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Gleyed Matrix (S4)      | <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)       |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Sandy Redox (S5)              | <input type="checkbox"/> High Plains Depressions (F16)   |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Stripped Matrix (S6)          | <b>(LRR H outside of MLRA 72 &amp; 73)</b>               |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Mucky Mineral (F1)      | <input type="checkbox"/> Reduced Vertic (F18)            |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)      | <input type="checkbox"/> Red Parent Material (F21)       |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)                     | <input type="checkbox"/> Depleted Matrix (F3)          | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Redox Dark Surface (F6)       | <input type="checkbox"/> Other (Explain in Remarks)      |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Depleted Dark Surface (F7)    |                                                          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Redox Depressions (F8)        |                                                          |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)        | <input type="checkbox"/> High Plains Depressions (F16) |                                                          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)             | <b>(MLRA 72 &amp; 73 of LRR H)</b>                     |                                                          |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

|                                                                                 |                                                   |
|---------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____ | <b>Hydric Soil Present?</b> Yes _____ No <u>X</u> |
|---------------------------------------------------------------------------------|---------------------------------------------------|

Remarks:  
No soil indicators

## HYDROLOGY

| Wetland Hydrology Indicators:                                         |                                                                     |                                                                     |  |
|-----------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|--|
| Primary Indicators (minimum of one is required; check all that apply) |                                                                     | Secondary Indicators (minimum of two required)                      |  |
| <input type="checkbox"/> Surface Water (A1)                           | <input type="checkbox"/> Salt Crust (B11)                           | <input checked="" type="checkbox"/> Surface Soil Cracks (B6)        |  |
| <input type="checkbox"/> High Water Table (A2)                        | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)    |  |
| <input type="checkbox"/> Saturation (A3)                              | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                    |  |
| <input type="checkbox"/> Water Marks (B1)                             | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |  |
| <input type="checkbox"/> Sediment Deposits (B2)                       | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                               |  |
| <input type="checkbox"/> Drift Deposits (B3)                          | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                      |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                      | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  |  |
| <input type="checkbox"/> Iron Deposits (B5)                           | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input type="checkbox"/> Geomorphic Position (D2)                   |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)    | <input type="checkbox"/> Other (Explain in Remarks)                 | <input type="checkbox"/> FAC-Neutral Test (D5)                      |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                    |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)          |  |

|                                                                                                                                                                                                                                                                                 |                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>Field Observations:</b><br>Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____<br>Water Table Present?    Yes _____ No <u>X</u> Depth (inches): _____<br>Saturation Present?    Yes _____ No <u>X</u> Depth (inches): _____<br>(includes capillary fringe) | <b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Cracked surface only

|                                                                                                                                                  |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R |  |                                                      |                                                                   | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                               |  | City/County: <u>Rapid City, Pennington</u>           |                                                                   | Sampling Date: <u>08/14/2024</u>                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                       |  | State: <u>SD</u>                                     |                                                                   | Sampling Point: <u>D-03</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Investigator(s): <u>Jesse Broce</u>                                                                                                              |  | Section, Township, Range: <u>SW/SW S25 T2N R8E</u>   |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Landform (hillside, terrace, etc.): <u>Basin in toeslope</u>                                                                                     |  | Local relief (concave, convex, none): <u>concave</u> |                                                                   | Slope (%): <u>3</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Subregion (LRR/MLRA): <u>LRR G</u>                                                                                                               |  | Lat: <u>44.0965971</u>                               |                                                                   | Long: <u>-103.1268687</u> Datum: <u>NAD83</u>                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                           |  | NW1 classification: <u>None</u>                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>    </u> (If no, explain in Remarks.)         |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> significantly disturbed? Are "I X Yes <u>X</u> No <u>    </u>           |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> naturally problematic? (If needed, explain any answers in Remarks.)     |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                      |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>                                                                                      |  |                                                      | Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydric Soil Present? Yes <u>    </u> No <u>X</u>                                                                                                 |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Wetland Hydrology Present? Yes <u>X</u> No <u>    </u>                                                                                           |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:<br>Despite good geomorphic position, area is inundated too infrequently to develop wetland vegetation and soils                         |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VEGETATION – Use scientific names of plants.                                                                                                     |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Tree Stratum (Plot size: <u>    </u> )                                                                                                           |  | Absolute % Cover                                     | Dominant Species?                                                 | Indicator Status                                                                                                          | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)                                                                                                                                                                                                                                                               |
| 1. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                         |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Sapling/Shrub Stratum (Plot size: <u>    </u> )                                                                                                  |  |                                                      |                                                                   |                                                                                                                           | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>4</u> x 2 = <u>8</u><br>FAC species <u>0</u> x 3 = <u>0</u><br>FACU species <u>53</u> x 4 = <u>212</u><br>UPL species <u>0</u> x 5 = <u>0</u><br>Column Totals: <u>57</u> (A) <u>220</u> (B)<br>Prevalence Index = B/A = <u>3.86</u>                                                                                                                                                    |
| 1. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                         |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Herb Stratum (Plot size: <u>less than 5ft</u> )                                                                                                  |  |                                                      |                                                                   |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>    </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>    </u> 2 - Dominance Test is >50%<br><u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Polygonum aviculare</u>                                                                                                                    |  | <u>50</u>                                            | <u>Yes</u>                                                        | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>Hordeum jubatum</u>                                                                                                                        |  | <u>4</u>                                             | <u>No</u>                                                         | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>Helianthus annuus</u>                                                                                                                      |  | <u>3</u>                                             | <u>No</u>                                                         | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>Rumex crispus (Trace)</u>                                                                                                                  |  | <u>0</u>                                             |                                                                   | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>Atriplex prostrata (Trace)</u>                                                                                                             |  | <u>0</u>                                             |                                                                   | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 7. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 8. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 10. <u>    </u>                                                                                                                                  |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | <u>57</u>                                            | =Total Cover                                                      |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Woody Vine Stratum (Plot size: <u>    </u> )                                                                                                     |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                         |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| % Bare Ground in Herb Stratum <u>43</u>                                                                                                          |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:<br>Almost all FACU due to knotgrass                                                                                                     |  |                                                      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## SOIL

Sampling Point: D-03

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) |               |     |                |   |                   |                  |              |               |
|---------------------------------------------------------------------------------------------------------------------|---------------|-----|----------------|---|-------------------|------------------|--------------|---------------|
| Depth<br>(inches)                                                                                                   | Matrix        |     | Redox Features |   |                   |                  | Texture      | Remarks       |
|                                                                                                                     | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |              |               |
| 0-3                                                                                                                 | 2.5YR 3/2     | 100 |                |   |                   |                  | Loamy/Clayey | SiC           |
| 3-11                                                                                                                | 2.5Y 4/2      | 92  |                |   |                   |                  | Loamy/Clayey | L, 8% clasts  |
| 11-15                                                                                                               | 2.5Y 4/2      | 96  |                |   |                   |                  | Loamy/Clayey | CL, 4% clasts |
|                                                                                                                     |               |     |                |   |                   |                  |              |               |
|                                                                                                                     |               |     |                |   |                   |                  |              |               |
|                                                                                                                     |               |     |                |   |                   |                  |              |               |
|                                                                                                                     |               |     |                |   |                   |                  |              |               |
|                                                                                                                     |               |     |                |   |                   |                  |              |               |
|                                                                                                                     |               |     |                |   |                   |                  |              |               |
|                                                                                                                     |               |     |                |   |                   |                  |              |               |
|                                                                                                                     |               |     |                |   |                   |                  |              |               |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |                                                        | Indicators for Problematic Hydric Soils <sup>3</sup> :   |
|---------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Gleyed Matrix (S4)      | <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)       |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Sandy Redox (S5)              | <input type="checkbox"/> High Plains Depressions (F16)   |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Stripped Matrix (S6)          | <b>(LRR H outside of MLRA 72 &amp; 73)</b>               |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Mucky Mineral (F1)      | <input type="checkbox"/> Reduced Vertic (F18)            |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)      | <input type="checkbox"/> Red Parent Material (F21)       |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)                     | <input type="checkbox"/> Depleted Matrix (F3)          | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Redox Dark Surface (F6)       | <input type="checkbox"/> Other (Explain in Remarks)      |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Depleted Dark Surface (F7)    |                                                          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Redox Depressions (F8)        |                                                          |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)        | <input type="checkbox"/> High Plains Depressions (F16) |                                                          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)             | <b>(MLRA 72 &amp; 73 of LRR H)</b>                     |                                                          |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

|                                                                                 |                                                   |
|---------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____ | <b>Hydric Soil Present?</b> Yes _____ No <u>X</u> |
|---------------------------------------------------------------------------------|---------------------------------------------------|

Remarks:  
no soil indicators

## HYDROLOGY

| Wetland Hydrology Indicators:                                         |                                                                     |                                                                               |  |
|-----------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------|--|
| Primary Indicators (minimum of one is required; check all that apply) |                                                                     | Secondary Indicators (minimum of two required)                                |  |
| <input type="checkbox"/> Surface Water (A1)                           | <input type="checkbox"/> Salt Crust (B11)                           | <input type="checkbox"/> Surface Soil Cracks (B6)                             |  |
| <input type="checkbox"/> High Water Table (A2)                        | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input checked="" type="checkbox"/> X Sparsely Vegetated Concave Surface (B8) |  |
| <input type="checkbox"/> Saturation (A3)                              | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                              |  |
| <input type="checkbox"/> Water Marks (B1)                             | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)           |  |
| <input type="checkbox"/> Sediment Deposits (B2)                       | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                         |  |
| <input type="checkbox"/> Drift Deposits (B3)                          | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                                |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                      | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)            |  |
| <input type="checkbox"/> Iron Deposits (B5)                           | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> X Geomorphic Position (D2)                |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)    | <input type="checkbox"/> Other (Explain in Remarks)                 | <input type="checkbox"/> FAC-Neutral Test (D5)                                |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                    |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                    |  |

|                                                                                                                                                                                                                                                                                       |                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>Field Observations:</b><br>Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____<br>Water Table Present?      Yes _____ No <u>X</u> Depth (inches): _____<br>Saturation Present?        Yes _____ No <u>X</u> Depth (inches): _____<br>(includes capillary fringe) | <b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____ |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Depression on downstream side of culvert. Upstream side of depression is buried in alluvium, which also partly fills culvert



|                                                                                                                                                                                 |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                                |  |                                                      | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                              |  | City/County: <u>Rapid City, Pennington</u>           |                                                                                                                           | Sampling Date: <u>08/14/2024</u>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                      |  | State: <u>SD</u>                                     |                                                                                                                           | Sampling Point: <u>D-04</u>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                             |  | Section, Township, Range: <u>SE/SW S25 T2N R8E</u>   |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Landform (hillside, terrace, etc.): <u>Basin between culvert and stock pond</u>                                                                                                 |  | Local relief (concave, convex, none): <u>concave</u> |                                                                                                                           | Slope (%): <u>2</u>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                    |  | Lat: <u>44.0965170</u>                               |                                                                                                                           | Long: <u>-103.123427</u> Datum: <u>NAD83</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                                                          |  | NW1 classification: <u>None</u>                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                      |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>      </u>       |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)                              |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                                     |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u><br>Hydric Soil Present? Yes <u>X</u> No <u>      </u><br>Wetland Hydrology Present? Yes <u>X</u> No <u>      </u> |  |                                                      | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>      </u>                                                       |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:<br>Weak wetland indicators in all three categories                                                                                                                     |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VEGETATION – Use scientific names of plants.                                                                                                                                    |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Tree Stratum (Plot size: <u>      </u> )                                                                                                                                        |  | Absolute % Cover                                     | Dominant Species?                                                                                                         | Indicator Status                             | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)                                                                                                                                                                                                                                                             |
| 1. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                 |  | <u>      </u> =Total Cover                           |                                                                                                                           |                                              | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>50</u> x 2 = <u>100</u><br>FAC species <u>5</u> x 3 = <u>15</u><br>FACU species <u>3</u> x 4 = <u>12</u><br>UPL species <u>20</u> x 5 = <u>100</u><br>Column Totals: <u>78</u> (A) <u>227</u> (B)<br>Prevalence Index = B/A = <u>2.91</u>                                                                                                                                               |
| Sapling/Shrub Stratum (Plot size: <u>      </u> )                                                                                                                               |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                 |  | <u>      </u> =Total Cover                           |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Herb Stratum (Plot size: <u>5ft</u> )                                                                                                                                           |  |                                                      |                                                                                                                           |                                              | Hydrophytic Vegetation Indicators:<br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>X</u> 2 - Dominance Test is >50%<br><u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Hordeum jubatum</u>                                                                                                                                                       |  | <u>50</u>                                            | <u>Yes</u>                                                                                                                | <u>FACW</u>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>Xanthium strumarium</u>                                                                                                                                                   |  | <u>5</u>                                             | <u>No</u>                                                                                                                 | <u>FAC</u>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>Agropyron cristatum</u>                                                                                                                                                   |  | <u>10</u>                                            | <u>No</u>                                                                                                                 | <u>UPL</u>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>Bromus inermis</u>                                                                                                                                                        |  | <u>10</u>                                            | <u>No</u>                                                                                                                 | <u>UPL</u>                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>Atriplex prostrata (Trace)</u>                                                                                                                                            |  | <u>0</u>                                             | <u>      </u>                                                                                                             | <u>FACW</u>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. <u>Verbena officinalis (Trace)</u>                                                                                                                                           |  | <u>0</u>                                             | <u>      </u>                                                                                                             | <u>FACU</u>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 7. <u>Polygonum aviculare</u>                                                                                                                                                   |  | <u>3</u>                                             | <u>No</u>                                                                                                                 | <u>FACU</u>                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 8. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 10. <u>      </u>                                                                                                                                                               |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                 |  | <u>78</u>                                            | <u>      </u> =Total Cover                                                                                                |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Woody Vine Stratum (Plot size: <u>      </u> )                                                                                                                                  |  |                                                      |                                                                                                                           |                                              | Hydrophytic Vegetation Present? Yes <u>      </u> No <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                                                                             | <u>      </u>                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                 |  | <u>      </u> =Total Cover                           |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| % Bare Ground in Herb Stratum <u>30</u>                                                                                                                                         |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:<br>foxtail barley may be FACW but is highly invasive                                                                                                                   |  |                                                      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## SOIL

Sampling Point: D-04

[illegible]

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                              |                                                                     |                                                                                                       |                      |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------|
| Primary Indicators (minimum of one is required; check all that apply)                                      |                                                                     | Secondary Indicators (minimum of two required)                                                        |                      |
| <input type="checkbox"/> Surface Water (A1)                                                                | <input type="checkbox"/> Salt Crust (B11)                           | <input type="checkbox"/> Surface Soil Cracks (B6)                                                     |                      |
| <input type="checkbox"/> High Water Table (A2)                                                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                                      |                      |
| <input type="checkbox"/> Saturation (A3)                                                                   | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                                                      |                      |
| <input type="checkbox"/> Water Marks (B1)                                                                  | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                   |                      |
| <input type="checkbox"/> Sediment Deposits (B2)                                                            | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                                                 |                      |
| <input type="checkbox"/> Drift Deposits (B3)                                                               | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                                                        |                      |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                           | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                    |                      |
| <input type="checkbox"/> Iron Deposits (B5)                                                                | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> Geomorphic Position (D2)                                          |                      |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                         | <input type="checkbox"/> Other (Explain in Remarks)                 | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                                             |                      |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                         |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>                                     |                      |
| <b>Field Observations:</b>                                                                                 |                                                                     |                                                                                                       |                      |
| Surface Water Present?                                                                                     | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       | <input type="text"/> |
| Water Table Present?                                                                                       | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       | <input type="text"/> |
| Saturation Present?                                                                                        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       | <input type="text"/> |
| (includes capillary fringe)                                                                                |                                                                     | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                      |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                                     |                                                                                                       |                      |
| Remarks:                                                                                                   |                                                                     |                                                                                                       |                      |
| Technically qualifies                                                                                      |                                                                     |                                                                                                       |                      |

|                                                                                                                                                    |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------------------------------------------------------------------|--|----------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R   |  |                                                    |                                                                     | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                 |  | City/County: <u>Rapid City, Pennington</u>         |                                                                     | Sampling Date: <u>08/14/2024</u>                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                         |  | State: <u>SD</u>                                   |                                                                     | Sampling Point: <u>D-05</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                |  | Section, Township, Range: <u>SE/SE S26 T2N R8E</u> |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Landform (hillside, terrace, etc.): <u>Flat area near stock pond</u>                                                                               |  | Local relief (concave, convex, none): <u>none</u>  |                                                                     | Slope (%): <u>2</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                       |  | Lat: <u>44.0965700</u>                             |                                                                     | Long: <u>-103.1234193</u> Datum: <u>NAD83</u>                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                             |  | NW1 classification: <u>None</u>                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)         |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "I X Yes <u>X</u> No <u>      </u>     |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.) |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SUMMARY OF FINDINGS – Attach site map showing sampling p <u>X</u>                                                                                  |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>                                                                                      |  |                                                    | Is the Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hydric Soil Present? Yes <u>      </u> No <u>X</u>                                                                                                 |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Wetland Hydrology Present? Yes <u>      </u> No <u>X</u>                                                                                           |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Remarks:<br>Nearby wetlands by culvert and at stock pond. This area can be an area of flow or overflow during times of high water / rainfall.      |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| VEGETATION – Use scientific names of plants.                                                                                                       |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tree Stratum (Plot size: <u>      </u> )                                                                                                           |  | Absolute % Cover                                   | Dominant Species?                                                   | Indicator Status                                                                                                          | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)                                                                                                                                                                                                                                                                        |
| 1. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                    |  | =Total Cover                                       |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Sapling/Shrub Stratum (Plot size: <u>      </u> )                                                                                                  |  |                                                    |                                                                     |                                                                                                                           | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>35</u> x 2 = <u>70</u><br>FAC species <u>3</u> x 3 = <u>9</u><br>FACU species <u>0</u> x 4 = <u>0</u><br>UPL species <u>55</u> x 5 = <u>275</u><br>Column Totals: <u>93</u> (A) <u>354</u> (B)<br>Prevalence Index = B/A = <u>3.81</u>                                                                                                                                                            |
| 1. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                    |  | =Total Cover                                       |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Herb Stratum (Plot size: <u>5ft</u> )                                                                                                              |  |                                                    |                                                                     |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>      </u> 2 - Dominance Test is >50%<br><u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Agropyron cristatum</u>                                                                                                                      |  | <u>55</u>                                          | <u>Yes</u>                                                          | <u>UPL</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>Hordeum jubatum</u>                                                                                                                          |  | <u>35</u>                                          | <u>Yes</u>                                                          | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>Xanthium strumarium</u>                                                                                                                      |  | <u>3</u>                                           | <u>No</u>                                                           | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 6. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 8. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 9. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 10. <u>      </u>                                                                                                                                  |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                    |  | <u>93</u> =Total Cover                             |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Woody Vine Stratum (Plot size: <u>      </u> )                                                                                                     |  |                                                    |                                                                     |                                                                                                                           | Hydrophytic Vegetation Present? Yes <u>      </u> No <u>X</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 1. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>      </u>                                                                                                                                   |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                    |  | =Total Cover                                       |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| % Bare Ground in Herb Stratum <u>15</u>                                                                                                            |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Remarks:<br>little to no hydrophytic vegetation                                                                                                    |  |                                                    |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## SOIL

Sampling Point: D-05

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) |               |     |                |   |                   |                  |              |                            |
|---------------------------------------------------------------------------------------------------------------------|---------------|-----|----------------|---|-------------------|------------------|--------------|----------------------------|
| Depth<br>(inches)                                                                                                   | Matrix        |     | Redox Features |   |                   |                  | Texture      | Remarks                    |
|                                                                                                                     | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |              |                            |
| 0-3                                                                                                                 | 2.5Y 4/3      | 100 |                |   |                   |                  | Loamy/Clayey | C                          |
| 3-7                                                                                                                 | 2.5Y 4/3      | 98  |                |   |                   |                  | Loamy/Clayey | CL, 2% gravel-sized clasts |
| 7-14                                                                                                                | 2.5Y 4/3      | 90  |                | 7 |                   |                  | Loamy/Clayey | CL, 3% clasts              |
|                                                                                                                     |               |     |                |   |                   |                  |              |                            |
|                                                                                                                     |               |     |                |   |                   |                  |              |                            |
|                                                                                                                     |               |     |                |   |                   |                  |              |                            |
|                                                                                                                     |               |     |                |   |                   |                  |              |                            |
|                                                                                                                     |               |     |                |   |                   |                  |              |                            |
|                                                                                                                     |               |     |                |   |                   |                  |              |                            |
|                                                                                                                     |               |     |                |   |                   |                  |              |                            |
|                                                                                                                     |               |     |                |   |                   |                  |              |                            |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |                                                        | Indicators for Problematic Hydric Soils <sup>3</sup> :   |
|---------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Gleyed Matrix (S4)      | <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)       |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Sandy Redox (S5)              | <input type="checkbox"/> High Plains Depressions (F16)   |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Stripped Matrix (S6)          | <b>(LRR H outside of MLRA 72 &amp; 73)</b>               |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Mucky Mineral (F1)      | <input type="checkbox"/> Reduced Vertic (F18)            |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)      | <input type="checkbox"/> Red Parent Material (F21)       |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)                     | <input type="checkbox"/> Depleted Matrix (F3)          | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Redox Dark Surface (F6)       | <input type="checkbox"/> Other (Explain in Remarks)      |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Depleted Dark Surface (F7)    |                                                          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Redox Depressions (F8)        |                                                          |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)        | <input type="checkbox"/> High Plains Depressions (F16) |                                                          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)             | <b>(MLRA 72 &amp; 73 of LRR H)</b>                     |                                                          |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

|                                                                                 |                                                   |
|---------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____ | <b>Hydric Soil Present?</b> Yes _____ No <u>X</u> |
|---------------------------------------------------------------------------------|---------------------------------------------------|

Remarks:  
redox too deep for redox depressions

## HYDROLOGY

| Wetland Hydrology Indicators:                                         |                                                                     |                                                                     |  |
|-----------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|--|
| Primary Indicators (minimum of one is required; check all that apply) |                                                                     | Secondary Indicators (minimum of two required)                      |  |
| <input type="checkbox"/> Surface Water (A1)                           | <input type="checkbox"/> Salt Crust (B11)                           | <input type="checkbox"/> Surface Soil Cracks (B6)                   |  |
| <input type="checkbox"/> High Water Table (A2)                        | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)    |  |
| <input type="checkbox"/> Saturation (A3)                              | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                    |  |
| <input type="checkbox"/> Water Marks (B1)                             | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |  |
| <input type="checkbox"/> Sediment Deposits (B2)                       | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                               |  |
| <input type="checkbox"/> Drift Deposits (B3)                          | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                      |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                      | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  |  |
| <input type="checkbox"/> Iron Deposits (B5)                           | <input type="checkbox"/> Thin Muck Surface (C7)                     | <u>X</u> Geomorphic Position (D2)                                   |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)    | <input type="checkbox"/> Other (Explain in Remarks)                 | <input type="checkbox"/> FAC-Neutral Test (D5)                      |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                    |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)          |  |

|                                                                                                                                                                                                                                                                                 |                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>Field Observations:</b><br>Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____<br>Water Table Present?    Yes _____ No <u>X</u> Depth (inches): _____<br>Saturation Present?    Yes _____ No <u>X</u> Depth (inches): _____<br>(includes capillary fringe) | <b>Wetland Hydrology Present?</b> Yes _____ No <u>X</u> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
may occasionally be inundated due to proximity to and similar geomorphic position of stock pond.

|                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <div>U.S. Army Corps of Engineers</div> <div>WETLAND DETERMINATION DATA SHEET – Great Plains Region</div> <div>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R</div>                                                                                                                                                                                                                                                       |  |                                                                                      |                                                                                                 | <div>OMB Control #: 0710-0024, Exp: 11/30/2024</div> <div>Requirement Control Symbol EXEMPT:</div> <div>(Authority: AR 335-15, paragraph 5-2a)</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                                                                                                                                                                                                                                                                                |  | City/County: <u>Rapid City, Pennington</u>                                           |                                                                                                 | Sampling Date: <u>08/14/2024</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |
| Applicant/Owner: <u>Towey</u>                                                                                                                                                                                                                                                                                                                                                                                                     |  | State: <u>SD</u>                                                                     |                                                                                                 | Sampling Point: <u>D-06</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                                                                                                                                                                                                                                                                               |  | Section, Township, Range: <u>SW/SE S26</u>                                           |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| Landform (hillside, terrace, etc.): <u>foot slope of road embankment</u>                                                                                                                                                                                                                                                                                                                                                          |  | Local relief (concave, convex, none): <u>concave</u>                                 |                                                                                                 | Slope (%): <u>4</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                                                                                                                                                                                                                                                                      |  | Lat: <u>44.0966897</u>                                                               |                                                                                                 | Long: <u>-103.1182763</u> Datum: <u>NAD83</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                                                                                                                                                                                                                                                                                                            |  | NW1 classification: <u>None</u>                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                                                                                                                                                                                                                                                                     |  |                                                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed?    Are "Normal Circumstances" present?    Yes <u>X</u> No <u>      </u>                                                                                                                                                                                                                                                   |  |                                                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic?    (If needed, explain any answers in Remarks.)                                                                                                                                                                                                                                                                             |  |                                                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                                                                                                                                                                                                                                                                                       |  |                                                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| <div>Hydrophytic Vegetation Present?    Yes <u>      </u>    No <u>X</u></div> <div>Hydric Soil Present?    Yes <u>      </u>    No <u>X</u></div> <div>Wetland Hydrology Present?    Yes <u>      </u>    No <u>X</u></div>                                                                                                                                                                                                      |  |                                                                                      | <div>Is the Sampled Area</div> <div>within a Wetland?    Yes <u>X</u>    No <u>      </u></div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| <div>Remarks:</div> <div>closest thing to a wetland near culvert that isn't just rip-rap. Flow direction from rip-rap is west, and then south in channel. This small depression is the closest thing to a wetland in this project area in this drainage.</div>                                                                                                                                                                    |  |                                                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| VEGETATION – Use scientific names of plants.                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| <div>Tree Stratum    (Plot size: <u>      </u>)</div> <div>1. <u>      </u></div> <div>2. <u>      </u></div> <div>3. <u>      </u></div> <div>4. <u>      </u></div> <div><u>      </u> =Total Cover</div>                                                                                                                                                                                                                       |  | <div>Absolute % Cover</div> <div>Dominant Species?</div> <div>Indicator Status</div> |                                                                                                 | <div>Dominance Test worksheet:</div> <div>Number of Dominant Species That Are OBL, FACW, or FAC: <u>      0      </u> (A)</div> <div>Total Number of Dominant Species Across All Strata: <u>      2      </u> (B)</div> <div>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>      0.0%      </u> (A/B)</div>                                                                                                                                                                                                                                                                                                                  |  |
| <div>Sapling/Shrub Stratum    (Plot size: <u>      </u>)</div> <div>1. <u>      </u></div> <div>2. <u>      </u></div> <div>3. <u>      </u></div> <div>4. <u>      </u></div> <div>5. <u>      </u></div> <div><u>      </u> =Total Cover</div>                                                                                                                                                                                  |  |                                                                                      |                                                                                                 | <div>Prevalence Index worksheet:</div> <div>Total % Cover of: <u>      </u>    Multiply by:</div> <div>OBL species <u>      0      </u>    x 1 = <u>      0      </u></div> <div>FACW species <u>      0      </u>    x 2 = <u>      0      </u></div> <div>FAC species <u>      0      </u>    x 3 = <u>      0      </u></div> <div>FACU species <u>      100      </u>    x 4 = <u>      400      </u></div> <div>UPL species <u>      5      </u>    x 5 = <u>      25      </u></div> <div>Column Totals: <u>      105      </u> (A)    <u>      425      </u> (B)</div> <div>Prevalence Index = B/A = <u>      4.05      </u></div> |  |
| <div>Herb Stratum    (Plot size: <u>      5ft      </u>)</div> <div>1. <u>Poa pratensis</u></div> <div>2. <u>Elymus repens</u></div> <div>3. <u>Agropyron cristatum</u></div> <div>4. <u>      </u></div> <div>5. <u>      </u></div> <div>6. <u>      </u></div> <div>7. <u>      </u></div> <div>8. <u>      </u></div> <div>9. <u>      </u></div> <div>10. <u>      </u></div> <div><u>      105      </u> =Total Cover</div> |  | <div>60</div> <div>Yes</div> <div>FACU</div>                                         |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |
| <div>Woody Vine Stratum    (Plot size: <u>      </u>)</div> <div>1. <u>      </u></div> <div>2. <u>      </u></div> <div><u>      </u> =Total Cover</div>                                                                                                                                                                                                                                                                         |  |                                                                                      |                                                                                                 | <div>Hydrophytic Vegetation Indicators:</div> <div><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation</div> <div><u>      </u> 2 - Dominance Test is &gt;50%</div> <div><u>      </u> 3 - Prevalence Index is ≤3.0<sup>1</sup></div> <div><u>      </u> 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)</div> <div><u>      </u> Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)</div> <div><sup>1</sup>Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</div>                                                       |  |
| <div>% Bare Ground in Herb Stratum <u>      5      </u></div>                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                      |                                                                                                 | <div>Hydrophytic Vegetation Present?    Yes <u>      </u>    No <u>X</u></div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |
| <div>Remarks:</div> <div>very upland grasses, mostly invasive</div>                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                      |                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |

## SOIL

Sampling Point: D-06

[illegible]

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                              |                                                                       |                                                                                                         |                      |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------|
| Primary Indicators (minimum of one is required; check all that apply)                                      |                                                                       | Secondary Indicators (minimum of two required)                                                          |                      |
| <input type="checkbox"/> Surface Water (A1)                                                                | <input type="checkbox"/> Salt Crust (B11)                             | <input type="checkbox"/> Surface Soil Cracks (B6)                                                       |                      |
| <input type="checkbox"/> High Water Table (A2)                                                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                  | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                                        |                      |
| <input type="checkbox"/> Saturation (A3)                                                                   | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                   | <input type="checkbox"/> Drainage Patterns (B10)                                                        |                      |
| <input type="checkbox"/> Water Marks (B1)                                                                  | <input type="checkbox"/> Dry-Season Water Table (C2)                  | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                     |                      |
| <input type="checkbox"/> Sediment Deposits (B2)                                                            | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)   | <b>(where tilled)</b>                                                                                   |                      |
| <input type="checkbox"/> Drift Deposits (B3)                                                               | <b>(where not tilled)</b>                                             | <input type="checkbox"/> Crayfish Burrows (C8)                                                          |                      |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                           | <input type="checkbox"/> Presence of Reduced Iron (C4)                | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                      |                      |
| <input type="checkbox"/> Iron Deposits (B5)                                                                | <input type="checkbox"/> Thin Muck Surface (C7)                       | <input checked="" type="checkbox"/> X Geomorphic Position (D2)                                          |                      |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                         | <input type="checkbox"/> Other (Explain in Remarks)                   | <input type="checkbox"/> FAC-Neutral Test (D5)                                                          |                      |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                         |                                                                       | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                                              |                      |
| <b>Field Observations:</b>                                                                                 |                                                                       |                                                                                                         |                      |
| Surface Water Present?                                                                                     | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X | Depth (inches):                                                                                         | <input type="text"/> |
| Water Table Present?                                                                                       | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X | Depth (inches):                                                                                         | <input type="text"/> |
| Saturation Present?                                                                                        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X | Depth (inches):                                                                                         | <input type="text"/> |
| (includes capillary fringe)                                                                                |                                                                       | <b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> X |                      |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                                       |                                                                                                         |                      |
| Remarks:<br>is part of channel, but must not be very active                                                |                                                                       |                                                                                                         |                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                                                                                                                                                                                                                                                                                                                                                                          |  | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a)                                                                                                                                                                                                                                         |  |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | City/County: <u>Rapid City, Pennington</u>                                                                                                                                                                                                                                                                                                                        |  |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | State: <u>SD</u>                                                                                                                                                                                                                                                                                                                                                  |  |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Section, Township, Range: <u>SE/SE T2N R8E</u>                                                                                                                                                                                                                                                                                                                    |  |
| Landform (hillside, terrace, etc.): <u>drainage</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | Local relief (concave, convex, none): <u>concave</u>                                                                                                                                                                                                                                                                                                              |  |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | Slope (%): <u>2</u>                                                                                                                                                                                                                                                                                                                                               |  |
| Lat: <u>44.096621</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  | Long: <u>-103.113693</u>                                                                                                                                                                                                                                                                                                                                          |  |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  | Datum: <u>NAD83</u>                                                                                                                                                                                                                                                                                                                                               |  |
| NW1 classification: <u>None</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed?    Are "I X"    Yes <u>X</u> No <u>      </u>                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic?    (If needed, explain any answers in Remarks.)                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | Is the Sampled Area within a Wetland?    Yes <u>      </u> No <u>X</u>                                                                                                                                                                                                                                                                                            |  |
| Hydric Soil Present?    Yes <u>      </u> No <u>X</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Wetland Hydrology Present?    Yes <u>X</u> No <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Remarks:<br>Area is depression downstream of culvert which was formerly constrained by wattle which has since degraded to the point of uselessness. Some former ponding is likely due to the wattle.                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| VEGETATION – Use scientific names of plants.                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Tree Stratum    (Plot size: <u>      </u> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | Absolute % Cover    Dominant Species?    Indicator Status                                                                                                                                                                                                                                                                                                         |  |
| 1. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 2. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 3. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 4. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | =Total Cover                                                                                                                                                                                                                                                                                                                                                      |  |
| Sapling/Shrub Stratum    (Plot size: <u>      </u> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| 1. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 2. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 3. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 4. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 5. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | =Total Cover                                                                                                                                                                                                                                                                                                                                                      |  |
| Herb Stratum    (Plot size: <u>5 ft</u> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| 1. <u>Elymus repens</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 45    Yes    FACU                                                                                                                                                                                                                                                                                                                                                 |  |
| 2. <u>Poa pratensis</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 15    No    FACU                                                                                                                                                                                                                                                                                                                                                  |  |
| 3. <u>Thlaspi arvense</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | 8    No    FACU                                                                                                                                                                                                                                                                                                                                                   |  |
| 4. <u>Symphoricarpos albus</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  | 7    No    UPL                                                                                                                                                                                                                                                                                                                                                    |  |
| 5. <u>Agropyron cristatum</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 4    No    UPL                                                                                                                                                                                                                                                                                                                                                    |  |
| 6. <u>Helianthus annuus</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | 2    No    FACU                                                                                                                                                                                                                                                                                                                                                   |  |
| 7. <u>Verbena officinalis</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 1    No    FACU                                                                                                                                                                                                                                                                                                                                                   |  |
| 8. <u>Polygonum aviculare</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | 1    No    FACU                                                                                                                                                                                                                                                                                                                                                   |  |
| 9. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 10. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | 83 =Total Cover                                                                                                                                                                                                                                                                                                                                                   |  |
| Woody Vine Stratum    (Plot size: <u>      </u> )                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| 1. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
| 2. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>      </u>                                                                                                                                                                                                                                                                                                                                                     |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  | =Total Cover                                                                                                                                                                                                                                                                                                                                                      |  |
| % Bare Ground in Herb Stratum <u>25</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Remarks:<br>Distinctly upland vegetation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                                                                                                                                                                                                                                                                                                                                   |  |
| Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)                                                                                                                                                                                                                                                                         |  | Prevalence Index worksheet:<br>Total % Cover of:    Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>0</u> x 2 = <u>0</u><br>FAC species <u>0</u> x 3 = <u>0</u><br>FACU species <u>72</u> x 4 = <u>288</u><br>UPL species <u>11</u> x 5 = <u>55</u><br>Column Totals: <u>83</u> (A) <u>343</u> (B)<br>Prevalence Index = B/A = <u>4.13</u> |  |
| Hydrophytic Vegetation Indicators:<br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>      </u> 2 - Dominance Test is >50%<br><u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |  | Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u>                                                                                                                                                                                                                                                                                                  |  |

## SOIL

Sampling Point: D-08

[illegible]

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                              |                                                                     |                                                                                                       |  |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--|
| Primary Indicators (minimum of one is required; check all that apply)                                      |                                                                     | Secondary Indicators (minimum of two required)                                                        |  |
| <input type="checkbox"/> Surface Water (A1)                                                                | <input type="checkbox"/> Salt Crust (B11)                           | <input checked="" type="checkbox"/> Surface Soil Cracks (B6)                                          |  |
| <input type="checkbox"/> High Water Table (A2)                                                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                                      |  |
| <input type="checkbox"/> Saturation (A3)                                                                   | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                                                      |  |
| <input type="checkbox"/> Water Marks (B1)                                                                  | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                   |  |
| <input type="checkbox"/> Sediment Deposits (B2)                                                            | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                                                 |  |
| <input type="checkbox"/> Drift Deposits (B3)                                                               | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                                                        |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                           | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                    |  |
| <input type="checkbox"/> Iron Deposits (B5)                                                                | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> Geomorphic Position (D2)                                          |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                         | <input type="checkbox"/> Other (Explain in Remarks)                 | <input type="checkbox"/> FAC-Neutral Test (D5)                                                        |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                         |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                                            |  |
| <b>Field Observations:</b>                                                                                 |                                                                     |                                                                                                       |  |
| Surface Water Present?                                                                                     | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| Water Table Present?                                                                                       | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| Saturation Present?                                                                                        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| (includes capillary fringe)                                                                                |                                                                     | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                                     |                                                                                                       |  |
| Remarks:<br>Small depression in drainage with soil cracks.                                                 |                                                                     |                                                                                                       |  |



| <b>U.S. Army Corps of Engineers</b><br><b>WETLAND DETERMINATION DATA SHEET – Great Plains Region</b><br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                           |                                       | <b>OMB Control #: 0710-0024, Exp: 11/30/2024</b><br><b>Requirement Control Symbol EXEMPT:</b><br><b>(Authority: AR 335-15, paragraph 5-2a)</b> |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                                       |                                       | City/County: <u>Rapid City, Pennington</u>                                                                                                     |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                               |                                       | State: <u>SD</u>                                                                                                                               |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                                      |                                       | Sampling Date: <u>8/15/2024</u>                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Section, Township, Range: <u>SW/SW T2N R8E</u>                                                                                                                                           |                                       | Sampling Point: <u>D-09</u>                                                                                                                    |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Landform (hillside, terrace, etc.): <u>Depression in outflow of culvert</u>                                                                                                              |                                       | Local relief (concave, convex, none): <u>concave</u>                                                                                           |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Slope (%): <u>7</u>                                                                                                                                                                      |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                             |                                       | Lat: <u>44.096544</u>                                                                                                                          |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Long: <u>-103.11059</u>                                                                                                                                                                  |                                       | Datum: <u>NAD83</u>                                                                                                                            |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                                                                   |                                       | NW1 classification: <u>None</u>                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                            |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed?    Are "Normal Circumstances" present?    Yes <u>X</u> No <u>      </u>          |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic?    (If needed, explain any answers in Remarks.)                                    |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.</b>                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Hydrophytic Vegetation Present?    Yes <u>X</u> No <u>      </u><br>Hydric Soil Present?    Yes <u>X</u> No <u>      </u><br>Wetland Hydrology Present?    Yes <u>X</u> No <u>      </u> |                                       | <b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>                                                                     |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Remarks:<br>Culvert is supposed to flow into drainage, but is actually lower than drainage, so ponding occurs.                                                                           |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>VEGETATION – Use scientific names of plants.</b>                                                                                                                                      |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Tree Stratum                                                                                                                                                                             | (Plot size: <u>      </u> )           | Absolute % Cover                                                                                                                               | Dominant Species? | Indicator Status |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 1.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  | <b>Dominance Test worksheet:</b><br><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>      2      </u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>      2      </u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>      100.0%      </u> (A/B)                                                                                                                                                                                                                                             |
| 2.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                          |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                          |                                       | =Total Cover                                                                                                                                   |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Sapling/Shrub Stratum                                                                                                                                                                    | (Plot size: <u>      </u> )           |                                                                                                                                                |                   |                  | <b>Prevalence Index worksheet:</b><br>Total % Cover of:                      Multiply by:<br>OBL species <u>      0      </u> x 1 = <u>      0      </u><br>FACW species <u>      8      </u> x 2 = <u>      16      </u><br>FAC species <u>      27      </u> x 3 = <u>      81      </u><br>FACU species <u>      4      </u> x 4 = <u>      16      </u><br>UPL species <u>      5      </u> x 5 = <u>      25      </u><br>Column Totals: <u>      44      </u> (A) <u>      138      </u> (B)<br>Prevalence Index = B/A = <u>      3.14      </u> |
| 1.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                          |                                       | =Total Cover                                                                                                                                   |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Herb Stratum                                                                                                                                                                             | (Plot size: <u>      5 ft      </u> ) |                                                                                                                                                |                   |                  | <b>Hydrophytic Vegetation Indicators:</b><br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>  X  </u> 2 - Dominance Test is >50%<br><u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.                        |
| 1.                                                                                                                                                                                       | <u>Xanthium strumarium</u>            | <u>20</u>                                                                                                                                      | <u>Yes</u>        | <u>FAC</u>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.                                                                                                                                                                                       | <u>Hordeum jubatum</u>                | <u>8</u>                                                                                                                                       | <u>Yes</u>        | <u>FACW</u>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3.                                                                                                                                                                                       | <u>Verbena officinalis</u>            | <u>4</u>                                                                                                                                       | <u>No</u>         | <u>FACU</u>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4.                                                                                                                                                                                       | <u>Rumex crispus</u>                  | <u>4</u>                                                                                                                                       | <u>No</u>         | <u>FAC</u>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 5.                                                                                                                                                                                       | <u>Amaranthus blitoides</u>           | <u>3</u>                                                                                                                                       | <u>No</u>         | <u>FAC</u>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6.                                                                                                                                                                                       | <u>Solanum rostratum</u>              | <u>3</u>                                                                                                                                       | <u>No</u>         | <u>UPL</u>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 7.                                                                                                                                                                                       | <u>Agropyron cristatum</u>            | <u>2</u>                                                                                                                                       | <u>No</u>         | <u>UPL</u>       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 8.                                                                                                                                                                                       | <u>Polygonum aviculare (Trace)</u>    | <u>0</u>                                                                                                                                       |                   | <u>FACU</u>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 9.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 10.                                                                                                                                                                                      |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                          |                                       | 44 =Total Cover                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Woody Vine Stratum                                                                                                                                                                       | (Plot size: <u>      </u> )           |                                                                                                                                                |                   |                  | <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2.                                                                                                                                                                                       |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                                                                                                                                                                          |                                       | =Total Cover                                                                                                                                   |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| % Bare Ground in Herb Stratum <u>      60      </u>                                                                                                                                      |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Remarks:<br>Borderline wetland vegetation                                                                                                                                                |                                       |                                                                                                                                                |                   |                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## SOIL

Sampling Point: D-09

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) |               |    |                |    |                   |                  |              |                                     |
|---------------------------------------------------------------------------------------------------------------------|---------------|----|----------------|----|-------------------|------------------|--------------|-------------------------------------|
| Depth<br>(inches)                                                                                                   | Matrix        |    | Redox Features |    |                   |                  | Texture      | Remarks                             |
|                                                                                                                     | Color (moist) | %  | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |              |                                     |
| 0-5                                                                                                                 | 2.5Y 5/3      | 98 | 2.5YR 5/8      | 2  | C                 | PL               | Loamy/Clayey |                                     |
| 5-16                                                                                                                | 2.5Y 4/2      | 70 | 2.5YR 5/8      | 30 | C                 | PL               | Loamy/Clayey | Dramatic increase in cobbles @ 9 in |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                     |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                     |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                     |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                     |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                     |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                     |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                     |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                     |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains.      <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |                                                          | Indicators for Problematic Hydric Soils <sup>3</sup> :   |
|---------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Gleyed Matrix (S4)        | <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)       |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Sandy Redox (S5)                | <input type="checkbox"/> High Plains Depressions (F16)   |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Stripped Matrix (S6)            | <b>(LRR H outside of MLRA 72 &amp; 73)</b>               |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Mucky Mineral (F1)        | <input type="checkbox"/> Reduced Vertic (F18)            |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        | <input type="checkbox"/> Red Parent Material (F21)       |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)                     | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Redox Dark Surface (F6)         | <input type="checkbox"/> Other (Explain in Remarks)      |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Depleted Dark Surface (F7)      |                                                          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Redox Depressions (F8)          |                                                          |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)        | <input type="checkbox"/> High Plains Depressions (F16)   |                                                          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)             | <b>(MLRA 72 &amp; 73 of LRR H)</b>                       |                                                          |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

|                                                                                 |                                                                                                 |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____ | <b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Remarks:                                                                        |                                                                                                 |

## HYDROLOGY

| Wetland Hydrology Indicators:                                         |                                                                     |                                                                             |  |
|-----------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------|--|
| Primary Indicators (minimum of one is required; check all that apply) |                                                                     | Secondary Indicators (minimum of two required)                              |  |
| <input type="checkbox"/> Surface Water (A1)                           | <input type="checkbox"/> Salt Crust (B11)                           | <input checked="" type="checkbox"/> Surface Soil Cracks (B6)                |  |
| <input type="checkbox"/> High Water Table (A2)                        | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input checked="" type="checkbox"/> Sparsely Vegetated Concave Surface (B8) |  |
| <input type="checkbox"/> Saturation (A3)                              | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                            |  |
| <input type="checkbox"/> Water Marks (B1)                             | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)         |  |
| <input type="checkbox"/> Sediment Deposits (B2)                       | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                       |  |
| <input type="checkbox"/> Drift Deposits (B3)                          | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                              |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                      | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)          |  |
| <input type="checkbox"/> Iron Deposits (B5)                           | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> Geomorphic Position (D2)                |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)    | <input type="checkbox"/> Other (Explain in Remarks)                 | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                   |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                    |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                  |  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                       |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Field Observations:</b><br>Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____<br>Water Table Present?      Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____<br>Saturation Present?        Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): _____<br>(includes capillary fringe) | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:                                                                                                                                                                                                                                                                                                                      |                                                                                                       |
| Remarks:                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                       |

|                                                                                                                                                                                 |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                                |  |                                                     | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                              |  | City/County: <u>Rapid City, Pennington</u>          |                                                                                                                           | Sampling Date: <u>8/15/2024</u>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                      |  | State: <u>SD</u>                                    |                                                                                                                           | Sampling Point: <u>D-10</u>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                             |  | Section, Township, Range: <u>SW/SW T2N R8E</u>      |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Landform (hillside, terrace, etc.): <u>shallow drainage</u>                                                                                                                     |  | Local relief (concave, convex, none): <u>convex</u> |                                                                                                                           | Slope (%): <u>2</u>                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                    |  | Lat: <u>44.096580</u>                               |                                                                                                                           | Long: <u>-103.110557</u> Datum: <u>NAD83</u> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Soil Map Unit Name: <u>Pierre Clay</u>                                                                                                                                          |  | NW1 classification: <u>None</u>                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                   |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed?    Are "Normal Circumstances" present?    Yes <u>X</u> No <u>      </u> |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic?    (If needed, explain any answers in Remarks.)                           |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                                     |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u>                                                                                                                |  |                                                     | Is the Sampled Area within a Wetland?    Yes <u>      </u> No <u>X</u>                                                    |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hydric Soil Present?    Yes <u>      </u> No <u>X</u>                                                                                                                           |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Wetland Hydrology Present?    Yes <u>X</u> No <u>      </u>                                                                                                                     |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Remarks:                                                                                                                                                                        |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| VEGETATION – Use scientific names of plants.                                                                                                                                    |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tree Stratum    (Plot size: <u>      </u> )                                                                                                                                     |  | Absolute % Cover                                    | Dominant Species?                                                                                                         | Indicator Status                             | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)                                                                                                                                                                                                                                                                        |
| 1. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                 |  | =Total Cover                                        |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Sapling/Shrub Stratum    (Plot size: <u>      </u> )                                                                                                                            |  |                                                     |                                                                                                                           |                                              | Prevalence Index worksheet:<br>Total % Cover of:    Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>10</u> x 2 = <u>20</u><br>FAC species <u>52</u> x 3 = <u>156</u><br>FACU species <u>3</u> x 4 = <u>12</u><br>UPL species <u>25</u> x 5 = <u>125</u><br>Column Totals: <u>90</u> (A) <u>313</u> (B)<br>Prevalence Index = B/A = <u>3.48</u>                                                                                                                                                     |
| 1. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                 |  | =Total Cover                                        |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Herb Stratum    (Plot size: <u>5 ft</u> )                                                                                                                                       |  |                                                     |                                                                                                                           |                                              | Hydrophytic Vegetation Indicators:<br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>      </u> 2 - Dominance Test is >50%<br><u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Panicum capillare</u>                                                                                                                                                     |  | 35                                                  | Yes                                                                                                                       | FAC                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>Agropyron cristatum</u>                                                                                                                                                   |  | 25                                                  | Yes                                                                                                                       | UPL                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>Hordeum jubatum</u>                                                                                                                                                       |  | 10                                                  | No                                                                                                                        | FACW                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>Rumex crispus</u>                                                                                                                                                         |  | 13                                                  | No                                                                                                                        | FAC                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5. <u>Xanthium strumarium</u>                                                                                                                                                   |  | 4                                                   | No                                                                                                                        | FAC                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 6. <u>Verbena officinalis</u>                                                                                                                                                   |  | 2                                                   | No                                                                                                                        | FACU                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7. <u>Polygonum aviculare (Trace)</u>                                                                                                                                           |  | 0                                                   |                                                                                                                           | FACU                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 8. <u>Taraxacum officinale (Trace)</u>                                                                                                                                          |  | 0                                                   |                                                                                                                           | FACU                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 9. <u>Thlaspi arvense</u>                                                                                                                                                       |  | 1                                                   | No                                                                                                                        | FACU                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 10. <u>      </u>                                                                                                                                                               |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                 |  | 90                                                  | =Total Cover                                                                                                              |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Woody Vine Stratum    (Plot size: <u>      </u> )                                                                                                                               |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>      </u>                                                                                                                                                                |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                                 |  | =Total Cover                                        |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| % Bare Ground in Herb Stratum <u>25</u>                                                                                                                                         |  |                                                     |                                                                                                                           |                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Remarks:                                                                                                                                                                        |  |                                                     |                                                                                                                           |                                              | Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## SOIL

Sampling Point: D-10

[illegible]

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                              |                                                                     |                                                                                                       |  |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--|
| Primary Indicators (minimum of one is required; check all that apply)                                      |                                                                     | Secondary Indicators (minimum of two required)                                                        |  |
| <input type="checkbox"/> Surface Water (A1)                                                                | <input type="checkbox"/> Salt Crust (B11)                           | <input checked="" type="checkbox"/> Surface Soil Cracks (B6)                                          |  |
| <input type="checkbox"/> High Water Table (A2)                                                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                                      |  |
| <input type="checkbox"/> Saturation (A3)                                                                   | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                                                      |  |
| <input type="checkbox"/> Water Marks (B1)                                                                  | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                   |  |
| <input type="checkbox"/> Sediment Deposits (B2)                                                            | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                                                 |  |
| <input type="checkbox"/> Drift Deposits (B3)                                                               | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                                                        |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                           | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                    |  |
| <input type="checkbox"/> Iron Deposits (B5)                                                                | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> Geomorphic Position (D2)                                          |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                         | <input type="checkbox"/> Other (Explain in Remarks)                 | <input type="checkbox"/> FAC-Neutral Test (D5)                                                        |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                         |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                                            |  |
| <b>Field Observations:</b>                                                                                 |                                                                     |                                                                                                       |  |
| Surface Water Present?                                                                                     | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| Water Table Present?                                                                                       | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| Saturation Present?                                                                                        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| (includes capillary fringe)                                                                                |                                                                     | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                                     |                                                                                                       |  |
| Remarks:                                                                                                   |                                                                     |                                                                                                       |  |
| Bottom of drainage                                                                                         |                                                                     |                                                                                                       |  |

|                                                                                                                                                                                 |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                                |  |                                                      |                                                                     | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                              |  | City/County: <u>Rapid City, Pennington</u>           |                                                                     | Sampling Date: <u>8/15/2024</u>                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                      |  | State: <u>SD</u>                                     |                                                                     | Sampling Point: <u>D-11</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                             |  | Section, Township, Range: <u>SW/SE T2N R8E</u>       |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Landform (hillside, terrace, etc.): <u>depression past culvert</u>                                                                                                              |  | Local relief (concave, convex, none): <u>concave</u> |                                                                     | Slope (%): <u>1</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                    |  | Lat: <u>44.096658</u>                                |                                                                     | Long: <u>-103.099078</u> Datum: <u>NAD83</u>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Soil Map Unit Name: <u>Kyle clay</u>                                                                                                                                            |  | NW1 classification: <u>None</u>                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                      |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>      </u> No <u>      </u>  |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)                              |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                                     |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u><br>Hydric Soil Present? Yes <u>X</u> No <u>      </u><br>Wetland Hydrology Present? Yes <u>X</u> No <u>      </u> |  |                                                      | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>      </u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:<br>Area below culvert subject to ponding.                                                                                                                              |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VEGETATION – Use scientific names of plants.                                                                                                                                    |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Tree Stratum (Plot size: <u>      </u> )                                                                                                                                        |  | Absolute % Cover                                     | Dominant Species?                                                   | Indicator Status                                                                                                          | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)                                                                                                                                                                                                                                                             |
| 1. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                 |  | =Total Cover                                         |                                                                     |                                                                                                                           | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>40</u> x 2 = <u>80</u><br>FAC species <u>11</u> x 3 = <u>33</u><br>FACU species <u>0</u> x 4 = <u>0</u><br>UPL species <u>0</u> x 5 = <u>0</u><br>Column Totals: <u>51</u> (A) <u>113</u> (B)<br>Prevalence Index = B/A = <u>2.22</u>                                                                                                                                                   |
| Sapling/Shrub Stratum (Plot size: <u>      </u> )                                                                                                                               |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                 |  | =Total Cover                                         |                                                                     |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>X</u> 2 - Dominance Test is >50%<br><u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Herb Stratum (Plot size: <u>      </u> )                                                                                                                                        |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 1. <u>Hordeum jubatum</u>                                                                                                                                                       |  | <u>40</u>                                            | <u>Yes</u>                                                          | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>Xanthium strumarium</u>                                                                                                                                                   |  | <u>5</u>                                             | <u>No</u>                                                           | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>Rumex crispus</u>                                                                                                                                                         |  | <u>6</u>                                             | <u>No</u>                                                           | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 7. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 8. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 10. <u>      </u>                                                                                                                                                               |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                 |  | <u>51</u>                                            | =Total Cover                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Woody Vine Stratum (Plot size: <u>      </u> )                                                                                                                                  |  |                                                      |                                                                     |                                                                                                                           | Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 1. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>      </u>                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                                                 |  | =Total Cover                                         |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| % Bare Ground in Herb Stratum <u>55</u>                                                                                                                                         |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:                                                                                                                                                                        |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## SOIL

Sampling Point: D-11

[illegible]

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                              |                                                                     |                                                                                                       |  |
|------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--|
| Primary Indicators (minimum of one is required; check all that apply)                                      |                                                                     | Secondary Indicators (minimum of two required)                                                        |  |
| <input type="checkbox"/> Surface Water (A1)                                                                | <input type="checkbox"/> Salt Crust (B11)                           | <input checked="" type="checkbox"/> Surface Soil Cracks (B6)                                          |  |
| <input type="checkbox"/> High Water Table (A2)                                                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                                      |  |
| <input type="checkbox"/> Saturation (A3)                                                                   | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                                                      |  |
| <input type="checkbox"/> Water Marks (B1)                                                                  | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                   |  |
| <input type="checkbox"/> Sediment Deposits (B2)                                                            | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                                                 |  |
| <input type="checkbox"/> Drift Deposits (B3)                                                               | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                                                        |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                           | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                    |  |
| <input type="checkbox"/> Iron Deposits (B5)                                                                | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> Geomorphic Position (D2)                                          |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                         | <input type="checkbox"/> Other (Explain in Remarks)                 | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                                             |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                         |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                                            |  |
| <b>Field Observations:</b>                                                                                 |                                                                     |                                                                                                       |  |
| Surface Water Present?                                                                                     | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| Water Table Present?                                                                                       | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| Saturation Present?                                                                                        | Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> | Depth (inches):                                                                                       |  |
| (includes capillary fringe)                                                                                |                                                                     | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |  |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                                     |                                                                                                       |  |
| Remarks:                                                                                                   |                                                                     |                                                                                                       |  |

|                                                                                                                                                                           |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                          |  |                                                     |                                                                   | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                        |  | City/County: <u>Rapid City, Pennington</u>          |                                                                   | Sampling Date: <u>8/15/2024</u>                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                |  | State: <u>SD</u>                                    |                                                                   | Sampling Point: <u>D-12</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                       |  | Section, Township, Range: <u>SW/SE T2N R8E</u>      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Landform (hillside, terrace, etc.): <u>shallow drainage</u>                                                                                                               |  | Local relief (concave, convex, none): <u>saddle</u> |                                                                   | Slope (%): <u>4</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                              |  | Lat: <u>44.096657</u>                               |                                                                   | Long: <u>-103.099093</u> Datum: <u>NAD83</u>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Soil Map Unit Name: <u>Kyle clay</u>                                                                                                                                      |  | NWI classification: <u>None</u>                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>    </u> (If no, explain in Remarks.)                                  |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>    </u>         |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> naturally problematic? (If needed, explain any answers in Remarks.)                              |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                               |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u><br>Hydric Soil Present? Yes <u>X</u> No <u>    </u><br>Wetland Hydrology Present? Yes <u>X</u> No <u>    </u> |  |                                                     | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>    </u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Remarks:                                                                                                                                                                  |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| VEGETATION – Use scientific names of plants.                                                                                                                              |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Tree Stratum (Plot size: <u>    </u> )                                                                                                                                    |  | Absolute % Cover                                    | Dominant Species?                                                 | Indicator Status                                                                                                          | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)                                                                                                                                                                                                                                                       |
| 1. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                           |  | =Total Cover                                        |                                                                   |                                                                                                                           | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>55</u> x 2 = <u>110</u><br>FAC species <u>24</u> x 3 = <u>72</u><br>FACU species <u>3</u> x 4 = <u>12</u><br>UPL species <u>10</u> x 5 = <u>50</u><br>Column Totals: <u>92</u> (A) <u>244</u> (B)<br>Prevalence Index = B/A = <u>2.65</u>                                                                                                                                         |
| Sapling/Shrub Stratum (Plot size: <u>    </u> )                                                                                                                           |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                           |  | =Total Cover                                        |                                                                   |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>    </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>X</u> 2 - Dominance Test is >50%<br><u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| Herb Stratum (Plot size: <u>5 ft</u> )                                                                                                                                    |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 1. <u>Hordeum jubatum</u>                                                                                                                                                 |  | <u>55</u>                                           | <u>Yes</u>                                                        | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>Rumex crispus</u>                                                                                                                                                   |  | <u>15</u>                                           | <u>No</u>                                                         | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3. <u>Agropyron cristatum</u>                                                                                                                                             |  | <u>10</u>                                           | <u>No</u>                                                         | <u>UPL</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 4. <u>Xanthium strumarium</u>                                                                                                                                             |  | <u>8</u>                                            | <u>No</u>                                                         | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5. <u>Verbena officinalis</u>                                                                                                                                             |  | <u>2</u>                                            | <u>No</u>                                                         | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 6. <u>Cirsium arvense</u>                                                                                                                                                 |  | <u>1</u>                                            | <u>No</u>                                                         | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 7. <u>Panicum capillare</u>                                                                                                                                               |  | <u>1</u>                                            | <u>No</u>                                                         | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 8. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 9. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 10. <u>    </u>                                                                                                                                                           |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                           |  | <u>92</u>                                           | =Total Cover                                                      |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Woody Vine Stratum (Plot size: <u>    </u> )                                                                                                                              |  |                                                     |                                                                   |                                                                                                                           | Hydrophytic Vegetation Present? Yes <u>X</u> No <u>    </u>                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 1. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. <u>    </u>                                                                                                                                                            |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|                                                                                                                                                                           |  | =Total Cover                                        |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| % Bare Ground in Herb Stratum <u>10</u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Remarks:<br>Hydrophytic mainly due to foxtail barley.                                                                                                                     |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## SOIL

Sampling Point: D-12

[illegible]

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                              |                                                                                |                                                                                                       |                      |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------|
| Primary Indicators (minimum of one is required; check all that apply)                                      |                                                                                | Secondary Indicators (minimum of two required)                                                        |                      |
| <input type="checkbox"/> Surface Water (A1)                                                                | <input type="checkbox"/> Salt Crust (B11)                                      | <input type="checkbox"/> Surface Soil Cracks (B6)                                                     |                      |
| <input type="checkbox"/> High Water Table (A2)                                                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                           | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                                      |                      |
| <input type="checkbox"/> Saturation (A3)                                                                   | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                            | <input type="checkbox"/> Drainage Patterns (B10)                                                      |                      |
| <input type="checkbox"/> Water Marks (B1)                                                                  | <input type="checkbox"/> Dry-Season Water Table (C2)                           | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                   |                      |
| <input type="checkbox"/> Sediment Deposits (B2)                                                            | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                                                 |                      |
| <input type="checkbox"/> Drift Deposits (B3)                                                               | <b>(where not tilled)</b>                                                      | <input type="checkbox"/> Crayfish Burrows (C8)                                                        |                      |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                           | <input type="checkbox"/> Presence of Reduced Iron (C4)                         | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                    |                      |
| <input type="checkbox"/> Iron Deposits (B5)                                                                | <input type="checkbox"/> Thin Muck Surface (C7)                                | <input checked="" type="checkbox"/> Geomorphic Position (D2)                                          |                      |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                         | <input type="checkbox"/> Other (Explain in Remarks)                            | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                                             |                      |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                         |                                                                                | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                                            |                      |
| <b>Field Observations:</b>                                                                                 |                                                                                |                                                                                                       |                      |
| Surface Water Present?                                                                                     | Yes <input type="checkbox"/> No <input type="checkbox"/>                       | Depth (inches):                                                                                       | <input type="text"/> |
| Water Table Present?                                                                                       | Yes <input type="checkbox"/> No <input type="checkbox"/>                       | Depth (inches):                                                                                       | <input type="text"/> |
| Saturation Present?                                                                                        | Yes <input type="checkbox"/> No <input type="checkbox"/>                       | Depth (inches):                                                                                       | <input type="text"/> |
| (includes capillary fringe)                                                                                |                                                                                | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                      |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                                                |                                                                                                       |                      |
| Remarks:                                                                                                   |                                                                                |                                                                                                       |                      |



|                                                                                                                                                                                                     |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                                                    |  |                                                      |                                                                        | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                                                  |  | City/County: <u>Rapid City, Pennington</u>           |                                                                        | Sampling Date: <u>8/15/2024</u>                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                                          |  | State: <u>SD</u>                                     |                                                                        | Sampling Point: <u>D-13</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                                                 |  | Section, Township, Range: <u>SW/SE T2N R8E</u>       |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Landform (hillside, terrace, etc.): <u>shallow drainage</u>                                                                                                                                         |  | Local relief (concave, convex, none): <u>concave</u> |                                                                        | Slope (%): <u>2</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                                        |  | Lat: <u>44.096678</u>                                |                                                                        | Long: <u>-103.99058</u> Datum: <u>NAD83</u>                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Soil Map Unit Name: <u>Kyle clay</u>                                                                                                                                                                |  | NW1 classification: <u>None</u>                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Are climatic / hydrologic conditions on the site typical for this time of year?    Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                                       |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed?    Are "Normal Circumstances" present?    Yes <u>X</u> No <u>      </u>                     |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic?    (If needed, explain any answers in Remarks.)                                               |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                                                         |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u>                                                                                                                                    |  |                                                      | Is the Sampled Area within a Wetland?    Yes <u>      </u> No <u>X</u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Hydric Soil Present?    Yes <u>X</u> No <u>      </u>                                                                                                                                               |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Wetland Hydrology Present?    Yes <u>X</u> No <u>      </u>                                                                                                                                         |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Remarks:<br>Part of a dry drainage. Similar vegetation continues in a channel to the south, but there are no drainage patterns. Soil may be wetter here due to proximity to seasonally ponded area. |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| VEGETATION – Use scientific names of plants.                                                                                                                                                        |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Tree Stratum    (Plot size: <u>      </u> )                                                                                                                                                         |  | Absolute % Cover                                     | Dominant Species?                                                      | Indicator Status                                                                                                          | Dominance Test worksheet:<br><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0.0%</u> (A/B)                                                                                                                                                                                                                                                                 |
| 1. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                     |  | =Total Cover                                         |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Sapling/Shrub Stratum    (Plot size: <u>      </u> )                                                                                                                                                |  |                                                      |                                                                        |                                                                                                                           | Prevalence Index worksheet:<br><br>Total % Cover of:    Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>8</u> x 2 = <u>16</u><br>FAC species <u>17</u> x 3 = <u>51</u><br>FACU species <u>75</u> x 4 = <u>300</u><br>UPL species <u>9</u> x 5 = <u>45</u><br>Column Totals: <u>109</u> (A) <u>412</u> (B)<br>Prevalence Index = B/A = <u>3.78</u>                                                                                                                                                      |
| 1. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 5. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                     |  | =Total Cover                                         |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Herb Stratum    (Plot size: <u>5ft</u> )                                                                                                                                                            |  |                                                      |                                                                        |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>      </u> 2 - Dominance Test is >50%<br><u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Poa pratensis</u>                                                                                                                                                                             |  | <u>75</u>                                            | <u>Yes</u>                                                             | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2. <u>Carex brevior</u>                                                                                                                                                                             |  | <u>15</u>                                            | <u>No</u>                                                              | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3. <u>Agropyron cristatum</u>                                                                                                                                                                       |  | <u>9</u>                                             | <u>No</u>                                                              | <u>UPL</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4. <u>Hordeum jubatum</u>                                                                                                                                                                           |  | <u>8</u>                                             | <u>No</u>                                                              | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 5. <u>Xanthium strumarium</u>                                                                                                                                                                       |  | <u>2</u>                                             | <u>No</u>                                                              | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 6. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 7. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 8. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 9. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 10. <u>      </u>                                                                                                                                                                                   |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                     |  | <u>109</u> =Total Cover                              |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Woody Vine Stratum    (Plot size: <u>      </u> )                                                                                                                                                   |  |                                                      |                                                                        |                                                                                                                           | Hydrophytic Vegetation Present?    Yes <u>      </u> No <u>X</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 1. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2. <u>      </u>                                                                                                                                                                                    |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|                                                                                                                                                                                                     |  | =Total Cover                                         |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| % Bare Ground in Herb Stratum <u>      </u>                                                                                                                                                         |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Remarks:                                                                                                                                                                                            |  |                                                      |                                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## SOIL

Sampling Point: D-13

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) |               |    |                |    |                   |                  |              |                                |
|---------------------------------------------------------------------------------------------------------------------|---------------|----|----------------|----|-------------------|------------------|--------------|--------------------------------|
| Depth<br>(inches)                                                                                                   | Matrix        |    | Redox Features |    |                   |                  | Texture      | Remarks                        |
|                                                                                                                     | Color (moist) | %  | Color (moist)  | %  | Type <sup>1</sup> | Loc <sup>2</sup> |              |                                |
| 0-7                                                                                                                 | 2.5Y 4/2      | 95 | 5YR 3/4        | 5  | C                 | PL               | Loamy/Clayey | Silt clay                      |
| 7-8                                                                                                                 | 10YR 4/2      | 50 | 5YR 3/4        | 50 | C                 | M                | Loamy/Clayey | Loam                           |
| 8-14                                                                                                                | 2.5Y 4/2      | 99 | 5YR 3/4        | 1  | C                 | PL               | Loamy/Clayey | Prominent redox concentrations |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                |
|                                                                                                                     |               |    |                |    |                   |                  |              |                                |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |                                                          | Indicators for Problematic Hydric Soils <sup>3</sup> :   |
|---------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Gleyed Matrix (S4)        | <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)       |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Sandy Redox (S5)                | <input type="checkbox"/> High Plains Depressions (F16)   |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Stripped Matrix (S6)            | <b>(LRR H outside of MLRA 72 &amp; 73)</b>               |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Mucky Mineral (F1)        | <input type="checkbox"/> Reduced Vertic (F18)            |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)        | <input type="checkbox"/> Red Parent Material (F21)       |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)                     | <input checked="" type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Redox Dark Surface (F6)         | <input type="checkbox"/> Other (Explain in Remarks)      |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Depleted Dark Surface (F7)      |                                                          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Redox Depressions (F8)          |                                                          |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)        | <input type="checkbox"/> High Plains Depressions (F16)   |                                                          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)             | <b>(MLRA 72 &amp; 73 of LRR H)</b>                       |                                                          |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

|                                                                                 |                                                                                                 |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____ | <b>Hydric Soil Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|

Remarks:  
Redox is minor except in the concentrated layer which is 1 in thick. The low-lying area here is a channel which will not collect water, so it cannot be a redox depression.

## HYDROLOGY

| Wetland Hydrology Indicators:                                         |                                                                                                   |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Primary Indicators (minimum of one is required; check all that apply) |                                                                                                   | Secondary Indicators (minimum of two required)         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Surface Water (A1)                           | <input type="checkbox"/> Salt Crust (B11)                                                         | <input type="checkbox"/> Surface Soil Cracks (B6)      | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)<br><input checked="" type="checkbox"/> Drainage Patterns (B10)<br><input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where tilled)<br><input type="checkbox"/> Crayfish Burrows (C8)<br><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)<br><input checked="" type="checkbox"/> Geomorphic Position (D2)<br><input type="checkbox"/> FAC-Neutral Test (D5)<br><input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F) |
| <input type="checkbox"/> High Water Table (A2)                        | <input type="checkbox"/> Aquatic Invertebrates (B13)                                              | <input type="checkbox"/> Presence of Reduced Iron (C4) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Saturation (A3)                              | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                                               | <input type="checkbox"/> Thin Muck Surface (C7)        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Water Marks (B1)                             | <input type="checkbox"/> Dry-Season Water Table (C2)                                              | <input type="checkbox"/> Other (Explain in Remarks)    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Sediment Deposits (B2)                       | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) (where not tilled) |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Drift Deposits (B3)                          |                                                                                                   |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Algal Mat or Crust (B4)                      |                                                                                                   |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Iron Deposits (B5)                           |                                                                                                   |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)    |                                                                                                   |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <input type="checkbox"/> Water-Stained Leaves (B9)                    |                                                                                                   |                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| <b>Field Observations:</b><br>Surface Water Present?    Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____<br>Water Table Present?      Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____<br>Saturation Present?        Yes <input type="checkbox"/> No <input type="checkbox"/> Depth (inches): _____<br>(includes capillary fringe) | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
Observed drainage patterns may actually be from cattle traffic.

|                                                                                                                                                                                 |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                                |  |                                                      |                                                                     | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                              |  | City/County: <u>Rapid City, Pennington</u>           |                                                                     | Sampling Date: <u>8/15/2024</u>                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                      |  | State: <u>SD</u>                                     |                                                                     | Sampling Point: <u>D-14</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                             |  | Section, Township, Range: <u>SW/NW T2N R8E</u>       |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Landform (hillside, terrace, etc.): <u>low point in a dry stream</u>                                                                                                            |  | Local relief (concave, convex, none): <u>concave</u> |                                                                     | Slope (%): <u>4</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                    |  | Lat: <u>44.105814</u>                                |                                                                     | Long: <u>-103.110933</u> Datum: <u>NAD83</u>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Soil Map Unit Name: <u>Kyle clay</u>                                                                                                                                            |  | NW1 classification: <u>None</u>                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                      |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "I X" Yes <u>X</u> No <u>      </u>                                 |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)                              |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                                     |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u><br>Hydric Soil Present? Yes <u>      </u> No <u>X</u><br>Wetland Hydrology Present? Yes <u>X</u> No <u>      </u> |  |                                                      | Is the Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Remarks:<br>Deeply cracked, possibly vertic soils. Lower strata is sandier, possibly alluvium.                                                                                  |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| VEGETATION – Use scientific names of plants.                                                                                                                                    |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Tree Stratum (Plot size: <u>      </u> )                                                                                                                                        |  | Absolute % Cover                                     | Dominant Species?                                                   | Indicator Status                                                                                                          | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)                                                                                                                                                                                                                                                                  |
| 1. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 4. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                 |  | =Total Cover                                         |                                                                     |                                                                                                                           | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>50</u> x 2 = <u>100</u><br>FAC species <u>23</u> x 3 = <u>69</u><br>FACU species <u>0</u> x 4 = <u>0</u><br>UPL species <u>0</u> x 5 = <u>0</u><br>Column Totals: <u>73</u> (A) <u>169</u> (B)<br>Prevalence Index = B/A = <u>2.32</u>                                                                                                                                                       |
| Sapling/Shrub Stratum (Plot size: <u>      </u> )                                                                                                                               |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 4. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                 |  | =Total Cover                                         |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Herb Stratum (Plot size: <u>      </u> )                                                                                                                                        |  |                                                      |                                                                     |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>X</u> 2 - Dominance Test is >50%<br><u>      </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Hordeum jubatum</u>                                                                                                                                                       |  | <u>50</u>                                            | <u>Yes</u>                                                          | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2. <u>Xanthium strumarium</u>                                                                                                                                                   |  | <u>20</u>                                            | <u>Yes</u>                                                          | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 3. <u>Rumex crispus</u>                                                                                                                                                         |  | <u>3</u>                                             | <u>No</u>                                                           | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 4. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 5. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 6. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 7. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 8. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 9. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 10. <u>      </u>                                                                                                                                                               |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                 |  | 73 =Total Cover                                      |                                                                     |                                                                                                                           | Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Woody Vine Stratum (Plot size: <u>      </u> )                                                                                                                                  |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 1. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2. <u>      </u>                                                                                                                                                                |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|                                                                                                                                                                                 |  | =Total Cover                                         |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| % Bare Ground in Herb Stratum <u>35</u>                                                                                                                                         |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Remarks:                                                                                                                                                                        |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## SOIL

Sampling Point: D-14

| Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.) |               |     |                |   |                   |                  |              |                                             |
|---------------------------------------------------------------------------------------------------------------------|---------------|-----|----------------|---|-------------------|------------------|--------------|---------------------------------------------|
| Depth<br>(inches)                                                                                                   | Matrix        |     | Redox Features |   |                   |                  | Texture      | Remarks                                     |
|                                                                                                                     | Color (moist) | %   | Color (moist)  | % | Type <sup>1</sup> | Loc <sup>2</sup> |              |                                             |
| 0-5                                                                                                                 | 2.5Y 3/2      | 99  | 5YR 4/6        | 1 | C                 | PL               | Loamy/Clayey | Loam, very hard, has some CaCO <sub>3</sub> |
| 5-12                                                                                                                | 2.5Y 4/3      | 98  | 7.5R 3/8       | 2 | C                 | PL               | Loamy/Clayey | Prominent redox concentrations              |
| 12-16                                                                                                               | 2.5Y 5/2      | 100 |                |   |                   |                  | Loamy/Clayey | Some CaCO <sub>3</sub> masses               |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                             |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                             |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                             |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                             |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                             |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                             |
|                                                                                                                     |               |     |                |   |                   |                  |              |                                             |

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

| Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) |                                                        | Indicators for Problematic Hydric Soils <sup>3</sup> :   |
|---------------------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------------|
| <input type="checkbox"/> Histosol (A1)                                    | <input type="checkbox"/> Sandy Gleyed Matrix (S4)      | <input type="checkbox"/> 1 cm Muck (A9) (LRR I, J)       |
| <input type="checkbox"/> Histic Epipedon (A2)                             | <input type="checkbox"/> Sandy Redox (S5)              | <input type="checkbox"/> High Plains Depressions (F16)   |
| <input type="checkbox"/> Black Histic (A3)                                | <input type="checkbox"/> Stripped Matrix (S6)          | <b>(LRR H outside of MLRA 72 &amp; 73)</b>               |
| <input type="checkbox"/> Hydrogen Sulfide (A4)                            | <input type="checkbox"/> Loamy Mucky Mineral (F1)      | <input type="checkbox"/> Reduced Vertic (F18)            |
| <input type="checkbox"/> Stratified Layers (A5) (LRR F)                   | <input type="checkbox"/> Loamy Gleyed Matrix (F2)      | <input type="checkbox"/> Red Parent Material (F21)       |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR F, G, H)                     | <input type="checkbox"/> Depleted Matrix (F3)          | <input type="checkbox"/> Very Shallow Dark Surface (F22) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11)                | <input type="checkbox"/> Redox Dark Surface (F6)       | <input type="checkbox"/> Other (Explain in Remarks)      |
| <input type="checkbox"/> Thick Dark Surface (A12)                         | <input type="checkbox"/> Depleted Dark Surface (F7)    |                                                          |
| <input type="checkbox"/> Sandy Mucky Mineral (S1)                         | <input type="checkbox"/> Redox Depressions (F8)        |                                                          |
| <input type="checkbox"/> 2.5 cm Mucky Peat or Peat (S2) (LRR G, H)        | <input type="checkbox"/> High Plains Depressions (F16) |                                                          |
| <input type="checkbox"/> 5 cm Mucky Peat or Peat (S3) (LRR F)             | <b>(MLRA 72 &amp; 73 of LRR H)</b>                     |                                                          |

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

|                                                                                 |                                                   |
|---------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Restrictive Layer (if observed):</b><br>Type: _____<br>Depth (inches): _____ | <b>Hydric Soil Present?</b> Yes _____ No <u>X</u> |
|---------------------------------------------------------------------------------|---------------------------------------------------|

Remarks:  
Surface is extremely hard and has deep cracks. Some cracks extend >16 cm.

## HYDROLOGY

| Wetland Hydrology Indicators:                                         |                                                                     |                                                                     |  |
|-----------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------|--|
| Primary Indicators (minimum of one is required; check all that apply) |                                                                     | Secondary Indicators (minimum of two required)                      |  |
| <input type="checkbox"/> Surface Water (A1)                           | <input type="checkbox"/> Salt Crust (B11)                           | <input checked="" type="checkbox"/> Surface Soil Cracks (B6)        |  |
| <input type="checkbox"/> High Water Table (A2)                        | <input type="checkbox"/> Aquatic Invertebrates (B13)                | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)    |  |
| <input type="checkbox"/> Saturation (A3)                              | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 | <input type="checkbox"/> Drainage Patterns (B10)                    |  |
| <input type="checkbox"/> Water Marks (B1)                             | <input type="checkbox"/> Dry-Season Water Table (C2)                | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |  |
| <input type="checkbox"/> Sediment Deposits (B2)                       | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                               |  |
| <input type="checkbox"/> Drift Deposits (B3)                          | <b>(where not tilled)</b>                                           | <input type="checkbox"/> Crayfish Burrows (C8)                      |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                      | <input type="checkbox"/> Presence of Reduced Iron (C4)              | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)  |  |
| <input type="checkbox"/> Iron Deposits (B5)                           | <input type="checkbox"/> Thin Muck Surface (C7)                     | <input checked="" type="checkbox"/> Geomorphic Position (D2)        |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)    | <input type="checkbox"/> Other (Explain in Remarks)                 | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)           |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                    |                                                                     | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)          |  |

|                                                                                                                                                                                                                                                                                       |                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>Field Observations:</b><br>Surface Water Present?    Yes _____ No <u>X</u> Depth (inches): _____<br>Water Table Present?      Yes _____ No <u>X</u> Depth (inches): _____<br>Saturation Present?        Yes _____ No <u>X</u> Depth (inches): _____<br>(includes capillary fringe) | <b>Wetland Hydrology Present?</b> Yes <u>X</u> No _____ |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

|                                                                                                                                                  |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R |  |                                                     |                                                                   | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                               |  | City/County: <u>Rapid City, Pennington</u>          |                                                                   | Sampling Date: <u>8/16/2024</u>                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                       |  | State: <u>SD</u>                                    |                                                                   | Sampling Point: <u>D-15</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Investigator(s): <u>Jesse Broce</u>                                                                                                              |  | Section, Township, Range: <u>SE/SE T2N R8E</u>      |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Landform (hillside, terrace, etc.): <u>Terrace above stream</u>                                                                                  |  | Local relief (concave, convex, none): <u>convex</u> |                                                                   | Slope (%): <u>5</u>                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                     |  | Lat: <u>44.114315</u>                               |                                                                   | Long: <u>-103.111187</u> Datum: <u>NAD83</u>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Soil Map Unit Name: <u>Owanka Clay Loam</u>                                                                                                      |  | NW1 classification: <u>None</u>                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>    </u> (If no, explain in Remarks.)         |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> significantly disturbed? Are "I X Yes <u>X</u> No <u>    </u>           |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Are Vegetation <u>    </u> , Soil <u>    </u> , or Hydrology <u>    </u> naturally problematic? (If needed, explain any answers in Remarks.)     |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| SUMMARY OF FINDINGS – Attach site map showing sampling p <u>X</u>                                                                                |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>                                                                                      |  |                                                     | Is the Sampled Area within a Wetland? Yes <u>    </u> No <u>X</u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Hydric Soil Present? Yes <u>    </u> No <u>X</u>                                                                                                 |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Wetland Hydrology Present? Yes <u>    </u> No <u>X</u>                                                                                           |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:                                                                                                                                         |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| VEGETATION – Use scientific names of plants.                                                                                                     |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Tree Stratum (Plot size: <u>    </u> )                                                                                                           |  | Absolute % Cover                                    | Dominant Species?                                                 | Indicator Status                                                                                                          | Dominance Test worksheet:<br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br>Total Number of Dominant Species Across All Strata: <u>2</u> (B)<br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50.0%</u> (A/B)                                                                                                                                                                                                                                                              |
| 1. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                        |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Sapling/Shrub Stratum (Plot size: <u>    </u> )                                                                                                  |  |                                                     |                                                                   |                                                                                                                           | Prevalence Index worksheet:<br>Total % Cover of: Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>65</u> x 2 = <u>130</u><br>FAC species <u>2</u> x 3 = <u>6</u><br>FACU species <u>70</u> x 4 = <u>280</u><br>UPL species <u>0</u> x 5 = <u>0</u><br>Column Totals: <u>137</u> (A) <u>416</u> (B)<br>Prevalence Index = B/A = <u>3.04</u>                                                                                                                                                |
| 1. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                        |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Herb Stratum (Plot size: <u>    </u> )                                                                                                           |  |                                                     |                                                                   |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><u>    </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>    </u> 2 - Dominance Test is >50%<br><u>    </u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>    </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>    </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Spartina pectinata</u>                                                                                                                     |  | <u>60</u>                                           | <u>Yes</u>                                                        | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>Helianthus annuus</u>                                                                                                                      |  | <u>65</u>                                           | <u>Yes</u>                                                        | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3. <u>Cirsium arvense</u>                                                                                                                        |  | <u>3</u>                                            | <u>No</u>                                                         | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4. <u>Cyclachaena xanthiifolia</u>                                                                                                               |  | <u>1</u>                                            | <u>No</u>                                                         | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5. <u>Persicaria pensylvanica</u>                                                                                                                |  | <u>5</u>                                            | <u>No</u>                                                         | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 6. <u>Lactuca serriola</u>                                                                                                                       |  | <u>1</u>                                            | <u>No</u>                                                         | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 7. <u>Thlaspi arvense</u>                                                                                                                        |  | <u>2</u>                                            | <u>No</u>                                                         | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 8. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 9. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 10. <u>    </u>                                                                                                                                  |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | <u>137</u>                                          | =Total Cover                                                      |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Woody Vine Stratum (Plot size: <u>    </u> )                                                                                                     |  |                                                     |                                                                   |                                                                                                                           | Hydrophytic Vegetation Present? Yes <u>    </u> No <u>X</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 1. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2. <u>    </u>                                                                                                                                   |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                                                                                                                                  |  | =Total Cover                                        |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| % Bare Ground in Herb Stratum <u>7</u>                                                                                                           |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Remarks:                                                                                                                                         |  |                                                     |                                                                   |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## SOIL

Sampling Point: D-15

[illegible]

## HYDROLOGY

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                     |  |  |                                                                                                       |  |  |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|--|--|-------------------------------------------------------------------------------------------------------|--|--|--|
| <b>Wetland Hydrology Indicators:</b><br><u>Primary Indicators (minimum of one is required; check all that apply)</u>                                                                                                                                                                                                                                                                                                                                                   |                                                                     |  |  | <u>Secondary Indicators (minimum of two required)</u>                                                 |  |  |  |
| <input type="checkbox"/> Surface Water (A1)                                                                                                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/> Salt Crust (B11)                           |  |  | <input type="checkbox"/> Surface Soil Cracks (B6)                                                     |  |  |  |
| <input type="checkbox"/> High Water Table (A2)                                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> Aquatic Invertebrates (B13)                |  |  | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                                      |  |  |  |
| <input type="checkbox"/> Saturation (A3)                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                 |  |  | <input type="checkbox"/> Drainage Patterns (B10)                                                      |  |  |  |
| <input type="checkbox"/> Water Marks (B1)                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> Dry-Season Water Table (C2)                |  |  | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                   |  |  |  |
| <input type="checkbox"/> Sediment Deposits (B2)                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) |  |  | <b>(where tilled)</b>                                                                                 |  |  |  |
| <input type="checkbox"/> Drift Deposits (B3)                                                                                                                                                                                                                                                                                                                                                                                                                           | <b>(where not tilled)</b>                                           |  |  | <input type="checkbox"/> Crayfish Burrows (C8)                                                        |  |  |  |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                                                                                                                                                                                                                                                                                                                                                                                       | <input type="checkbox"/> Presence of Reduced Iron (C4)              |  |  | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                    |  |  |  |
| <input type="checkbox"/> Iron Deposits (B5)                                                                                                                                                                                                                                                                                                                                                                                                                            | <input type="checkbox"/> Thin Muck Surface (C7)                     |  |  | <input type="checkbox"/> Geomorphic Position (D2)                                                     |  |  |  |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                                                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> Other (Explain in Remarks)                 |  |  | <input type="checkbox"/> FAC-Neutral Test (D5)                                                        |  |  |  |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                     |  |  | <input type="checkbox"/> Frost-Heave Hummocks (D7) <b>(LRR F)</b>                                     |  |  |  |
| <b>Field Observations:</b><br>Surface Water Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/><br>Water Table Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/><br>Saturation Present?    Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <input type="text"/><br>(includes capillary fringe) |                                                                     |  |  | <b>Wetland Hydrology Present?</b> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> |  |  |  |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:                                                                                                                                                                                                                                                                                                                                                             |                                                                     |  |  |                                                                                                       |  |  |  |
| Remarks:<br>Due to the position of this point above the drainage, it may get inundated during floods, but most of the time it is a poor geomorphic position.                                                                                                                                                                                                                                                                                                           |                                                                     |  |  |                                                                                                       |  |  |  |

|                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. Army Corps of Engineers<br>WETLAND DETERMINATION DATA SHEET – Great Plains Region<br>See ERDC/EL TR-10-1; the proponent agency is CECW-CO-R                                                                                                                                                                                                                                                         |  |                                                      |                                                                     | OMB Control #: 0710-0024, Exp: 11/30/2024<br>Requirement Control Symbol EXEMPT:<br>(Authority: AR 335-15, paragraph 5-2a) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Project/Site: <u>Cheyenne Blvd</u>                                                                                                                                                                                                                                                                                                                                                                       |  | City/County: <u>Rapid City, Pennington</u>           |                                                                     | Sampling Date: <u>8/14/2024</u>                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Applicant/Owner: <u>Towey Design Group</u>                                                                                                                                                                                                                                                                                                                                                               |  | State: <u>SD</u>                                     |                                                                     | Sampling Point: <u>D-16</u>                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Investigator(s): <u>Jesse Broce</u>                                                                                                                                                                                                                                                                                                                                                                      |  | Section, Township, Range: <u>SE/SE T2N R8E</u>       |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Landform (hillside, terrace, etc.): <u>streambed</u>                                                                                                                                                                                                                                                                                                                                                     |  | Local relief (concave, convex, none): <u>concave</u> |                                                                     | Slope (%): <u>12</u>                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Subregion (LRR/MLRA): <u>LRR G, MLRA 60A</u>                                                                                                                                                                                                                                                                                                                                                             |  | Lat: <u>44.114213</u>                                |                                                                     | Long: <u>-103.111079</u> Datum: <u>NAD83</u>                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Soil Map Unit Name: <u>Owanka clay loam</u>                                                                                                                                                                                                                                                                                                                                                              |  | NW1 classification: <u>None</u>                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Are climatic / hydrologic conditions on the site typical for this time of year? Yes <u>X</u> No <u>      </u> (If no, explain in Remarks.)                                                                                                                                                                                                                                                               |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> significantly disturbed? Are "Normal Circumstances" present? Yes <u>X</u> No <u>      </u>                                                                                                                                                                                                                                |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Are Vegetation <u>      </u> , Soil <u>      </u> , or Hydrology <u>      </u> naturally problematic? (If needed, explain any answers in Remarks.)                                                                                                                                                                                                                                                       |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.                                                                                                                                                                                                                                                                                              |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Hydrophytic Vegetation Present? Yes <u>X</u> No <u>      </u><br>Hydric Soil Present? Yes <u>X</u> No <u>      </u><br>Wetland Hydrology Present? Yes <u>X</u> No <u>      </u>                                                                                                                                                                                                                          |  |                                                      | Is the Sampled Area within a Wetland? Yes <u>X</u> No <u>      </u> |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Remarks: Bottom of constructed ditch is mainly <i>Spartina pectinata</i> . Along course of stream there is very minor cut bank development in one place. Some debris is caught on the fence here. The channel must not be submerged very often, but probably has times of heavy flow. The up- and downstream extremities of the mapped wetland area here is predominantly <i>Helianthus</i> , like D-15. |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| VEGETATION – Use scientific names of plants.                                                                                                                                                                                                                                                                                                                                                             |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Tree Stratum (Plot size: <u>      </u> )                                                                                                                                                                                                                                                                                                                                                                 |  | Absolute % Cover                                     | Dominant Species?                                                   | Indicator Status                                                                                                          | Dominance Test worksheet:<br><br>Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)<br><br>Total Number of Dominant Species Across All Strata: <u>1</u> (B)<br><br>Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.0%</u> (A/B)                                                                                                                                                                                                                                                         |
| 1. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                          |  | =Total Cover                                         |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Sapling/Shrub Stratum (Plot size: <u>      </u> )                                                                                                                                                                                                                                                                                                                                                        |  |                                                      |                                                                     |                                                                                                                           | Prevalence Index worksheet:<br><br>Total % Cover of: <u>      </u> Multiply by:<br>OBL species <u>0</u> x 1 = <u>0</u><br>FACW species <u>98</u> x 2 = <u>196</u><br>FAC species <u>0</u> x 3 = <u>0</u><br>FACU species <u>0</u> x 4 = <u>0</u><br>UPL species <u>3</u> x 5 = <u>15</u><br>Column Totals: <u>101</u> (A) <u>211</u> (B)<br>Prevalence Index = B/A = <u>2.09</u>                                                                                                                                        |
| 1. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 5. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                          |  | =Total Cover                                         |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Herb Stratum (Plot size: <u>5ft radius</u> )                                                                                                                                                                                                                                                                                                                                                             |  |                                                      |                                                                     |                                                                                                                           | Hydrophytic Vegetation Indicators:<br><br><u>      </u> 1 - Rapid Test for Hydrophytic Vegetation<br><u>X</u> 2 - Dominance Test is >50%<br><u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup><br><u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)<br><u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)<br><br><sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. |
| 1. <u>Spartina pectinata</u>                                                                                                                                                                                                                                                                                                                                                                             |  | <u>96</u>                                            | <u>Yes</u>                                                          | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2. <u>Bromus inermis</u>                                                                                                                                                                                                                                                                                                                                                                                 |  | <u>3</u>                                             | <u>No</u>                                                           | <u>UPL</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3. <u>Persicaria pensylvanica</u>                                                                                                                                                                                                                                                                                                                                                                        |  | <u>2</u>                                             | <u>No</u>                                                           | <u>FACW</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 4. <u>Xanthium strumarium (Trace)</u>                                                                                                                                                                                                                                                                                                                                                                    |  | <u>0</u>                                             |                                                                     | <u>FAC</u>                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 5. <u>Cirsium arvense (Trace)</u>                                                                                                                                                                                                                                                                                                                                                                        |  | <u>0</u>                                             |                                                                     | <u>FACU</u>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 6. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 7. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 8. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 9. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 10. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                        |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                          |  | <u>101</u>                                           | =Total Cover                                                        |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Woody Vine Stratum (Plot size: <u>      </u> )                                                                                                                                                                                                                                                                                                                                                           |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 1. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2. <u>      </u>                                                                                                                                                                                                                                                                                                                                                                                         |  | <u>      </u>                                        | <u>      </u>                                                       | <u>      </u>                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                          |  | =Total Cover                                         |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| % Bare Ground in Herb Stratum <u>0</u>                                                                                                                                                                                                                                                                                                                                                                   |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Remarks:                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                      |                                                                     |                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## SOIL

Sampling Point: D-16

[illegible]

## HYDROLOGY

| Wetland Hydrology Indicators:                                                                              |                                                                                |                                                                                                       |                      |
|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------|
| Primary Indicators (minimum of one is required; check all that apply)                                      |                                                                                | Secondary Indicators (minimum of two required)                                                        |                      |
| <input type="checkbox"/> Surface Water (A1)                                                                | <input type="checkbox"/> Salt Crust (B11)                                      | <input type="checkbox"/> Surface Soil Cracks (B6)                                                     |                      |
| <input type="checkbox"/> High Water Table (A2)                                                             | <input type="checkbox"/> Aquatic Invertebrates (B13)                           | <input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)                                      |                      |
| <input type="checkbox"/> Saturation (A3)                                                                   | <input type="checkbox"/> Hydrogen Sulfide Odor (C1)                            | <input type="checkbox"/> Drainage Patterns (B10)                                                      |                      |
| <input type="checkbox"/> Water Marks (B1)                                                                  | <input type="checkbox"/> Dry-Season Water Table (C2)                           | <input type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3)                                   |                      |
| <input type="checkbox"/> Sediment Deposits (B2)                                                            | <input checked="" type="checkbox"/> Oxidized Rhizospheres on Living Roots (C3) | <b>(where tilled)</b>                                                                                 |                      |
| <input type="checkbox"/> Drift Deposits (B3)                                                               | <b>(where not tilled)</b>                                                      | <input type="checkbox"/> Crayfish Burrows (C8)                                                        |                      |
| <input type="checkbox"/> Algal Mat or Crust (B4)                                                           | <input type="checkbox"/> Presence of Reduced Iron (C4)                         | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)                                    |                      |
| <input type="checkbox"/> Iron Deposits (B5)                                                                | <input type="checkbox"/> Thin Muck Surface (C7)                                | <input checked="" type="checkbox"/> Geomorphic Position (D2)                                          |                      |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)                                         | <input type="checkbox"/> Other (Explain in Remarks)                            | <input checked="" type="checkbox"/> FAC-Neutral Test (D5)                                             |                      |
| <input type="checkbox"/> Water-Stained Leaves (B9)                                                         |                                                                                | <input type="checkbox"/> Frost-Heave Hummocks (D7) (LRR F)                                            |                      |
| <b>Field Observations:</b>                                                                                 |                                                                                |                                                                                                       |                      |
| Surface Water Present?                                                                                     | Yes <input type="checkbox"/> No <input type="checkbox"/>                       | Depth (inches):                                                                                       | <input type="text"/> |
| Water Table Present?                                                                                       | Yes <input type="checkbox"/> No <input type="checkbox"/>                       | Depth (inches):                                                                                       | <input type="text"/> |
| Saturation Present?                                                                                        | Yes <input type="checkbox"/> No <input type="checkbox"/>                       | Depth (inches):                                                                                       | <input type="text"/> |
| (includes capillary fringe)                                                                                |                                                                                | <b>Wetland Hydrology Present?</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> |                      |
| Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available: |                                                                                |                                                                                                       |                      |
| Remarks:                                                                                                   |                                                                                |                                                                                                       |                      |