

**SPECIFICATIONS  
and  
CONTRACT DOCUMENTS**

**UPPER REPUBLICAN  
NATURAL RESOURCES DISTRICT**

**ROCK CREEK  
DROP STRUCTURE #1**

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Dundy County, Nebraska



**PREPARED BY:**

The Flatwater Group, Inc.  
8200 Cody Drive, Suite A  
Lincoln, Nebraska 68512  
Phone: 402-435-5441

Flatwater Group Project No. URNRD-2017-01  
JULY 2018





PROJECT: Rock Creek Drop Structure #1  
COUNTY: Dundy County, Nebraska

Prepared by:

**The Flatwater Group**  
8200 Cody Drive, Suite A  
Lincoln, Nebraska 68512-9550



Technical Specifications Prepared By:



Flatwater Group Project No. URNRD-2017-01  
July 2018

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NEAR:	Parks, Nebraska
COUNTY:	Dundy

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## ENUMERATION of DRAWINGS

**PROJECT:** Rock Creek Drop Structure #1

**LOCATION:** Parks, Nebraska

**COUNTY:** Dundy

**NOTE:** The following Enumeration of Drawings is part of the contract documents for this project.

DRAWING NUMBER		TITLE of DRAWING	DATE of TFG DRAWING
1 of 5	Cover		Jul 2018
2 of 5	General Notes and Schedule of Quantities		Jul 2018
3 of 5	Plan and Profile		Jul 2018
4 of 5	Detail 1		Jul 2018
5 of 5	Detail 2		Jul 2018

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## INVITATION TO BIDDERS

Sealed Bids will be received by the Upper Republican Natural Resources District, P.O. Box 1140, 511 East 5<sup>th</sup> Street, Imperial, Nebraska, 69033, for the following project at the time listed:

**BID DATE AND TIME:** September 14, 2018 @ 4:00PM MT

**PROJECT:** Rock Creek Drop Structure #1

**LOCATION:** Rock Creek Rd., Parks, NE

**COUNTY:** Dundy

Bids will be publicly opened, read aloud, and tabulated at the office of the Upper Republican Natural Resources District, East 5<sup>th</sup> Street, Imperial, Nebraska at the time specified. If auxiliary aids or reasonable accommodations are needed for attendance at the bid opening, please call Jasper Fanning 308-882-5173. Advance notice of seven days is needed when requesting an interpreter.

Furnish all labor, materials and equipment for Rock Creek Drop Structure #1 per the plans and specifications. Bidder shall include all incidental work necessary to complete the Project as required by the plans and specifications.

Envelopes containing bids shall be sealed and must be accompanied by a certified check or bid bond in an amount equal to but not less than five (5) percent of the amount bid. The check or bond shall be payable to the Treasurer, Upper Republican Natural Resources District as security that the bidder to whom the award is made will enter into contract to complete the work bid upon and furnish the required bonds and insurance. Mark envelopes as "Rock Creek Drop Structure #1" Bid.

No bid may be withdrawn within a period of forty-five (45) days after the date fixed for the bid opening. Work shall be commenced and completed within the time(s) designated in the Bid Form.

Bidding Documents are available at the office of the Upper Republican Natural Resources District, East 5<sup>th</sup> Street, Imperial, Nebraska. Bid documents may also be viewed and downloaded from the Upper Republican NRD website ([www.urnrd.org](http://www.urnrd.org)) or viewed at The Flatwater Group website ([www.flatwatergroup.com](http://www.flatwatergroup.com)). Bidding documents are also on file in the office of the engineer for review: The Flatwater Group, 8200 Cody Drive, Suite A, Lincoln, Nebraska, 68512, phone (402) 435-5441.

The Upper Republican Natural Resources District reserves the right to accept or reject any or all Bids and to waive any or all informalities or irregularities.

BY: JASPER FANNING – General Manager

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## INSTRUCTIONS TO BIDDERS

### I. DEFINITIONS .....

- A. Bidding Documents include the Advertisement, Instructions to Bidders, the bid form, contract forms and the proposed Contract Documents including any Addenda issued prior to receipt of bids.
- B. Addenda are written or graphic instructions issued by the Engineer prior to the execution of the Contract which modify or interpret the bidding documents.
- C. Contract documents include the executed Contract form, General and Supplementary Conditions of the Contract, the drawings, the specifications, all Addenda and all Contract change orders as issued.
- D. A Bid is a complete and properly signed proposal to do the Work for the sums stipulated therein.

### II. BIDDER'S REPRESENTATION.....

#### A. EACH BIDDER BY MAKING HIS BID PRESENTS THAT:

- 1. He has read and understands the Bidding Documents and his Bid is made in accordance therewith.
- 2. He has visited the site and has familiarized himself with the local conditions under which the Work is to be performed.
- 3. His Bid is based upon the materials, systems and equipment described in the Bidding Documents.

### III. BIDDING DOCUMENTS.....

#### A. INTERPRETATION OR CORRECTION OF BIDDING DOCUMENTS:

- 1. Bidders shall promptly notify the Engineer of any ambiguity, inconsistency or error which they may discover upon examination of the Bidding Documents or of the site and local conditions.
- 2. Bidders requiring clarification or interpretation of the Bidding Documents shall make a request to the Engineer at least seven days prior to the date for receipt of bids.
- 3. Interpretation, correction or change of the Bidding Documents will be made by Addendum. Interpretations, corrections or changes of the Bidding Documents made in any other manner will not be binding, and bidders shall not rely upon such interpretations, corrections or changes.

#### B. SUBSTITUTIONS:

- 1. The materials, products and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance and quality to be met by any proposed substitution.
- 2. No substitution will be considered unless written request for approval has been submitted by the Bidder at least five days prior to the date for receipt of bids. Each such request shall include the name of the material or equipment and a complete description of the proposed item and any other information necessary for evaluation. A statement setting forth any changes in other materials, equipment or work that incorporation of the substitute would require shall be included. The burden of Proof of the merit of the proposed substitute is upon the proposer. The Engineer's decision of approval or disapproval of a proposed substitution shall be final.
- 3. If the Engineer approves any proposed substitution, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

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C. ADDENDA:

1. Addenda will be mailed or delivered to all who are known by the Engineer to have received a complete set of Bidding Documents.
2. Copies of Addenda will be made available for inspection wherever Bidding Documents are on file for that purpose.
3. Each Bidder shall ascertain prior to submitting his bid that he has received all Addenda issued, and he shall acknowledge their receipt in his bid.

IV. **BIDDING PROCEDURES**.....

A. FORM AND STYLE OF BIDS:

1. Bids shall be submitted on the forms provided by the Engineer.
2. All blanks on the form shall be filled in by typewriter, computer or manually in ink.
3. Where so indicated by the makeup of the bid form, sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written amount shall govern.
4. Any interlineation, alteration or erasure must be initialed by the signer of the Bid.
5. All requested alternates shall be bid or marked "No Bid".
6. Where there are two or more major items of work for which separate quotations have been requested, Bidder may state on the proposal form his refusal to accept less than whatever combination of the items he may stipulate.
7. Each Bid shall include the legal name of Bidder and a statement whether Bidder is a sole proprietor, a partnership, a corporation, or any other legal entity, and each copy shall be signed by the person or persons legally authorized to bind the Bidder to a contract. A proposal by a corporation shall further give the State of Incorporation.

B. BID SECURITY:

1. Each Bid shall be accompanied by a bid security in the required form and amount stipulated in the advertisement for bids pledging that the Bidder will enter into a contract with the Owner on the terms stated in his proposal and will furnish bonds as described here-in-after covering the faithful performance of the Contract and the payment of all obligations arising thereunder. Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the Bid Security shall be forfeited to the Owner as liquidated damages, not as penalty.
2. If a surety bid bond is provided it shall be written on an approved form of Bid Bond, and the Attorney-In-Fact who executes the bond on behalf of the surety shall affix to the bond a certified and current copy of his Power of Attorney.
3. The Owner will have the right to retain the bid security of Bidders until (a), the Contract has been executed and bonds have been furnished or (b), the specified time has elapsed so that Bids may be withdrawn, or (c), all Bids have been rejected.

C. SUBMISSION OF BIDS:

1. All Bids, the bid security and any other documents required to be submitted with the Bid shall be enclosed in a sealed opaque envelope. The envelope shall be identified with the Project name, and the Bidder's name and address. If the Bid is sent by mail the sealed envelope shall be enclosed in a separate mailing envelope with the notation "Rock Creek Drop Structure #1 Bid" on the face thereof.
2. Bids shall be deposited at the designated location prior to the time and date for receipt of bids indicated in the Advertisement to Bidders, or any extension thereof made by Addendum. Bids received after the time and date for receipt of bids will be returned unopened.
3. Bidder shall assume full responsibility for timely delivery at location designated for receipt of Bids.

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4. ***Oral, telephonic or telegraphic (by fax) Bids are invalid and will not receive consideration.***

D. MODIFICATION OR WITHDRAWAL OF BID:

1. A Bid may not be modified, withdrawn or canceled by the Bidder during the stipulated time period following the time and date designated for the receipt of Bids, and Bidder so agrees in submitting his Bid.
2. Prior to the time and date designated for receipt of Bids, Bids submitted early may be modified or withdrawn only by notice in writing to the Engineer prior to the time designated for receipt of Bids.
3. Withdrawn Bids may be resubmitted up to the time designated for the receipt of Bids provided that they are then fully in conformance with these Instructions to Bidders.
4. Bid security shall be in amount sufficient for the Bid as modified or resubmitted.

V. **CONSIDERATION OF BIDS .....**

A. OPENING OF BIDS:

1. Properly identified Bids received on time will be opened publicly read aloud, and an abstract of the amounts of the Base Bids and major Alternates, if any, will be made available to the Bidders.

B. REJECTION OF BIDS:

1. The Owner shall have the right to reject any or all Bids, to reject a Bid not accompanied by required bid security or data required by the Bidding Documents or to reject a Bid in any way incomplete or irregular.

C. BUDGET LIMITATIONS:

1. Limited funds are available for construction of this project. The Upper Republican Natural Resources District under the direction of Engineer, reserves the right to negotiate with the low bidder to delete portions of construction as necessary so that the project will not exceed available funds.
2. Cancellation of any portion of work through change order to confirm such negotiations, arrangements or deletions to original contract agreement will be issued by the Engineer upon contract award.

D. ACCEPTANCE OF BID (AWARD):

1. The Owner shall have the right to waive any informality or irregularity in any Bid received.
2. **The Owner shall have the right to accept Base Bid(s) and/or Alternates in any order and/or combination and to determine the low Bidder on the basis of the sum of the Base Bid(s) and the Alternates accepted.**
3. It is the intent of the Owner to award a contract, to one Contractor, to the lowest responsible Bidder provided the Bid has been submitted in accordance with the requirements of the Bidding Documents, is judged to be reasonable, and does not exceed the funds available.
  - a. The lowest responsible Bidder will be evaluated on the following criteria:
    - (1) The Bid price.
    - (2) The ability, capacity and skill of the Bidder to perform the work required.
    - (3) The character, integrity, reputation, judgment, experience and efficiency of the Bidder.
    - (4) The quality of workmanship and level of performance on previous contracts.



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- (5) Past and present level of compliance by the Bidder with laws relating to the contract.

**VI. POST BID INFORMATION.....**

**A. SUBMISSION OF QUALIFICATION STATEMENT:**

1. Bidders to whom award of a contract is under consideration shall submit to the Engineer upon his request a properly executed Contractor's Qualification Statement, AIA Document A305.

**B. SUBMISSIONS:**

1. Unless waived by the Engineer, the Bidder shall, within seven days of notification of selection for the award of a contract for the Work, submit the following information:
  - a. An itemized cost breakdown to be used for accounting and progress payments.
  - b. A designation of the Work to be performed by the Bidder with his own forces.
  - c. The proprietary names and the suppliers of principal items or systems of material and equipment proposed for the Work.
  - d. A list of names of the Subcontractors or other persons or organizations proposed for the principal portions of the Work.
  - e. Special items required for evaluation prior to contract award.
2. The Bidder will be required to establish to the satisfaction of the Engineer and the Owner the reliability and responsibility of the proposed Subcontractors to furnish and perform the Work described.

**VII. PERFORMANCE BOND AND LABOR AND MATERIAL PAYMENT BOND.....**

**A. TIME OF DELIVERY AND FORM OF BONDS:**

1. The Bidder shall furnish the required 100% Performance and 100% Labor and Material Payment Bonds to the Owner not later than the date of execution of the Contract.
2. The bonds shall be written in the form to AIA Document A312, Latest Edition, as published by the American Institute of Architects shall be fully executed and attached to each copy of the "Form of Contract".
3. Bonds shall be issued by a Nebraska Resident Agent authorized to do Business in Nebraska.
4. The Bidder shall require the Attorney-In-Fact who executes the required bonds on behalf of the surety to affix thereto a certified and current copy of his Power of Attorney.

**VIII. SALES AND USE TAX.....**

- A. Owner shall furnish Contractor with a Purchasing Agent Appointment and Exempt Sale Certificate Form for items incorporated into the Work considered by State of Nebraska to be exempt from Sales Tax. Contractor is responsible to monitor valid dates and notify Owner if an extension is necessary.

**B. This Appointment and Exempt Sale Certificate does not apply to:**

1. Purchase of materials to be used but not incorporated into the Contract work, including but not limited to form lumber, scaffolding, etc.
2. Purchase or rental of machinery, equipment or tools owned or leased by Contractor and used in performing the work.

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**IX. FORM OF CONTRACT BETWEEN OWNER AND CONTRACTOR.....**

**A. FORM TO BE USED:**

1. The Agreement for the Work will be written on the Standard Form of Contract between Owner and Contractor as bound in the Specifications. Contractor must have Form W-9 on file with URNRD before any payment can be made.

**X. NEW EMPLOYEE WORK ELIGIBILITY STATUS**

A. The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

B. If the Contractor is an individual or sole proprietorship, the following applies:

1. The Contractor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at [www.das.state.ne.us](http://www.das.state.ne.us).
2. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the US Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
3. The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. §4-108.

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## FORM OF PROPOSAL

PROJECT: Rock Creek Drop Structure #1

LOCATION: Dundy County

NEAR: Parks, NE

Upper Republican Natural Resources District  
PO Box 1140  
511 East 5<sup>th</sup> Street  
Imperial, Nebraska 69033

DATE: \_\_\_\_\_

TIME: \_\_\_\_\_

The undersigned, having examined the contract documents and investigated the local conditions affecting the project work, hereby proposes to construct the project in accordance with the contract documents for the following prices:

**BASE BID:**

Rock Creek Drop Structure #1					
ITEM NO.	BID ITEM	UNIT	QUANTITY	UNIT PRICE	EXTENDED PRICE
1	Mobilization / Demobilization	LS	1	\$	\$
2	Construction Staking	LS	1	\$	\$
3	Excavation	CY	1,062	\$	\$
4	Excavation Disposal	CY	1,062	\$	\$
5	Gravel, in Place	TON	25	\$	\$
6	#2 Crushed Concrete Base, in Place	CY	28	\$	\$
7	Broken Concrete Riprap over Filter Fabric, in Place	CY	465	\$	\$
8	Remove and Salvage Existing Broken Concrete Riprap, in Place	CY	230	\$	\$
9	Steel Sheet Pile, in Place	SF	1,710	\$	\$
10	Remove and Salvage Pipe Culvert	LS	1	\$	\$
11	Seeding	AC	1.0	\$	\$
12	Erosion Control Blanket	SY	356	\$	\$
<b>SUBTOTAL of ITEMS 1 thru 12</b> <i>Write out total amount</i> \$ _____ <i>Dollars</i>				\$	\$

*NOTE: Include all equipment, materials, labor and installation in Prices.*

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## COMPLETION DATE

The Contractor, under this agreement, shall commence this work within 10 calendar days of the date of the notice to proceed. **The Contractor shall have the work under the Base Bid, substantially complete within 90 calendar days of the date of the NOTICE TO PROCEED and shall have the work completed and site cleared and ready for the further use of the Owner by December 31, 2018.**

## ADDENDUM RECEIPTS:

The receipt of the following Addenda to the drawings and specifications is hereby acknowledged:

Addendum No. \_\_\_\_\_ dated \_\_\_\_\_

Addendum No. \_\_\_\_\_ dated \_\_\_\_\_

In submitting this proposal, the undersigned agrees:

- (1) That the Upper Republican NRD reserves the right to accept or to reject any and all bids and to waive any or all informalities or irregularities.
- (2) This bid will be held open for acceptance for a period of **forty-five (45) days**.
- (3) To enter into and execute the contract within ten (10) days, if awarded on the basis of this proposal.
- (4) To furnish a properly executed Performance Bond and Labor and Material Payment Bond in the full amount of the contract.
- (5) That the individual or company submitting this bid has a *Drug Free Workplace Policy* in place and a copy of that policy can be produced on request.

The undersigned states that he complies with, and will continue to comply with, Fair Labor Standards in the pursuit of his business and in the execution of the contract on which he is bidding, as required by State of Nebraska Statutes, Chapter 73, Section 73-104.

The Bid Security attached in the minimum sum of 5% of the Total Base Bid Proposal is to become the property of the Owner in the event the agreement and bonds are not executed within the time above set forth, as liquidated damages for the delay and additional expense to the Owner caused thereby.

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ADDRESS

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COMPANY NAME

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CITY

[ ] AN INDIVIDUAL  
[ ] A CO-PARTNERSHIP  
[ ] A CORPORATION  
\_\_\_\_\_ STATE OF INCORPORATION

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TELEPHONE

---

SIGNATURE

---

FEDERAL IDENTIFICATION NUMBER

---

TYPE or PRINT NAME

---

TITLE

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**FORM of CONTRACT**

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THIS AGREEMENT entered into this \_\_\_\_ day of \_\_\_\_\_ in the year of TWO THOUSAND THIRTEEN by and between; \_\_\_\_\_;  
**Phone (\_\_\_\_) - \_\_\_\_\_** hereinafter referred to as the "CONTRACTOR", and the UPPER REPUBLICAN NATURAL RESOURCES DISTRICT, at Imperial, Nebraska, hereinafter referred to as the "OWNER".

WITNESSETH: That the parties under the Contract agree that the Contractor shall carry out the following generally described work in consideration of the sum of:

(\$ \_\_\_\_\_)

to be paid him by the Owner on completion of all items of work required in accordance with the work as described hereunder or on a prorated monthly basis if applicable.

TO WIT: The Contractor shall at his cost and under his sole responsibility furnish all labor, tools, materials, transportation, equipment and perform all work required in accordance with the contract documents for completion of the following described project:

SAMPLE

The Contract Documents are incorporated herein by reference and made a part hereof. A copy of these documents is in the possession of each of the parties hereto, and they have been reviewed by each party. Documents included are as listed:

The Contractor, under this agreement, shall commence this work within 10 calendar days of the date of NOTICE TO PROCEED and shall have the work completed and the site cleared and ready for the further use of the Owner by \_\_\_\_\_.

As a result of this Contract, the Contractor, or his Staff, Company, Firm or any person conducting work in behalf of the Contractor, shall not be in any way considered an Upper Republican NRD Employee. It is expressly understood by the Contractor that it is in all instances an independent contractor who shall provide, manage, and assume all obligations whatsoever which may occur or be required by the Workmen's Compensation laws of any State, Old Age and Survivors Insurance, Internal Revenue Acts, Income Tax of any State, and laws and regulations relating thereto, and the Contractor shall save and hold harmless the Upper Republican NRD against any obligation relating to any such liability.

The Contractor shall comply with all of the State and Federal laws governing and shall hold the Owner blameless for any and all liabilities arising out of his operations under the contract. It is expressly understood that the Contractor assumes full liability for the acts of its employees, agents, and officers assigned to perform the Contractor's duties hereunder, and shall reimburse the URNRD for any damage to URNRD property, caused by the Contractor, its employees, agents or officers.

The Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for it, to solicit or secure this Contract and that it has

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not paid or agreed to pay any person, company, corporation, individual or firm, other than a bona fide employee working solely for it, any fee, commission, percentage, gift, or any other consideration contingent upon or resulting from the award or the making of this Contract.

Contractor warrants that its officers, stockholders, associates and employees presently have no known financial interest, direct or indirect, which would conflict in any manner or degree with the performance of the services required by this Contract. The Contractor shall comply with the provisions of laws of the State of Nebraska which require disclosure for conflict of interest determinations of amounts received under this Contract. The existence of any conflict of interest shall render this Contract voidable by the NRD.

Under Federal and/or state law, this contract and Contractor must not discriminate in employment on this specific contract performance on the basis of race, color, religion, age, gender, marital status, national origin, disability or political affiliation. The Contract agrees to abide by the Nebraska Fair Employment Practices Act as provided by Neb. Rev. Stat. Sections 48-1101 through 48-1126, and the American with Disabilities Act of 1990 (P.L. 101-366) as implemented by 28 CFR 35, which is made a part of and included in this Contract by reference.

The Contractor Certifies by executing this agreement that he has a *Drug Free Workplace Policy* in place stating that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance in the workplace is prohibited and a copy of that policy can be produced on request, and he complies and will continue to comply with Nebraska Statute, Chapter 73, Section 73-104, Fair Labor Standards in the pursuit of his business and in the execution of this contract.

#### **NEW EMPLOYEE WORK ELIGIBILITY STATUS**

The Contractor is required and hereby agrees to use a federal immigration verification system to determine the work eligibility status of new employees physically performing services within the State of Nebraska. A federal immigration verification system means the electronic verification of the work authorization program authorized by the Illegal Immigration Reform and Immigrant Responsibility Act of 1996, 8 U.S.C. 1324a, known as the E-Verify Program, or an equivalent federal program designated by the United States Department of Homeland Security or other federal agency authorized to verify the work eligibility status of a newly hired employee.

If the Contractor is an individual or sole proprietorship, the following applies:

1. The Contractor must complete the United States Citizenship Attestation Form, available on the Department of Administrative Services website at [www.das.state.ne.us](http://www.das.state.ne.us).
2. If the Contractor indicates on such attestation form that he or she is a qualified alien, the Contractor agrees to provide the US Citizenship and Immigration Services documentation required to verify the Contractor's lawful presence in the United States using the Systematic Alien Verification for Entitlements (SAVE) Program.
3. The Contractor understands and agrees that lawful presence in the United States is required and the Contractor may be disqualified or the contract terminated if such lawful presence cannot be verified as required by Neb. Rev. Stat. §4-108.

This contract shall be considered executed at Imperial, Chase County, Nebraska, and shall be governed by the laws of the State of Nebraska.

In Witness Whereof the parties have affixed their signature, thus entering into this contract, the day and year first written.

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**Approved:**

Upper Republican Natural Resources District  
511 East 5<sup>th</sup> Street  
Imperial, Nebraska 69033

**Contractor:**

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FIRM NAME

BY:

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**Jasper Fanning**  
General Manager

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ADDRESS

DATE:

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CITY / STATE / ZIP

AN INDIVIDUAL ( )  
A CO-PARTNERSHIP ( )  
A CORPORATION ( )

---

SIGNATURE \*

---

*(Please Print Name)*

---

TITLE

---

DATE

\* The Contracting Agent is duly authorized to sign this document for the corporation.



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**SECTION 00600**  
**PERFORMANCE and LABOR and MATERIAL PAYMENT BOND**

**REFERENCE:**

A Performance Bond and a Labor and Material Bond equal to A.I.A. Document #311, Latest Edition as published by the American Institute of Architects shall be fully executed and attached to each copy of the "Form of Contract".

Bonds shall be issued by a Nebraska Resident Agent authorized to do Business in Nebraska and shall be accompanied by a current copy of his Power of Attorney. Performance Bond and Labor and Material Bond shall be issued in the Full Total Amount (100%) of the Contract.

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## **SECTION 00700 GENERAL CONDITIONS**

### **1. DEFINITIONS**

The Upper Republican Natural Resources District sometimes referred to as the "Owner", or "District". The "Architect", "Engineer", "Consultant": and the "Contractor", are those named as such in the Contract Documents.

The "Engineer" is the Engineer of the District. He/She may act personally or by and through such assistants as may be duly authorized to act for him; but whenever in these conditions the word "Engineer" is used, it shall be understood as referring to the Engineer appointed by the District and not to any assistant.

The "Consultant" is the consulting engineer that the District may have employed to perform professional services required for the planning and construction of this project.

The term "the work" or "Work of the Contractor" includes labor or materials or both, equipment, transportation, and other facilities necessary to complete the Contract.

The term "Subcontractor" as employed herein, includes any person, firm or corporation having a direct contract with the Contractor to supply labor or materials or both for work of the contractor, but does not include those who merely furnish material or materials not worked to a special design according to the plans and specifications of this work.

The term "Surety" includes any person, firm or corporation that has executed, as surety, the Contractor's performance bond securing the performance of the Contract.

The words "Plans", "Maps/Figures", and "Drawings" are used synonymously in this Contract.

Wherever the word "Approved", "Approval", "As selected", appear in the specifications, it shall mean the approval of selection by the Consultant.

### **2. DEFINITION OF NOTICE**

Wherein any of the contract documents there is any provision in respect to the giving of notice, such notice shall be deemed to have been given; as to the District, when written notice shall be delivered to the Engineer of the District, or shall have been placed in the United States Mails addressed to the Engineer of the District, as to the Contractor, when written notice shall be delivered to the chief representative of the Contractor at the site of the project or by mailing such written notice in the United States Mail addressed to the Contractor at the place stated as the address of his permanent place of business in the Proposal Form; as to the Surety on the performance bond, when a written notice is placed in the United States Mails, addressed to the Surety at the home office of such Surety or to its agent or agents who executed such performance bond in behalf of such surety.

### **3. AUTHORITY OF THE CONSULTANT OR AGENT**

The District may for professional services required for certain projects employ consulting architects or engineers -- in these documents referred to as the Consultant. The District on certain other projects may direct that the professional services be performed by the Engineer of the District. The Engineer/Consultant who has prepared the plans and specifications shall make written interpretations of them. He/She shall approve all samples of material which are specified to be submitted for approval, approve the use of any equipment offered in lieu of that mentioned in the specifications and shall check and approve all shop drawings and details. He/she shall

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make periodic inspections of the project work and shall decide the quantity of the work and material incorporated therein. He/she shall decide all questions which may arise as to the fulfillment of the Contract by the Contractor.

**4. CONTRACTOR'S SUPERINTENDENT**

The Contractor shall keep on his/her work, during its progress, a competent superintendent and any necessary assistants, all satisfactory to the Engineer. The Superintendent shall not be changed except with the consent of the Engineer, unless the Superintendent proves to be unsatisfactory to the contractor and ceases to be in his employ. The Superintendent shall represent the Contractor in his absence and all directions given by him shall be as binding as if given to the Contractor. Important directions shall be confirmed in writing to the Contractor. Other directions shall be so confirmed on written request in each case.

**5. PLANS AND SPECIFICATIONS - CORRELATION**

The work shall be executed in strict conformity with the drawings, maps/figures and specifications.

Plans, drawings and specifications are cooperative and supplementary. Portions of the work which can best be illustrated by the plans and drawings may not be included in the specifications and portions of the work best described by the specifications may not be depicted on the plans or drawings. All items necessary to construct or erect a complete improvement, project, building or structure shall be furnished whether called for in the specifications or shown on the plans and drawings. Special conditions shall take priority over General Conditions: Detailed Specifications shall take priority over General Specifications and large scale drawings shall take priority over small scale drawings. In case of disagreement between the plans, drawings and specifications, or within any document itself, the better quality or greater quantity of work shall be estimated and the matter drawn to the Engineer's/Consultant's attention for decision.

**6. MATERIALS - TESTS AND STANDARDS**

Samples of materials selected by the Engineer/Consultant to be tested must be furnished by the Contractor. Where not otherwise specified, all materials shall meet the American Standards for Testing of Materials (ASTM) Standard or tentative specifications for that material. The Contractor, when requested, shall furnish a sample of all material which shall be kept on the job as basis for comparison of material incorporated in the job.

**7. OBSOLETE EQUIPMENT**

It is important that the District be protected as far as possible against the discontinuance of the make of equipment to be purchased, and that repair parts, services of expert factory representatives be available if desired. Under these conditions, the Contractor shall not furnish equipment made by firms in the hands of receivers or equipment not currently in production by the manufacturers.

**8. PATENTS**

The Contractor and his Surety shall hold and save harmless the District, its officers, agents, servants, and employees from liability of any nature or kind including costs and expenses, for or on account of any patented invention, articles or appliances manufactured or used in the performance of this Contract unless otherwise specifically stipulated in this contract.

**9. OTHER CONTRACTS**

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The District may award contracts for additional work and the Contractor shall fully cooperate with such other contractors and carefully fit his own work to that provided under other contracts as may be directed by the Engineer/Consultant. If the Contractor commits or permits any act which interferes with the performance of work by any other contractor, this shall be grounds for termination of contract.

**10. ASSIGNMENT OF CONTRACT**

The Contractor shall not assign this Contract or any part hereof without the written consent of the District. No assignment of this contract shall be valid unless it shall contain a provision that the funds to be paid to the Assignee under the Assignment are subject to a prior lien for services rendered or materials supplied for the performance of work called for in said contract in favor of all persons, firms, or corporations rendering such services or supplying such materials.

**11. SUBCONTRACTING**

The Contractor shall be fully responsible to the District for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them. The Contractor shall be responsible for assigning, coordinating, and achieving completion of all subcontracted work to satisfy all requirements of the contract documents in a timely and proper manner. All subcontracted work shall be subject to all requirements of the Contract Documents except those legal contractual duties for which only the Contractor has exclusive responsibility as specifically assigned by the Contract Documents. Nothing contained in the Contract shall create any Contractual relation between any subcontractor and the District. The attention of the Contractor and subcontractors is called to the Contract Documents which are a part of this contract.

The Contractor must notify the District of each subcontract he intends to award, giving:

Name of subcontractor  
Branch of work concerned  
Total price of subcontract

No part of this Contract shall be sublet without prior approval of the District.

**12. CONTRACTOR'S INSURANCE**

The Contractor shall not commence work under this Contract until he/she has obtained all the insurance required hereunder and such insurance has been approved by the Owner nor shall the Contractor allow any subcontractor to commence work on his subcontract until all similar insurance required of the subcontractor has been obtained and approved by the Owner (or Contractor). Approval of the insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder.

If by the terms of any insurance a mandatory deductible is required, or if the Contractor elects to increase the mandatory deductible amount, the Contractor shall be responsible for payment of the amount of the deductible in the event of a paid claim.

**(a) WORKER'S COMPENSATION INSURANCE**

The Contractor shall take out and maintain during the life of this Contract the statutory Worker's Compensation and Employer's Liability Insurance for all of his employees to be engaged in work on the project under this Contract and, in case any such work is sublet, the Contractor shall require the subcontractor similarly to provide Worker's Compensation and Employer's Liability Insurance for all of the

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latter's employees to be engaged in such work. This policy shall be written to meet the statutory requirements for the state in which the work is to be performed, including Occupational Disease. Where applicable, this policy shall provide USL&H coverage. This policy shall include a waiver of subrogation in favor of the Owner. The amounts of such insurance shall not be less than the limits stated hereinafter.

(b) **COMMERCIAL GENERAL LIABILITY INSURANCE AND COMMERCIAL AUTOMOBILE LIABILITY INSURANCE**

The Contractor shall take out and maintain during the life of this Contract such Commercial General Liability Insurance and Commercial Automobile Liability Insurance as shall protect him and any subcontractor performing work covered by this Contract from claims for damages for bodily injury, including death, as well as from claims for property damage, which may arise from operations under this Contract, whether such operation be by himself or by any subcontractor or by anyone directly or indirectly employed by either of them, and the amounts of such insurance shall no be less than limits stated hereinafter.

The Commercial General Liability Insurance shall be written on an occurrence basis, and provide Premises/Operations, Products/Completed Operations, Independent Contractors, Personal Injury and Contractual Liability coverages. The policy shall include the Owner, Engineer, and others as required by the Contract Documents, as an Additional Insured. This policy shall be primary, and any insurance or self-insurance carried by the Owner or Engineer shall be considered excess and non-contributory. The Commercial Automobile Liability Insurance shall be written to cover all Owned, Non-owned and Hired vehicles.

The Contractor agrees to indemnify, defend, and hold harmless the Owner and Engineer for bodily injury, personal injury and property damage caused out of or in connection with their work to the extent the loss or damage is caused by them or their Subcontractor. Further, Contractor agrees to waive its rights of subrogation from its insurance carrier in relation to any loss or damage.

(c) **INSURANCE-BUILDER'S RISK**

Unless otherwise provided, the Contractor shall purchase and maintain Builder's Risk Insurance for the entire value of the project and work site, from a company or companies lawfully authorized and licensed to do business in the jurisdiction in which the Project is located. This insurance shall be written to cover all risks of direct physical loss, and shall include interests of the Owner, the Contractor, and Sub-contractors in the Work. A loss insured under this insurance shall be adjusted with the Owner and made payable to the Owner as fiduciary for the insured, as their interests may appear.

(d) **INSURANCE COVERAGE AMOUNTS REQUIRED**

1. **Workers' Compensation and Employer's Liability**

Coverage A	Statutory	
Coverage B		
Bodily Injury by Accident	\$500,000	each accident
Bodily Injury by Disease	\$500,000	policy limit
Bodily Injury by Disease	\$500,000	each employee

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2.	Commercial General Liability		
	General Aggregate	\$2,000,000	
	Products/Completed Operations Agg.	\$2,000,000	
	Damage to Rented Premises	\$300,000	ea. occurrence
	Personal/Advertising Injury	\$1,000,000	per person
	Bodily Injury/Property Damage	\$1,000,000	ea. occurrence
	Fire Damage	\$50,000	any one fire
	Medical Payments	\$10,000	any one person
3.	Commercial Automobile Liability		
	Bodily Injury/Property Damage	\$1,000,000	comb. single limit
4.	Umbrella/Excess Liability		
	Over primary insurance	\$1,000,000	ea. occurrence
		\$1,000,000	aggregate
5.	Builder's Risk	100% of work completed values	

The Contractor shall furnish a certificate of insurance with liability limits shown, and Upper Republican Natural Resources District to be named as an additional insured and a Waiver of Subrogation in favor of the Upper Republican Natural Resources District. The Contractor agrees to indemnify, defend and hold harmless the Upper Republican Natural Resources District for bodily injury, personal injury and property damage caused out of or in connection with their work to the extent the loss or damage is caused by them or their Subcontractor. Further, Contractor agrees to waive its rights of subrogation from its insurance carrier in relation to any loss or damage.

The Contractor shall assume all perils of fire, extended coverage, vandalism, mischief and theft and shall purchase and maintain property insurance upon the entire Work site to the full insurable value thereof. Such insurance shall be in a company or companies against which the Owner has no reasonable objection. This insurance shall include the interests of the Owner, the Contractor, Subcontractors and Sub-subcontractors in the Work and shall insure against the perils of fire and extended coverage and shall include "all risk" insurance for physical loss or damage including, without duplication of coverage, theft, vandalism and malicious mischief. If not covered under all risk insurance or otherwise provided in the Contract Documents, the Contractor shall maintain similar property insurance on portions of the Work stored off the site or in transit when such portions of the Work are to be included in an Application for Payment.

### 13. **EVIDENCE OF COVERAGE**

The Contractor shall furnish the Engineer (who will forward to Owner) with documentary evidence of insurance coverage which should be in the form of certificates submitted in duplicate. These certificates shall include the name of the company, serial number of the policy, effective dates, dates of expiration, and amounts and types of coverage afforded. If the Owner is damaged by the failure of the contractor to maintain such insurance, then the Contractor shall be responsible for all reasonable costs properly attributable thereto.

The following clauses or endorsements must be added to the certificates for the respective types of insurance. If the clause or endorsement is placed on the reverse side of such certificate, it should be followed by the signature of the official of the company who signs the certificate. All certificates must contain the following two clauses of endorsement;

"The insurance contract referred to herein provides complete coverage within the limits stated for

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the type of insurance mentioned covering all the insured's operations in connection with the insured's contract on the \_\_\_\_\_."

"Said insurance contract also provides that it cannot be canceled by the insurer in less than ten days after the insured has been given written notice of such cancellation."

**14. PROTECTION OF PERSONS AND PROPERTY**

The Contractor shall take all reasonable and proper precautions to protect persons and property from injury or damage resulting from his or her operation under this Contract. The requirements of the Nebraska Safety Codes adopted by the Nebraska State Department of Labor shall be applicable.

The Contractor shall protect all existing buildings, roadways, landscaping, and utilities against damage or interruption of services. It shall be the responsibility of the Contractor to correct health or safety hazards and repair property damage that results from their work. Such corrections shall be performed to restore conditions to at least the quality that existed at the time of commencement of this Work.

**15. PROSECUTION OF THE WORK AND COMPLETION DATE**

The work embraced in this contract shall be started on the earliest possible date after the signing of contract by both parties, and shall be carried on regularly and uninterruptedly thereafter, with such forces and by such means as will insure final completion of the entire contract on or before the completion date set in the documents. The time of beginning, rate of progress and time of completion are essential conditions of the contract.

The Contractor expressly agrees that in undertaking to complete the work within the Contract period fixed in the Contract Documents, he/she has taken into consideration and made allowances for all delays and hindrances incidental to such work, whether growing out of delays in securing materials or workmen, or otherwise.

Should the Contractor be delayed in the prosecution and completion of the work by any cause beyond his control, he/she may have no claim or right of action for damages from the Owner for any such cause or delay unless the cause or delay is the result of active interference by the Owner. The Contractor may in such case be granted an extension of time specified for completion of the work as the Owner may award in writing on account of such delay, provided, however, that claim for extension of time is made by the Contractor to the Owner, through the Engineer/Consultant, in writing, within two weeks from the time when such alleged cause for delay shall occur. The Owner reserves the right to withhold granting of any time extensions until the stipulated contract period is about to expire.

The Owner, at his own discretion, may waive the above requirements and grant extensions of time for any reason he deems valid.

An extension of the contract period may be granted by the Owner for any of the following reasons:

- a) Additional work resulting from modification of the plan for the project.
- b) Delays caused by the Owner.
- c) Other reasons beyond the control of the Contractor in which the Owner's judgment would justify such extension.

No extension of the Contract period will be allowed for variation between contract quantities and

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actual quantities which cannot be predetermined and which amount to less than twenty-five percent (25%) of the contract quantities.

**16. USE OF JOB SITE**

The Contractor shall confine his/her equipment, apparatus, the storage of materials, and operations of his workmen to limits indicated by law, ordinance, permits, or directions of the District and shall not unnecessarily encumber the premises with his materials.

The Contractor shall not load or permit any part of a structure to be loaded with a weight that will endanger its safety. The Contractor shall enforce the Engineer's/Consultant's instructions regarding signs, advertisement, fires, and smoke.

**17. LABOR**

All labor shall be performed in the best and most workmanlike manner by mechanics skilled in their respective trades. The standards of the work required throughout shall be of such quality as will produce only first class results

Mechanics whose work is unsatisfactory to the Engineer/Consultant, or are considered by either to be unskilled or otherwise objectionable, shall be instantly dismissed from the work upon notice from the Engineer/Consultant.

Contractor and subcontractor employed upon the work shall and will be required to conform to the Labor Laws of the State of Nebraska, and the various acts amendatory and supplementary thereto; and to all other laws, ordinances, codes and legal requirements applicable thereto.

**18. INSPECTION**

The District through its authorized representatives and agents shall be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials, and any data and records.

The Engineer shall at all times have access to the work and the premises used by the Contractor and to all places of manufacture where materials are being made for use under this contract, and shall have full facilities for determining that such materials are being made strictly in accordance with the plans and specifications.

**19. DEFECTIVE WORK OR MATERIAL**

Work or material not in accordance with the Plans and Specifications, or in any way defective shall be removed at once on order of the Engineer/Consultant. The Contractor shall replace or rebuild at his own expense with satisfactory material and in a workmanlike manner any work so removed and shall reimburse the District for any expense that it is put to by reason of extra work, and shall reimburse any other contractor who may incur expense caused by removal of the defective work.

**20. TERMINATION FOR BREACH**

In event that any of the provisions of this Contract are violated by the Contractor or any of his subcontractors, the District may serve written notice upon the Contractor and the Surety of its intention to terminate the Contract, and unless within ten (10) days after the serving of such notice upon the Contractor such violation shall cease and satisfactory arrangements for correction be made, the Contract shall, upon the expiration of said ten (10) days cease and terminate. In the event of any such termination, the District shall immediately serve notice thereof upon the Surety and The Contractor. The Owner may take over the work and prosecute the



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same to completion of Contract for the account and at the expense of the Contractor, and the Contractor and his Surety shall be liable to the District for any excess cost occasioned the District thereby and in such event the District may take possession of and utilize in completing the work, such materials, appliances, and plant as may be on the site of the work and necessary therefore. Neither the Owner nor any member or employee thereof shall be in any way liable or accountable to the Contractor or his/her surety for the method by which the completion of the said work, or any portion thereof, may be accomplished or for the price paid therefore.

**21. CONSTRUCTION REPORTS - PAYMENT ESTIMATES**

The Contractor shall submit to the Engineer schedules of costs and quantities of materials and of other items, which schedule shall be in such form and shall be supported as to correctness by such of the estimates upon which they are based as the Engineer may require.

The Contractor shall submit to the Engineer the following records on forms to be supplied by the Contractor (Notice – AIA Document forms shall be the latest edition):

- (a) AIA Document G702, Application and Certification for Payment
- (b) AIA Document G703, Continuation Sheet (Schedule of Values)

**22. PAYMENT**

So long as the work herein contracted for is carried on in accordance with the provisions of the contract, the Contractor will make an appropriate estimate of the value of the work performed during the month and the materials suitably stored on the work site, and shall prepare an Application And Certification For Payment and the Continuation Sheet and submit them to the Engineer. After each such estimate shall have been approved, the District will pay to the Contractor, ninety percent (90%) of the amount thereof. The District may at all times reserve and retain out of said payments, all such sums as it may be authorized to reserve or retain. At anytime, prior to final payment, the total payment to the Contractor shall not exceed ninety percent (90%) of the estimated value of the work performed and materials stored at the site. Until substantial completion, the Owner will pay 90% of the value of the work completed and materially stored on the site at monthly intervals on account of progress payments unless project documents state otherwise. All requests for payment shall include the Contractor's Federal Identification Number or Social Security Number, as applicable for processing payments. Final payment shall be authorized within **forty-five (45)** days from date of final acceptance and approval of the project.

**23. EXTRA, ADDITIONAL OR OMITTED WORK - PAYMENT FOR**

The District shall have the right at any time and without notice to the Sureties, to alter and modify the Plans and Specifications in any particular, thus making specific changes in connections with the construction, details, or execution of the work. All changes in plans and specifications will be made by the District in writing. The Contractor shall make such alterations as may thus be ordered by the District and in case these changes increase or decrease the amount of work to be done under this contract, equitable amounts in price will be added to or deducted from the contract price and contract time. The amount of such increase or decrease shall be agreed upon between the Owner and the Contractor BEFORE changes are made.

When directed in writing by the Engineer/Consultant and with approval of the District, the Contractor shall furnish all material and labor not otherwise provided for by the terms of this contract, but which may be connected with or necessary to the proper completion of the work. Such material and work shall be furnished and done as part of this contract and subject to its provisions. The payment for any such work shall be determined by agreement between the Owner and the Contractor before the extra work is commenced, either on the basis of a unit price, or a lump sum price, or on a cost-plus-limited basis and not to exceed the specified limit.

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No claims for extra work will be allowed unless accompanied by a written Change Order approved by the District authorizing such extra work and defining the agreed basis for payment. Change Orders shall be prepared by the Engineer and approved by District.

The Contractor shall, immediately after completing extra work, file with the Engineer, in writing, all claims for extra work performed. If the Contractor fails to make such claims within 30 days, Contractor's right to extra pay for such work shall be deemed to have been waived and forfeited and he or she shall not be entitled to any payment on account of such extra work.

**24. CONTRACTOR'S PAYMENT FOR LABOR AND MATERIALS**

The Contractor shall pay for all labor and materials used or furnished in the performance of this contract. Before final payment, the Contractor must certify that all bills for labor and materials have been paid. In event he is requested and fails to furnish satisfactory evidence, the District may withhold any payments until it is satisfied that all such claims have been paid.

**25. OWNER'S RIGHT TO WITHHOLD CERTAIN AMOUNTS AND MAKE APPLICATION THEREOF**

In addition to the payment to be retained by the District under preceding provisions of these General Conditions, the District may withhold a sufficient amount of any payment other-wise due to the Contractor to cover:

- (a) Payments that may be earned or due for just claims for labor or materials furnished in and about the performance of the work on the project under this contract
- (b) For defective work not remedied, and for damage to existing conditions or new work not remedied; and
- (c) For failure of the Contractor to make proper payments to his subcontractor.

The District shall disburse and shall have the right to act as agent for the Contractor in disbursing such funds as have been withheld pursuant to this paragraph to the party or parties who are entitled to payment there from. The District will render to the Contractor a proper accounting of all such funds disbursed in behalf of the Contractor.

**26. CLEAN UP**

On or before the completion of the work, the contractor shall clean all parts of the work under this contract. The Contractor shall remove all rubbish and all materials, tools, and equipment from the construction site, leaving the site of the work in as good condition as it was at the beginning of the work.

The Contractor shall each day clean up and remove from the project the rubbish resulting from his work, and shall at completion of his own work remove all construction materials and leave the project clean.

**27. FINAL INSPECTION**

When the work has been substantially completed, the Contractor shall notify the Engineer in writing that the work will be ready for final inspection and test on a definite date which shall be stated in such notice. The notice shall be given at least ten (10) days in advance of said date.

After the final inspection has been made; the Engineer shall present to the Contractor a report ("punch list") listing all deficiencies found in the inspection of the Contractor's work which are to

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be corrected. The Contractor shall immediately make the required corrections and the work necessary to remove the deficiencies reported. When the deficiencies have been removed, the Contractor shall in writing request a re-inspection of the work by the Engineer.

**28. FINAL PAYMENT**

As soon as practical after the completion and acceptance of the work and submittal of all guarantees, warranties, operating manuals, etc., required by the contract documents, the Contractor shall prepare a final payment statement showing the final payment amount due. After approval by the Contractor, and the District, the final payment voucher shall be processed for payment.

**29. GUARANTEE OF WORK**

Except as otherwise specified, all work shall be guaranteed by the Contractor against defects resulting from the use of inferior materials, equipment or workmanship for one year from the date of final completion of the Contract.

If, within any guarantee period, repairs or changes are required in connection with the guaranteed work, which, in the opinion of the Owner are rendered necessary as the result of the use of materials, equipment, or workmanship which are inferior, defective, or not in accordance with the Contract, the Contractor shall, promptly upon receipt of notice from the Owner, and with out expense to the Owner:

- a) Place in satisfactory condition in every particular all of such guaranteed work, correct all defects therein, and
- b) Make good all damages to the building or project work, or equipment or contents thereof, which, in the opinion of the Owner is the result of the use of materials, equipment, or not in accordance with the terms of the contract; and
- c) Make good any work or materials, or the equipment and contents of said building or project work disturbed in fulfilling any such guarantee.

In any case where fulfilling the requirements of the contract or of any guarantee embraced in or required thereby, the Contractor disturbs any work guaranteed under another contract, he shall restore such disturbed work to a condition satisfactory to the Owner and guarantee such restored work to the same extent as it was guaranteed under such other contract.

If the Contractor, 30 days after notice, fails to comply with the terms of the guarantee, the Owner may have defects corrected and the Contractor and his Surety shall be liable for all expense incurred.

All special guarantees applicable to definite parts of the work that may be required by the Contract Documents shall be subject to the terms of this paragraph during the first year of the life of such guarantee.

**30. UNEMPLOYMENT COMPENSATION FUND**

The Contractor shall make payments to the Unemployment Compensation Fund of the State of Nebraska all contributions and interest due under the provisions of Section 48-601 to 48-669, Revised Reissue Statute of Nebraska, on wages paid to individuals employed in the performance of this contract as required by Section 48-657, Revised Reissue Statute of Nebraska.

**31. PRECONSTRUCTION CONFERENCE**

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A preconstruction conference, if necessary, shall be scheduled before starting construction. It shall be held at the project site, or other convenient location. The meeting shall review responsibilities and personnel assignments of the Owner, Contractor, and the Engineer/Consultant.

Authorized representatives of the Owner, Contractor, and the Engineer/Consultant shall attend the preconstruction conference, as will the Contractor's superintendent, major subcontractors, manufacturers, suppliers, and other parties integral to the completion of the Work. All participants shall be familiar with the project and authorized to make decisions for the entities they represent.

The preconstruction conference will include discussion of items necessary for project progress and successful completion, such as: Construction scheduling; critical work sequencing; designation of responsible personnel; procedures for processing field decisions and change orders; procedures for processing Applications for Payment; distribution of Contract Documents; submission of Shop Drawings and product data a samples; preparation of record documents; use of the premises; parking availability; office, work, and storage areas; equipment deliveries and priorities; safety and first aid procedures; security; housekeeping; working hours; and other matters deemed important by the Engineer and/or Owner.

**- END OF SECTION 00700 -**

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**SECTION 00800  
SUPPLEMENTAL CONDITIONS**

**1. SALVAGE**

- A. The Owner reserves the right to keep all salvageable materials. Any materials or rubble not retained by the Owner shall be removed from the construction site and disposed of by the Contractor.

**2. ENVIROMENTAL IMPACT**

- A. The Contractor shall be responsible for all work in or about the construction, storage and access areas, or damage to existing plantings, except that necessary to the completion of the work. Grasses and natural landscaping features not direct obstacles to the construction or completion of the project shall be protected.
- B. The Contractor shall not discharge wastes, into flowing streams, tributaries, or any body of ponded water. Disposal locations for such discharges require approval by the Engineer.
- C. Clean Air Act: Contractor compliance with the "Clean Air Act of 1970" (42 U.S.C. 1857 ET. SCQ.) is required.
- D. Federal Water Pollution Control Act: Contractor compliance with the Federal Water Pollution Control Act (33 U.S.C. 1251 ET. SCQ. as amended) - Executive Order 11288 is required.
- E. Historical/Archeological Finds: If during the course of construction evidence of deposits of historical or archeological interest is found, the Contractor shall cease operations affecting the find and shall notify the Engineer. No further disturbance of the deposits shall ensue until the Contractor has been notified by the Engineer that he may proceed. The Owner will issue a Notice to Proceed after the State official has surveyed the find and made a determination of value and effect and reported such determination to the Owner.

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**SECTION 01005  
ADMINISTRATIVE PROVISIONS**

**PART 1 - GENERAL**

**1.01 REQUIREMENTS INCLUDED**

- A. Title of Work, and type of Contract.
- B. Work Sequence.
- C. Contractor Use of Premises.
- D. Coordination.
- E. Project Meetings.

**1.02 WORK COVERED BY CONTRACT DOCUMENTS**

Work covered under this Contract includes the completion of the Rock Creek Drop Structure #1, Dundy County, Nebraska, as shown and specified in the Contract Documents, for the Upper Republican Natural Resources District.

**1.03 CONTRACT METHOD**

Work shall be completed under a unit price contract as stated on completed Form of Proposal and agreed to in the Agreement.

**1.04 CONTRACTOR USE OF PREMISES**

Contractor shall minimize use of the premises, to the extent practical, for work and for construction operations, to allow for limited public access in areas where construction is not taking place. Contractor shall be responsible for installing security fencing, signs, and other measures deemed necessary to protect the public and prevent access to construction sites.

**1.05 COORDINATION**

Work shall be coordinated to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.

**1.06 REFERENCE STANDARDS**

- A. For Products specified by association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. The date of the standard is that in effect as of the Bid date, except when a specific date is specified.

**1.07 PROJECT MEETINGS**

- A. Prior to the start of construction, the Engineer will arrange a "pre-construction" meeting to be attended by the Contractor and Project Supervisors. This meeting may be waived if in the opinion of the Engineer, such a meeting is not necessary.
- B. Periodic meetings may be arranged during construction as needed and will be attended by the Contractor, the Engineer, and Owner.

**PART 2 - PRODUCTS**

Not used.

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**PART 3 - EXECUTION**

Not used.

**--END OF SECTION 1005--**

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## **SECTION 01010 GENERAL PROVISIONS**

### **PART 1 - GENERAL**

#### **1.01 DESCRIPTION OF WORK**

- A. The Work generally includes excavation, grading, placement of gravel, crushed concrete, broken concrete riprap over filter fabric, installation of steel sheet pile, seeding and other miscellaneous items necessary to complete the Work as drawn and specified.
- B. Contractor shall furnish all plant, labor, equipment, materials, services, supplies, and incidentals required to complete the work, unless otherwise specified.

#### **1.02 CONSTRUCTION LIMITS AND STORAGE**

- A. Contractor shall limit construction activities to the easement limits indicated on the Drawings, to the general vicinity of the Work, and to approved storage areas on the site unless otherwise approved by the Engineer. Damage, disturbance, and displacement of adjacent property shall be repaired or replaced by the Contractor at no additional cost to the Owner.
- B. Contractor shall be responsible for protecting plantings, structures, equipment, culverts and other properties not addressed as part of the work under this contract. Contractor shall be responsible for repairing or replacing such items that are damaged during construction.
- C. The areas outside the construction area will remain open/accessible during construction. Contractor shall provide barricades, safety or warning devices, signs and warning lights required for the protection of employees, the public, and property.
- D. Staging areas shall be as identified on the drawings or as pre-approved by the Engineer within the identified construction limits. Contractor shall assume full responsibility for the protection and safekeeping of products under this contract that are stored onsite during construction activities.
- E. Contractor shall move, without additional compensation, any material or equipment that interferes with operations of the landowner or any separate contractor or utility company.
- F. Contractor shall use the construction entrance identified on drawings for ingress and egress unless otherwise approved by the engineer.
- G. After construction, the Contractor shall restore project area to the condition prior to construction, at no additional cost to the Owner.

#### **1.03 MEASUREMENTS AND PROJECT LAYOUT**

- A. Contractor shall verify all access routes, field conditions, elevations, and dimensions affecting the construction of the Work prior to construction. Discrepancies discovered shall be reported to the Engineer for consideration before proceeding with the Work.
- B. Contractor shall be responsible for laying out the Work in accordance with the Contract Documents. Contractor shall establish temporary benchmarks and markers necessary to set lines and levels of construction as needed to locate each element of the project.

#### **1.04 CONSTRUCTION GUARANTEE**

- A. The Contractor shall guarantee all equipment, materials and workmanship incorporated in the project for a period of one year following date of final acceptance by the Owner.
- B. The Contractor shall immediately correct all deficiencies reported to him without cost to the Owner within this guarantee period.

### **PART 2 - PRODUCTS**



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Not used.

## **PART 3 - EXECUTION**

### **3.01 CONDUCTING WORK**

Work shall be conducted as specified herein and as indicated on the Drawings, unless otherwise directed by the Engineer. In the event there is a discrepancy between the Specifications and the maps, the Engineer shall be notified prior to conducting the work for which there is a discrepancy.

### **3.02 CONSTRUCTION SCHEDULE**

Prior to Construction, Contractor shall submit proposed project schedule that conforms to the contract requirements for completion of the work.

### **3.03 MOBILIZATION**

Mobilization shall include, but is not limited to moving all plant and equipment to the site, furnishing and erecting plant, temporary buildings, access controls, and other construction facilities, implementing security requirements, installing temporary utilities and lighting, providing onsite sanitary facilities and potable water supplies, erecting contractor staging and storage areas, and submitting all initial submittals.

### **3.04 CLEANUP AND WASTE DISPOSAL**

- A. Contractor shall maintain project areas as work progresses including picking up trash, debris, excess material, etc. All work areas shall be cleaned of rubbish, excess materials, equipment, etc., prior to final acceptance of the project by the Owner.
- B. Waste disposal activities shall include, but not be limited to, transport and disposal of site waste, rubbish, demolition debris, rubble, and excavated soil that cannot be used onsite to appropriate disposal facilities as specified and in accordance with applicable federal, state, and local regulations.

### **3.05 SITE RESTORATION**

- A. Prior to final acceptance of the project, the site shall be restored to its original condition prior to construction, unless otherwise indicated in the Specifications and maps. Site restoration shall include, but not be limited to, the following items:
  - 1. All surfaced areas removed or damaged during construction shall be replaced with similar materials of equal thickness to match the existing adjacent undisturbed areas.
  - 2. All areas disturbed during construction; including ruts from heavy equipment, uneven surfaces left by stump removal, etc., shall be graded smooth to match existing topography.
  - 3. Temporary berms, roads, and other temporary facilities shall be removed prior to final acceptance of the work, unless otherwise specified or directed by the Engineer.

### **3.06 DEMOBILIZATION**

On completion of the work, the Contractor shall promptly remove from the site all rubbish, unused materials, construction equipment, and temporary facilities and structures used during construction.

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### **3.07 NOTIFICATION OF PROPERTY OWNERS**

Contractor shall be responsible for contacting property owners, utility companies, and agencies concerning information regarding underground utilities, hookups, structures, and other facilities they may own or operate which may be encountered in the execution of the work. It is the responsibility of the Contractor to notify owners and operators of utilities (overhead and underground) when construction, excavation, demolition, or other work may affect such facilities.

### **3.08 PROTECTION OF PROPERTY**

For any work performed in close proximity to the properties of businesses, utilities, or other parties, the Contractor shall utilize every precaution to protect the property, utility lines, and other structures from damage. Any damage that the Contractor may inflict shall be repaired or replaced in a prompt manner as directed by the Engineer.

### **3.09 PERMITS**

Contractor shall be responsible for complying with all required construction permits.

### **3.10 TESTING**

Contractor shall be responsible for conducting testing as specified herein, including providing all labor, materials, and services necessary including collecting samples and obtaining the services of a certified independent laboratory, if required, unless otherwise directed by the Engineer.

### **3.11 UTILITIES**

A. Contractor shall be responsible for the following regarding utilities:

1. Verification of Utilities. Contractor is responsible for verifying location of utilities and ensuring that no utilities exist in the construction area. The Contractor shall contact the appropriate agency with authority over specific utilities potentially impacted by work and the Engineer a minimum of 72 hours prior to conducting construction activities that may impact existing utilities and obtain all applicable clearances and digging permits.
2. Protection of Existing Utilities. Contractor shall not relocate or cause disruption to existing utilities unless prior authorization is obtained from the appropriate authority, agency, or owner of the respective utilities. Contractor shall protect all existing utilities and improvements and shall restore damaged or temporary relocated utilities, all in accordance with the requirements of the contract documents. Damage to utility lines shall be immediately reported to the Engineer.

**--END OF SECTION 01010--**

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## SECTION 01200 MEASUREMENT AND PAYMENT

### PART 1 - GENERAL

#### 1.01 SCOPE

- A. This section specifies the method of measurement and payment for each bid item listed on the Base Bid Form.
- B. Items for work called for by the Drawings and Specifications, but for which no bid item is described, shall be considered subsidiary to the cost of the related bid items.
- C. Costs for all work to be conducted under this contract shall be included under one of the Bid Items listed in Paragraph: 1.02 BID ITEMS.

#### 1.02 BID ITEMS

- A. The scope of the work included in each item and measurement and payment shall be as follows:

##### **Bid Item 1: Mobilization / Demobilization**

Work under this item shall consist of the mobilization and demobilization of the Contractor's forces and equipment necessary to perform the work required under the contract. This item shall include all bonds, permits, insurance, administration, transportation to and from the site, operating supplies, detailed construction layouts, site preparation, and coordination necessary for the Contractor to provide and maintain a construction force at the project site complete and ready to perform all work required under the contract. All labor, materials, and equipment necessary to establish and maintain temporary facilities including, but not limited to, erosion control, site security, temporary office and sanitary facilities, traffic control for construction, construction entrances, and construction staging areas shall be included in this item including restoration of these facilities to preconstruction condition as applicable.

This pay item is a Lump Sum. Payment of the contract Lump Sum amount will be made as the work proceeds and will be prorated based on the percentage of work under this item that has been completed. This payment shall be full compensation for all equipment, labor, disposal, and incidentals required to complete the work.

##### **Bid Item 2: Construction Staking**

Work under this item shall consist of conducting all construction staking/surveys, including establishing surveying control as necessary, to construct the work to the lines and grades as indicated on the Drawings. Work shall include detailed construction layouts (staking) and surveys to establish and verify final grades, provide quantity estimates for materials in support of payment requests, and any other surveying required to properly perform the work as specified in the Contract Documents.

The basis of payment for this item is a Lump Sum. Payment of the contract Lump Sum amount will be made as the work proceeds and will be prorated based on the percentage of work under this item that has been completed. This payment shall be full compensation for all materials, equipment, tools, labor, and incidentals required to complete the work.

##### **Bid Item 3: Excavation**

Work under this item shall consist of excavation required to complete the work as specified and indicated on the Drawings. This work includes all handling of the material including excavating, over-excavating to remove unsuitable soil, temporary stockpiling of material for later use in the

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project, loading, and hauling excavated materials. Dewatering activities including pumping, trenching, temporary coffer dams, diversions, and other measures required to complete the work shall be included in this item of work.

The basis of measurement and payment for this item shall be per bank cubic yard. Payment shall be based on the Contract Unit Price for the volume of material measured and computed to the nearest cubic yard. Payment quantities shall be based on pre-excavation material volumes determined by pre- and post-excavation surveys. Volume of material to be paid for shall be calculated using surveyed cross sections of the excavation area prior to excavation of soil and of the finished excavation after excavation, removal, and disposal. Payment shall not be made for quantities of material excavated that exceeds finished elevations indicated on the Drawings unless otherwise specified or pre-approved by the Engineer.

Payment for this item will be made at the Contract Unit Price given in the Bid Form, as the work proceeds. This payment shall be full compensation for all equipment, tools, fuel, labor, materials, analysis, and performing all operations necessary for excavating, hauling, and disposing of excess soil, and all related requirements as indicated on the Drawings and as specified.

**Bid Item 4:      Excavation Disposal**

Work under this item includes all handling of the material including excavating, loading, hauling excavated materials, and disposing of excess and unsuitable material onsite.

The pay unit for this item is one in-place (prior to excavation) cubic yard. Final measurement of the specified quantity of excavation shall not be made. The quantity shown on the Drawings shall be an established quantity and shall be the basis of payment at the Contract Unit Price per cubic yard bid.

Payment for this Unit Price item will be made at the Contract Unit Price given in the Bid Form, as the work proceeds. This payment shall be full compensation for all stripping of vegetation, conservation of topsoil, excavation, over-excavation, equipment, fuel, labor, materials, and performing all operations necessary for excavating, hauling, disposing of excavated material onsite, and all related requirements as indicated on the Drawings and as specified.

**Bid Item 5:      Gravel, In Place**

Work under this item shall include supplying, hauling, placing, and compacting gravel fill where specified and indicated on the Drawings. Gravel fill shall meet the gradation requirements of the material specification.

Gravel fill which is accepted and used in the construction shall be measured for payment by the ton. Quarry/pit weight determinations will be accepted by the Engineer. The attendant at the quarry/pit will issue tickets to the driver for each load of material delivered to the project. Each ticket shall include: name of the producer, date, location of the quarry, quantity delivered (in tons), name of the Contractor, and the project number. Payment shall be made only for material incorporated into the project to the thickness specified. No payment shall be made for material that is unsuitable for use in the project. No payment shall be made for material placed in excess of the specified dimensions. Geotextile filter fabric specified for use beneath or around gravel fill shall not be measured and paid separately but shall be considered subsidiary to this item.

Payment for constructing the gravel fill will be made at the contract Unit Price given in the Bid Form, as the work proceeds. Payment shall constitute full compensation for all equipment, tools, fuel, labor, materials, analysis, and performing all operations necessary to complete the work to the lines and grades indicated on the Drawings and as specified.

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**Bid Item 6:     #2 Crushed Concrete Base, In Place**

Work under this item shall include loading, hauling, placing, and compacting crushed concrete base as specified and to the lines and grades indicated on the Drawings. Crushed concrete will be supplied by the URNRD at the location indicated on the drawings.

The basis of measurement and payment for this item shall be per cubic yard of #2 crushed concrete, in place. The pay unit for this item is one in-place cubic yard. Final measurement of the specified quantity of material shall not be made. The quantity shown on the Drawings shall be an established quantity and shall be the basis of payment at the Contract Unit Price per cubic yard bid. Payment shall not be made for quantities of material in excess of the specified thickness indicated on the Drawings unless otherwise specified or pre-approved by the Engineer. Geotextile filter fabric specified for use beneath crushed concrete shall not be measured and paid separately but shall be considered subsidiary to this item.

Payment for constructing the crushed concrete base will be made at the contract Unit Price given in the Bid Form, as the work proceeds. Payment shall constitute full compensation for all equipment, tools, fuel, labor, materials, analysis, and performing all operations necessary to complete the work to the lines and grades indicated on the Drawings and as specified.

**Bid Item 7:     Broken Concrete Riprap Over Filter Fabric, in Place**

Work under this item shall consist of loading, hauling, and placing broken concrete riprap on a prepared subgrade on geotextile filter fabric at the locations and to the lines and grades indicated on the Drawings. The work shall include loading and hauling material to the site and stockpiling onsite as necessary, hauling material from stockpiles, including intermediate staging, to the locations required, and placing riprap to the lines and grades shown on the Drawings. Broken concrete riprap will be supplied by the URNRD at the location indicated on the drawings.

The basis of measurement and payment for this item shall be per cubic yard of broken concrete riprap, in place. The pay unit for this item is one in-place cubic yard. Final measurement of the specified quantity of material shall not be made. The quantity shown on the Drawings shall be an established quantity and shall be the basis of payment at the Contract Unit Price per cubic yard bid. Payment shall not be made for quantities of material in excess of the specified thickness indicated on the Drawings unless otherwise specified or pre-approved by the Engineer. Geotextile filter fabric specified for use beneath riprap shall not be measured and paid separately but shall be considered subsidiary to this item.

Payment for this Unit Price item will be made at the contract Unit Price given in the Bid Form, as the work proceeds. Payment shall constitute full compensation for providing labor, equipment, material (including but not limited to geotextile), transportation, stockpiling, all handling and staging, and all other items necessary and incidental to complete the installation of riprap to the lines and grades specified and indicated on the Drawings.

**Bid Item 8:     Remove and Salvage Broken Concrete Riprap**

Work under this item shall consist of removing and salvaging existing broken concrete riprap. Salvaged riprap that meets the specified gradation of the materials specification shall be used under Bid Item 7. Exposed rebar and other unsuitable material shall be disposed of at the URNRD's stockpile location or other approved offsite location. The work shall include removing the material indicated on the Drawings, stockpiling onsite as necessary, hauling material from stockpiles, including intermediate staging, to the locations required.

The basis of measurement and payment for this item shall be per cubic yard of broken concrete riprap removed. The pay unit for this item is one cubic yard. Payment shall be based on the Contract Unit Price for the volume of material measured and computed to the nearest cubic yard.

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Payment quantities shall be based on pre-construction material volumes determined by pre- and post-construction surveys, load counts, or other method agreed to by the Engineer.

Payment for this Unit Price item will be made at the contract Unit Price given in the Bid Form, as the work proceeds. Payment shall constitute full compensation for providing labor, equipment, material (including but not limited to geotextile), transportation, stockpiling, all handling and staging, processing, and all other items necessary and incidental to complete removal and salvaging riprap specified and indicated on the Drawings.

**Bid Item 9:     Steel Sheet Pile, In Place**

Work under this item shall consist of preparing the site, excavation and backfill, furnishing and installing steel sheet piling, mobilization and operation of any special equipment required, and all incidental work required to complete the work as specified and indicated on the Drawings.

The basis of measurement and payment for steel sheet pile, in place shall be at the contract Unit Price given in the Bid Form as the work proceeds for sheet pile completed as Specified and approved by the Engineer. Measurement shall be to the nearest square foot installed. Such payment shall be full compensation for furnishing all materials, transportation, driving, cutting, welding, installing, equipment, tools, labor and incidentals necessary to complete the work in conformance with the Drawings and Specifications and accepted by the Engineer.

**Bid Item 10:     Remove and Salvage Pipe Culvert**

Work under this item shall consist of removing existing pipe culverts and salvaging the removed material to owner as specified and indicated on the Drawings.

The basis of payment for this item is a Lump Sum. Payment of the contract Lump Sum amount will be made as the work proceeds and will be prorated based on the percentage of work under this item that has been completed. This payment shall be full compensation for all materials, equipment, tools, labor, and incidentals required to complete the work.

**Bid Item 11:     Seeding**

Work under this item shall include final site grading and seed bed preparation as required to provide a finished grade as indicated on the Drawings, and providing and applying the specified type of seed, mulch, and other materials on areas within the work limits that are specified or indicated on the Drawings to be seeded.

The basis of measurement and payment for this item shall be per acre of area seeded. Final measurement of the specified quantity of seeding shall not be made. The quantity shown on the Drawings shall be an established quantity and shall be the basis of payment at the Contract Unit Price per acre bid. Payment will be made only for material incorporated into the project as specified. Only areas identified on the Drawings shall be measured for payment. All other areas damaged during construction, and requiring reseeding, shall be restored by the contractor at no additional cost to the Owner.

Payment for this Unit Price item will be made at the Contract Unit Price given in the Bid Form, as the work proceeds. Payment shall constitute full compensation for providing labor, equipment, and all other items necessary and incidental to complete the seeding and mulching in the areas indicated on the Drawings and as specified.

**Bid Item 12:     Erosion Control Blanket**

Work under this item shall consist of installing erosion control blanket as specified at the locations and to the lines indicated on the Drawings. This item includes all materials including blankets,

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anchoring materials, labor, and other items necessary to complete the work as specified and indicated on the Drawings.

The basis of measurement for payment for this item shall be per square yard of blanket, complete and in place, at the ultimate location of use. The pay unit for this item is one in place square yard of completed mat installation measured to the edge of the covered areas. No adjustment shall be made for overlapped areas. Final measurement of the specified quantity of erosion control blanket shall not be made. The quantity shown on the Drawings shall be an established quantity and shall be the basis of payment at the Contract Unit Price per square yard bid. Payment shall not be made for quantities of material in excess of the specified area indicated on the Drawings unless otherwise specified or pre-approved by the Engineer.

Payment for this Unit Price item will be made at the contract Unit Price given in the Bid Form, as the work proceeds. Payment shall constitute full compensation for furnishing, installing or placing, and testing of materials, providing labor and equipment to install the erosion control blanket to the grades and limits show on the Drawings, and all related requirements.

## **PART 2 - MATERIALS**

Not used.

## **PART 3 - EXECUTION**

### **3.01 GENERAL**

- A. Work that results in changes that result in an increase in the Contract cost of any item shall be addressed by Change Order, and such work shall not commence until the Change Order is issued. No compensation will be allowed for work completed in excess of the Contract areas for which prior approval was not granted and a Change Order was not issued.

**-- END OF SECTION 01200 --**

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## SECTION 01300 SUBMITTALS

### PART 1 - GENERAL

#### 1.01 SCOPE

- A. Submittal Procedures.
- B. Construction Progress Schedule.
- C. Shop Drawings
- D. Product Data.

#### 1.02 PROCEDURES

- A. For each submittal the Contractor shall:
  - 1. Transmit each submittal to The Flatwater Group, Inc., 8200 Cody Drive, Suite A, Lincoln, NE 68512-9550, with a transmittal letter or form listing the items transmitted.
  - 2. Transmit **three copies** of each submittal that requires approval. One copy of submittals such as test results may be submitted.
  - 3. Sequentially number transmittal forms. Revised submittals shall be numbered with the original number and a sequential alphabetical suffix.
  - 4. Identify the project, contractor, subcontractor, or supplier; pertinent Drawing sheet and detail number, and Specification section number, as appropriate. Identify deviations from Contract Documents. Provide space for Contractor and Engineer review stamps.
  - 5. Apply Contractor's stamp or statement, signed or initialed certifying the Contractor has reviewed the submittal and verified products required, field dimensions, adjacent construction work, and coordination of information, and is in accordance with the requirements of the work and Contract Documents.
  - 6. Schedule submittals to expedite the project and deliver to Engineer's office. Coordinate submission of related items.
  - 7. Allow 15 days, excluding delivery time to and from the Contractor, for review of submittals.
  - 8. Identify variations from contract documents and product or system limitations which may be detrimental to successful performance of the completed work.
  - 9. After Engineer's review of submittal, revise and resubmit as required, identifying changes made since previous submittal.
  - 10. Distribute copies of reviewed submittals to concerned persons. Instruct recipients to promptly report any inability to comply with provisions.
  - 11. Submittals not requested will not be recognized or processed.

#### 1.03 CONSTRUCTION SCHEDULES AND PROGRESS REPORTS

- A. Unless otherwise instructed by the Engineer, Contractor shall:
  - 1. Submit initial schedule within 5 days after date of Notice to Proceed.
  - 2. Submit schedule revisions with each Application for Payment, identifying changes since previous version.
  - 3. Submit weekly progress reports, signed by the Contractor's site manager.



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#### **1.04 APPLICATION FOR PAYMENT**

Each Application for Payment submitted by the Contractor shall be accompanied by appropriate documentation to verify that the work has been completed and the products and materials have been delivered and installed.

#### **1.05 PRODUCT/MATERIAL DATA**

- A. Contractor shall submit product and/or material data as specified.
1. Mark each copy to identify applicable products, materials, models, options, and other data; supplement manufacturer's standard data to provide information unique to the Work. Include manufacturer's installation instructions when required by the Specification section. Include a list of quantities of materials used.
  2. Submit the number of copies that Contractor requires, plus two additional copies, which will be retained by the Engineer.
  3. List of material items requiring submittals is as follows:
    - a. Steel Sheet Pile
    - b. Geotextiles
    - c. Seed/seed mixes
    - d. Aggregates
    - e. Others as specified

#### **1.06 MANUFACTURER INSTALLATION INSTRUCTIONS**

- A. When specified in individual specification sections, Contractor shall:
1. Submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing to Engineer.
  2. Indicate special procedures, conditions requiring special attention, and special criteria required for application or installation.

#### **1.08 MANUFACTURER CERTIFICATES**

When specified in individual specification sections, Contractor shall submit manufacturer and/or supplier certifications that products and materials meet or exceed specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate. Certificates may be based on recent or previous test results on material or products, if acceptable to Engineer.

### **PART 2 - PRODUCTS**

Not used.

### **PART 3 - EXECUTION**

Not used.

**-- END OF SECTION 01300 --**

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## **SECTION 01400 QUALITY CONTROL**

### **PART 1 - GENERAL**

#### **1.01 SCOPE**

- A. Quality assurance/quality control procedures and methods, tolerances, testing requirements, and other quality control measures to be conducted as part of this project. Meeting quality control objectives and/or requirements shall not relieve the Contractor of his responsibility to furnish materials and workmanship in accordance with the Drawings and Specifications. Persons responsible for maintaining quality control shall perform all tasks in accordance with local rules and regulations, and referenced specifications.
- B. Materials, equipment, and workmanship not meeting the required standards shall be removed and replaced at the Contractors expense including all subsequent testing required.
- C. In all areas where Contractor is responsible, required testing shall be performed by an independent testing laboratory, approved by the Engineer and paid for by the Contractor.

#### **1.02 QUALITY ASSURANCE**

- A. Contractor shall be responsible for quality control over subcontractors, suppliers, manufacturers, products and services provided and installed, and general workmanship of all work completed on this project, to produce quality work as specified.
- B. Comply with manufacturer's instructions, including recommended sequence of work or installation. If manufacturer's instructions conflict with Contract Documents, Contractor shall request clarification from the Engineer before proceeding.
- C. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- D. Complete work using qualified persons and acceptable methods to produce workmanship of specified quality.

#### **1.03 TOLERANCES**

- A. Complete all work within the specified tolerances.
- B. Monitor tolerance control of installed materials and products to ensure work meets specifications. Accumulation of tolerances shall not be permitted.
- C. Comply with recommended or specified manufacturer's tolerances. If manufacturer's tolerances conflict with Contract Documents, Contractor shall request clarification from Engineer before proceeding.
- D. Complete cutting, bending, and other modifications to materials and products required to meet appropriate dimensions and tolerances before securing materials and products in place.

#### **1.04 REFERENCES**

- A. Contractor shall complete all work using industry recognized methods and equipment to produce work as specified. For products or workmanship specified by association, trade, or other consensus standards, Contractor shall comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes. The most current copy of reference standards, up to the date on the current Contract Documents, shall be used, except where a specific date is established by code.
- B. Contractor shall be responsible for obtaining copies of standards where required by individual product specification sections.
- C. The contractual relationship, duties, and responsibilities of the parties in Contract, as well as those of the Engineer, shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

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## **1.05 TESTING**

- A. Unless otherwise specified, the Contractor shall be responsible for all testing and associated costs. When testing is set forth as the Contractor's responsibility, the Contractor shall:
1. Perform and pay for tests as required in individual specification sections.
  2. Secure the services of an approved, independent testing laboratory.
  3. Deliver to the laboratory adequate quantities of representative samples of materials proposed for use that are required to be tested.
  4. Notify the laboratory and Engineer in advance of construction operations, to provide adequate lead time and to allow the laboratory to complete any required calibration and assign personnel and testing as specified.
  5. Provide adequate facilities for safe and proper storage of test samples on project site.
  6. Furnish labor as required to obtain and handle samples at the site.
  7. Furnish samples of materials, design mixes, equipment, tools, storage, safe access, and assistance by incidental labor as requested.
  8. Submit reports of required tests to Engineer indicating observations and results of tests and indicating compliance or non-compliance with Contract Documents.
  9. Cooperate with the Engineer or independent firm performing tests not required to be completed by the Contractor, and coordinate work so that tests can be conducted.
- B. Testing or inspecting does not relieve Contractor from performing the Work according to contract requirements.
- C. At least one copy of the results of all tests, including those required as a part of the work covered by these specifications, ordered by the Engineer, or supplemental tests specified herein, shall be distributed to the Engineer in a timely manner.
- D. Each report shall state all details of each test to indicate satisfactory compliance with requirements of the Contract Documents. The results of any tests that indicate unsatisfactory conditions and/or failure to comply with the requirements of the Contract documents shall be reported immediately to the Engineer.

### **PART 2 - PRODUCTS**

Not used.

### **PART 3 - EXECUTION**

Not used.

**-- END OF SECTION 01400 --**

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**SECTION 01500**  
**CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

**PART 1 - GENERAL**

**1.01 SCOPE**

- A. Water.
- B. Sanitary Facilities.
- C. Temporary Heat.
- D. Enclosures.
- E. Barriers.
- F. Cleaning During Construction.
- G. Removal.

**1.02 WATER**

The Contractor shall be responsible for providing and transporting of any water needed for construction.

**1.03 SANITARY FACILITIES**

- A. The Contractor shall provide his employees with suitable temporary sanitary facilities at his/her own expense.
- B. Temporary facilities shall be removed upon completion of the project.

**1.04 TEMPORARY HEAT**

When temporary heat is required for protection of any portion of the project, it shall be provided by the Contractor.

**1.05 ENCLOSURES**

Provide temporary weather-tight closures to provide acceptable working conditions and protection for materials, to allow for temporary heating, and to prevent entry of unauthorized persons.

**1.06 BARRIERS**

Provide as required to prevent public entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.

**1.07 CLEANING DURING CONSTRUCTION**

Control accumulation of waste materials and rubbish; periodically dispose of off-site.

**1.08 REMOVAL**

Remove temporary materials, equipment, services, and construction prior to Substantial Completion inspection.

**PART 2 - PRODUCTS**

Not Used.

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## **PART 3 - EXECUTION**

### **3.01 STAGING/MATERIAL STORAGE AREAS**

Contractor staging and material storage areas shall be as shown on the Drawings or as approved by the Engineer.

### **3.02 GENERAL MAINTENANCE**

All areas requiring vegetation/re-vegetation shall be stabilized by seeding and mulching within seven calendar days after completion of final grading, if weather permits.

**-- END OF SECTION 01500 --**

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## **SECTION 01600 MATERIALS AND EQUIPMENT**

### **PART 1 - GENERAL**

#### **1.01 SCOPE**

- A. Requirements Included:
  - 1. Products
  - 2. Workmanship
  - 3. Manufacturer's Instructions
  - 4. Transportation and Handling
  - 5. Storage and Protection
  - 6. Substitutions and Product Options

#### **1.02 RELATED REQUIREMENTS**

- A. Section 01005 - Administrative Provisions
- B. Section 01300 - Submittals
- C. Section 01700 - Contract Closeout

#### **1.03 PRODUCTS**

- A. Products include material, equipment, and systems.
- B. Comply with Specifications and referenced standards as minimum requirements.
- C. Components required to be supplied in quantity within a Specification section shall be the same, and shall be interchangeable.
- D. Do not use materials and equipment removed from existing facilities, except as specifically required, or allowed, by Contract Documents.

#### **1.04 WORKMANSHIP**

- A. Comply with industry standards except when more restrictive tolerances or specified requirements indicate more rigid standards or more precise workmanship.
- B. Perform work by persons qualified to produce workmanship of specified quality.
- C. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, and racking.

#### **1.05 MANUFACTURERS' INSTRUCTIONS**

- A. When work is specified to comply with manufacturers' instructions, submit copies as specified in Section 01300, distribute copies to persons involved, and maintain one set at work site.
- B. Perform work in accordance with details of instructions and specified requirements. Should a conflict exist between Specifications and instructions, consult with the Engineer.

#### **1.06 TRANSPORTATION AND HANDLING**

- A. Transport Products by methods to avoid Product damage; deliver in undamaged condition in manufacturer's unopened containers or packaging, dry.
- B. Provide equipment and personnel to handle Products by methods to prevent soiling or damage.
- C. Promptly inspect shipments to assure that Products comply with requirements, quantities are correct, and Products are undamaged.

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## **1.07 STORAGE AND PROTECTION**

- A. Store Products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive Products in weather-tight enclosures; maintain within temperature and humidity ranges required by manufacturer's instructions.
- B. For exterior storage of fabricated Products, place on sloped supports above ground. Cover Products subject to deterioration with impervious sheet covering; provide ventilation to avoid condensation.
- C. Store loose granular materials on solid surfaces in a well-drained area; prevent mixing with foreign matter.
- D. Arrange storage to provide access for inspection. Periodically inspect to assure Products are undamaged, and are maintained under required conditions.
- E. After installation, provide coverings to protect Products from damage from traffic and construction operations, remove when no longer needed.
- F. Protect all grounds, equipment, roadways, and structures from damage during construction. Any damage to grounds, equipment, roadways, or structures shall be repaired or replaced by the Contractor at no charge to the Owner.

## **1.08 PRODUCT OPTIONS**

- A. Within 30 days after date of Contract, submit complete list of major Products proposed, with name of manufacturer, trade name, and model.
- B. Options:
  - 1. Products specified only by reference standard: Any Product meeting that standard.
  - 2. Products specified by naming several manufacturers: Products of any named manufacturer meeting Specifications.
  - 3. Products specified by naming one or more manufacturers and "or equal": Submit a request for substitution for any manufacturer not specifically named.
  - 4. Products specified by naming only one manufacturer: No option.

## **1.09 SUBSTITUTIONS**

- A. Only within 30 days after date of Contract will the Engineer consider requests from Contractor for substitutions. Subsequently, substitutions will be considered only when a Product becomes unavailable due to no fault of Contractor.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents.
- C. Request constitutes a representation that Contractor:
  - 1. Has investigated proposed Product and determined that it meets or exceeds, in all respects, specified Product.
  - 2. Will provide the same warranty for substitution as for specified Product.
  - 3. Will coordinate installation and make other changes which may be required for Work to be complete in all respects.
  - 4. Waives claims for additional costs which may subsequently become apparent.
- D. Substitutions will not be considered when they are indicated or implied on Shop Drawing or Product Data submittals without separate written request, or when acceptance will require substantial revision of Contract Documents.
- E. The Engineer will determine acceptability of proposed substitution, and will notify Contractor of acceptance or rejection in writing within a reasonable time.

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**PART 2 - PRODUCTS**

Not used.

**PART 3 - EXECUTION**

Not used.

**-- END OF SECTION 01600 --**



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## **SECTION 01700 CONTRACT CLOSEOUT**

### **PART 1 - GENERAL**

#### **1.01 SCOPE**

The section specifies Contract closeout procedures. This section shall be used in conjunction with other Contract Documents specifying closeout procedures.

### **PART 2 - PRODUCTS**

Not Used.

### **PART 3 - EXECUTION**

#### **3.01 CLOSEOUT PROCEDURES**

- A. Engineer's Review. Contractor shall submit written notification that the work substantially complete and is ready for the Engineers Review. The Engineer will review the work in conjunction with the Owner. The Engineer will then prepare a punch list of items to be completed.
- B. Substantial Completion:
  - 1. Engineer shall present to the Contractor a punch list of work items to be completed in accordance with the Contract Documents.
  - 2. When Contractor considers the work on the punch list to be substantially complete, he shall submit written notice with a list of items to be completed or corrected, and the estimated dates of the completion or correction.
  - 3. If Engineer finds the work is not substantially complete, the Engineer will promptly notify the Contractor in writing, listing the observed deficiencies. Contractor shall remedy the deficiencies and send a new written notice of substantial completion to the Engineer. This procedure shall continue until such time when the Engineer is satisfied such deficiencies have been corrected.
  - 4. When Engineer finds the work to be substantially complete, a Certificate of Substantial Completion will be prepared with a list of deficiencies that require timely correction, and/or non-construction deficiencies in accordance with provisions of General Conditions.
- C. Final Acceptance. When Contractor considers the work to be complete, a written certification shall be submitted to the Engineer certifying that:
  - 1. Contract Documents have been reviewed.
  - 2. Work has been inspected for compliance with Contract Documents.
  - 3. Work has been completed in accordance with Contract Documents, and deficiencies listed with Certificate of Substantial Completion have been corrected.
  - 4. Work is complete and ready for final inspection.
  - 5. Should the Engineer's inspection find work incomplete, Contractor will promptly be notified, in writing, listing observed deficiencies. Contractor shall remedy the deficiencies and send a second Certification of Final Completion. This procedure shall continue until such time when the Engineer is satisfied with such repairs and corrections.
  - 6. When the Engineer finds work is complete, closeout submittals will be considered. Contractor shall submit a final invoice for final payment identifying total adjusted Contract Sum, a record of previous payments, and sum remaining

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due. A Final Acceptance Certificate will be issued to the Contractor along with final payment.

D. Warranties and Bonds

1. Provide duplicate copies. Execute Contractor's submittals and assemble documents executed by subcontractors, suppliers, and manufacturers.
2. Submit material prior to final application for payment.

**-- END OF SECTION 01700 --**

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## SECTION 02220 EARTHWORK

### PART 1 - GENERAL

#### 1.01 SCOPE

- A. This section specifies requirements for earth moving activities including excavating and disposing of earth, filling/backfilling, compacting, grading and any other earthwork activities required as part of the work. This section is to be used with the requirements contained within other related sections.
- B. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

#### 1.02 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The latest available edition, at time of issuance of these Specifications, shall be used. The publications are referred to in the text, in this section, and other sections as applicable, by the basic designation only.

##### AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

- ASTM D 698 Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/cu.ft. (600 kN-m/cu.m.)
- ASTM D 1556 Density of Soil in Place by the Sand-Cone Method
- ASTM D 2487 Classification of Soils for Engineering Purposes (Unified Soil Classification System)
- ASTM D 2922 Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth)
- ASTM D 4253 Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table (1993)
- ASTM D 4254 Standard Test Methods for Minimum Index Density and Unit Weight of Soils and Calculations of Relative Density

##### STATE OF NEBRASKA DEPARTMENT OF ROADS

- NDR Standard Specifications for Highway Construction - 2007 (including subsequent supplements and updates)

#### 1.03 DEFINITIONS

- A. Onsite Materials  
  
Materials obtained from within the work Limits or identified borrow areas shall be considered onsite materials.
- B. Satisfactory Materials  
  
Onsite materials removed as part of the project shall be considered satisfactory if they can be used to achieve satisfactory results as shown and specified except as specified under unsatisfactory materials, and if they are free from roots and other organic matter, trash, debris, frozen materials, and stones larger than 3 inches in any dimension. Onsite

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materials that are too wet or too dry for immediate use shall be dried or moistened to the proper moisture content. Moisture condition alone shall not be reason for a material to be declared unsatisfactory. Onsite materials shall be used in completing the work to the maximum extent possible.

C. Unsatisfactory Materials

Materials that do not comply with the requirements for satisfactory materials are unsatisfactory. Materials classified in ASTM D 2487 as MH, Pt, OH, and OL are unsatisfactory. Unsatisfactory materials also include man-made fills, refuse, or backfills from previous construction.

D. Degree of Compaction

Unless otherwise specified, degree of compaction is a percentage of the standard maximum dry density obtained by the test procedure presented in ASTM D 698 abbreviated below as a percent of laboratory maximum dry density.

E. Fill/Backfill

Any material placed to bring an area to a specific grade, including backfill for excavations and trenches. Although backfill generally refers to material placed in an excavation, the terms fill and backfill may be used interchangeably throughout the Specifications and on the Drawings.

#### **1.04 SUBMITTALS**

A. Submittals shall be made as specified in Section 01300 SUBMITTALS and shall include but not be limited to:

1. Standard Proctor Density Test - ASTM D 698 test results.
2. In-Place Density - ASTM D 2922 test results.

B. Contractor shall provide a schedule including the depth and location of any tests conducted.

#### **1.05 EXCAVATION SAFETY**

Contractor shall be solely responsible for making all excavations safe. Appropriate measures shall be taken to slope or shore excavations to prevent collapse of side-slopes and ensure protection of persons working in or near the excavations. All work specified in this section shall be in accordance with 29 CFR Part 1926.

#### **1.06 QUALITY ASSURANCE**

Perform excavation work in compliance with applicable requirements of governing authorities having jurisdiction.

### **PART 2 - PRODUCTS**

#### **2.01 ONSITE MATERIALS**

A. Unless otherwise specified, onsite satisfactory materials shall be used as fill to the maximum extent practical. Onsite materials used for fill shall be free from roots, organic matter, trash, debris, and other objectionable material. Contractor shall be responsible for preparing onsite materials for use as backfill.

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- B. Contractor shall coordinate with Engineer prior to borrowing material from any location adjacent to the work area, not directly affected by the work.
  - C. In the event that there is not a sufficient quantity of satisfactory fill material available to complete the work, Contractor shall be responsible for obtaining fill material from an offsite source.

## **2.02 AGGREGATE FILL**

Crushed rock, gravel, and other aggregates for fill and base shall be as specified in Section 02850 AGGREGATES.

## **2.03 TOPSOIL**

- A. Topsoil is earth material capable of sustaining vegetative growth, typical of the area.
- B. Topsoil shall be reasonably free from underlying subsoil, clay lumps, objectionable weeds, litter, brush, matted roots, toxic substances, or any material that may be harmful to plant growth or be a hindrance to grading, planting, or maintenance operations. Topsoil shall not contain more than 5 percent by volume of stones, stumps, or other objects larger than 1 inch in diameter.

## **2.04 WATER**

Water used to wet material to obtain favorable moisture contents shall be clean and free of deleterious materials.

# **PART 3 - EXECUTION**

## **3.01 EXCAVATION**

- A. Excavation of every description, regardless of material encountered, within the required work limits, shall be performed to the lines and grades indicated, specified, or necessary to complete the work, unless otherwise directed by the Engineer. Contractor shall assume responsibility for determinations and conclusions as to the nature of the materials to be excavated and the difficulties of making and maintaining the required excavations.
- B. Contractor's method of excavation shall be such that the use of satisfactory excavated material will be maximized to fullest extent possible. Satisfactory excavated material shall be immediately placed where needed to complete the work, or temporarily stockpiled until needed. Satisfactory material shall be stockpiled separately from material requiring amendment prior to use. Unsatisfactory material shall be stockpiled separately and removed and disposed of at an appropriate offsite location.
- C. The Engineer may direct excavations to be conducted to a greater depth or beyond the work limits if, in the opinion of the Engineer, such work is necessary to ensure adequate support of the proposed structure, side slopes, etc. Compensation for such authorized additional work shall be at the applicable unit price for such items.
- D. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations or dimensions without specific direction of Engineer. No compensation will be made for unauthorized excavation or any remedial work completed as a result of unauthorized excavation.
- E. Excavation Safety
  - 1. The safety of all excavations shall be the sole responsibility of the Contractor. Contractor shall implement procedures consistent with CFR 29 Part 1926, Subpart K, as necessary, to ensure safety of personnel in the vicinity of the excavations and to prevent damage to adjacent property, pavements, utilities, or structures.
  - 2. All excavations shall be free of overhangs, and the sidewalls shall be kept free of

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loose material. As a minimum, Contractor shall slope all excavations to prevent these conditions.

- F. Complete restoration of all obstructions moved or removed to accommodate construction equipment or to facilitate work, shall be required, unless otherwise specified.
- G. Underground Utilities
  - 1. It shall be the Contractor's responsibility, prior to performing excavations, to determine the presence and location of any underground utilities that may be affected by excavations including conducting a one-call verification. Any damage caused by the Contractor's failure to make this verification and/or determination shall be repaired at no cost to the Owner. When work is being conducted in areas, if any, where there are underground obstructions, the Contractor shall:
    - a. Coordinate with appropriate owner of each utility regarding scope and schedule for utility relocation, in-place protection, or abandonment. Notify owners of pipes, cable, and/or other utilities 48 hours in advance of any excavation work. Underground utilities shall be located and exposed by the appropriate owner. Documentation shall be submitted to the Engineer showing notification to owners of buried utilities.
    - b. Preserve intact any existing underground pipes, culverts, or other utilities encountered during trenching and backfill operations. Hand excavation shall be required within one foot of any fiber optics, telecommunication, gas, or signal lines and within six inches of any sewer or water lines. If excavation beneath utility lines is required, the utility lines shall be supported as recommended by the owner of the utility, until proper backfill has been replaced beneath them. If any utilities or other structures are damaged or broken by the Contractor, they shall be replaced or repaired, at Contractor's expense, as soon as is practical. Once replaced or repaired, the condition of utilities or structures damaged by Contractor shall be at least equal to the condition they were in before the disturbance.

### **3.02 PREPARATION OF SURFACE/SUBGRADE**

- A. All vegetation, such as roots, brush, heavy growth of grass, sods, rubbish, and other unsatisfactory material within the area where fill is to be placed, shall be stripped or otherwise removed before fill is started. In no case will unsatisfactory material remain in or under the fill area. Sloped ground surfaces steeper than one vertical to four horizontal on which fill is to be placed shall be plowed, steeped, or broken up, as directed, in such a manner that the fill material will bond with the existing surface. Prepared surfaces on which compacted fill is to be placed shall be wetted or dried as may be required to obtain the specified moisture content and density.

### **3.03 BACKFILL OF EXCAVATIONS**

- A. Excavations shall be backfilled with satisfactory material, compacted, and smooth graded in accordance with Paragraph 3.05 FINISHED EXCAVATIONS AND FILLS. Backfill shall conform to the lines, grades, sections, and elevations indicated. Where no lines, grades, sections, or elevations are indicated, backfill shall be placed to restore the excavation to the pre-excavated lines and grades, to the shape of the typical sections indicated, or to meet the requirements of the particular case. Backfill shall consist of satisfactory material and shall be reasonably free from roots, other organic matter, and trash. No frozen material will be permitted in the fill. Unless otherwise specified, the material shall be placed in successive horizontal layers of 8 inches (maximum) in loose depth for the full width of the cross section and shall be compacted as specified. Each layer shall be

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- compacted before the overlaying lift is placed.
  - B. To facilitate the performance of backfill and compaction operations, the Contractor shall implement procedures consistent with CFR 29 Part 1926, Subpart K to ensure safety of personnel in the vicinity of the excavation and prevent damage to adjacent structures, pavements, etc. Any procedures involving additional sloping and benching or support systems to protect workers or adjacent property and structures will not be measured for payment. If the Contractor elects to flatten the slopes, the excavated material shall be stockpiled and reused as backfill for the excavation.
  - C. Moisture-Density Relations. The Contractor shall determine the laboratory moisture-density relation (ASTM D 698) for material used as fill on the site as specified. One determination (or "curve") shall be made for each type of soil or material encountered. This may be waived with approval and at the sole discretion of the Engineer.

### **3.04 COMPACTION**

#### **A. Compaction Effort**

1. Except where otherwise specified, compaction effort shall be as follows:

- a. Earth backfill and structure subgrade shall be compacted to a minimum of 95% of standard maximum dry density at a moisture content of optimum  $\pm$  3 percent.
- b. Channel side slopes, banks, and overbank area shall be compacted to a level equivalent to adjacent areas.

#### **B. Moisture Control**

Contractor shall maintain workable moisture contents prior to and during compacting operations. A uniform moisture content shall be maintained throughout each lift. Moisture content of the fill or backfill material shall be adjusted by wetting or aerating to achieve the required moisture content. Compaction of fill shall not be attempted when the moisture content is excessive. If the top surface of the preceding layer of compacted fill becomes too dry to permit suitable bond with the subsequent layer, the dry layer shall be removed or scarified and wetted to acceptable moisture content prior to placement of the next layer. Contractor shall be responsible for furnishing water, as required, to achieve specified compaction.

#### **C. Placement**

Soil shall be placed in horizontal lifts not to exceed 8 inches uncompacted thickness. When compaction is to be by hand-directed compaction equipment, the maximum uncompacted thickness shall be 4 inches. After placement of a loose lift, the uncompacted soil shall be worked, if necessary, to break up any large pieces and to provide a uniform thickness prior to compaction.

#### **D. Compaction Equipment**

Equipment used for compaction of fill materials shall be appropriate for the job and adequate to obtain the specified densities. Contractor shall repair or replace any damaged structures or work resulting from compaction operations, at no additional cost to the Owner.

#### **E. Compaction Testing**

1. Contractor shall be responsible for conducting field compaction testing according to ASTM D 698 or ASTM D 2922, as specified here and in Section 01400 QUALITY CONTROL. Unless otherwise directed by the Engineer, Compaction

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testing shall be conducted as follows:

- a. Four representative compaction tests shall be conducted on the rock riprap subgrade generally at the deepest area of fill. Coordinate exact location with Engineer.
- b. Two representative compaction tests shall be conducted on the crushed rock subgrade, one on the channel base and one on the channel banks. Coordinate exact location with Engineer.

F. Irregularities

Any irregularities or depressions that develop during and subsequent to compaction activities shall be corrected by loosening the material at these places and adding, removing, or replacing material as required until the surface can be made smooth and uniform.

### 3.05 FINISHED EXCAVATIONS AND FILLS

- A. All areas covered by the project, including excavated and filled sections and adjacent transition areas, shall be uniformly smooth-graded to a degree compatible with the intended use of the area. Fills and backfills shall conform to the lines, grades, sections, and elevations indicated on the Drawings. If no lines, grades, sections, or elevations are indicated, backfills shall be placed to restore the excavation to pre-excavated lines and grades.

B. Transitions

Transitions between varying slopes indicated on the Drawings shall be smooth and gradual.

C. Tolerances

A finished surface that is reasonably smooth, compacted as specified, and free from irregular surface changes shall be provided. The degree of finish shall be that ordinarily obtainable from blade-grader operations, except as otherwise specified.

D. Surfaces to be Seeded

Surface areas to be seeded shall be finished to a smoothness suitable for the application of turf materials. Seeding shall be conducted in accordance with Section 02820 SEEDING AND PLANTING.

### 3.06 PLACING TOPSOIL

- A. Contractor shall preserve and stockpile topsoil to the extent practical prior to conducting work. Preserved topsoil shall be placed on all areas to be seeded prior to seeding. On areas to receive topsoil, the compacted subgrade soil shall be scarified to a 2-inch depth for bonding of topsoil with subsoil. Topsoil shall then be spread evenly over the disturbed area and graded to the elevation and slopes indicated. Topsoil shall not be spread when frozen or excessively wet or dry.
- B. In areas where the finished excavation or fill is completed in soil(s) that meets the criteria for topsoil, surfaces shall be prepared as specified in Section 02820 SEEDING AND PLANTING, Paragraph 3.02 SITE PREPARATION. Placement of additional soil is not required in these areas provided the minimum specified thickness of topsoil is provided and the specified final grades are met.



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### 3.07 FINAL GRADING

Final grades shall be completed to the lines and grades indicated on the Drawings and/or as directed by the Engineer with proper allowance for placement of topsoil as specified and indicated on the Drawings. Final grades shall be free of exposed roots, debris, rubble, and stones exceeding 3 inches in any dimension. Final grades shall be neatly blended into existing surrounding terrain to provide a smooth, uniform transition.

### 3.08 PROTECTION OF FINISHED WORK

Newly graded areas shall be protected from traffic and from erosion, and any settlement or washing away that may occur from any cause, prior to acceptance, shall be repaired and grades reestablished to the required elevations and slopes. Damaged areas shall be revegetated, if necessary.

### 3.09 MATERIAL DISPOSAL

- A. Excess earth material excavated as part of the construction and unsatisfactory earth material not suitable for use in the project shall be disposed of at the specified onsite location. Temporary stockpiles may be used as necessary to stockpile material prior to onsite disposal. Spoil shall be placed within the URNRD permanent easement, which extends 75 feet on each side of the centerline of channel. Coordinate with Engineer on locations of spoil piles. Contractor shall deposit material at least 10 feet from the channel top of bank and in a manner that promotes positive drainage. If material is placed on terraced areas, the terraces shall be reformed and compacted at the conclusion of construction.
- B. Contractor shall dispose of all other non-earth material including debris, rubble, rocks, trash at an appropriate offsite disposal facility, unless otherwise specified or directed by the Engineer.
- C. Material shall not be hauled offsite when the moisture content is high enough that it results in spilling or leaking material from the haul vehicle onto roadways. Contractor shall be responsible for drying and determining when the material is suitable for hauling offsite.
- D. Contractor shall be responsible for identifying, arranging, and coordinating a location for all offsite spoil.

### 3.10 ROADS

#### A. Existing Roads

Existing roads at the site shall be maintained in useable condition. **Existing roads used by the Contractor during construction shall be repaired to their condition prior to construction activities.** Contractor shall document condition of roads prior to construction.

#### B. Haul Roads

- 1. Contractor shall be responsible for layout, preparation, grading, widening, compacting, surfacing, and maintaining haul roads. Any surfacing installed by the Contractor shall be removed by the Contractor prior to final completion of the project, unless otherwise specified or approved by the Engineer.
- 2. Contractor shall be responsible for maintaining haul roads during the course of the project.

### 3.11 FUGITIVE DUST CONTROL

Contractor shall implement fugitive dust control measures as necessary during all phases of the

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work. Contractor shall be responsible for providing water for dust control measures. Dust control measures shall comply with any applicable rules and regulations.

### **3.12 RESTORATION**

All areas shall be returned to pre-construction conditions unless otherwise specified. Temporary improvements, controls, accesses, and other temporary facilities shall be removed and areas disturbed by the construction of these improvements and other construction activity shall be regraded and revegetated in accordance with Section 02820 SEEDING AND PLANTING upon completion of specified work unless approved by the Engineer. Areas disturbed by the Contractor in excess of the quantities identified in the seeding items in the Bid Tab shall be seeded by the Contractor at no additional cost to the Owner.

**--END OF SECTION 02220--**

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## **SECTION 02410 STEEL SHEET PILE**

### **PART 1 - GENERAL**

#### **1.01 SCOPE**

The work consists of furnishing and installing the steel sheet piling at the locations shown on the Plans.

### **PART 2 - PRODUCTS**

#### **2.01 MATERIALS**

Steel sheet piles shall conform to the requirements of ASTM A 328, A 572, or A 690. Fabrication of piles from shorter lengths of pile stock is not permitted. Sheet pile shall have a minimum thickness of 0.375" and a minimum effective section modulus of 25 in<sup>3</sup>/ft.

### **PART 3 - EXECUTION**

#### **3.01 SITE PREPARATION**

All excavation within the area to be occupied by bearing piles shall be completed before the piles are driven.

#### **3.02 PROTECTION OF PILE HEADS**

The heads of all piles shall be protected during driving by suitable caps, rings, heads, blocks, mandrels, and other devices.

The heads of steel piles shall be cut square and fitted with a steel driving cap.

Driving heads, mandrels, and other devices shall be provided by the contractor as needed for special types of piles and shall conform to the recommendations of the pile manufacturer.

#### **3.03 GENERAL**

The contractor shall notify the Engineer before pile driving operation commences. Such notice shall be far enough in advance, a minimum of 24 hours, to provide the engineer adequate time to be present for the driving operations. Piles shall be driven only in the presence of the Engineer or authorized representative.

The determination of piling order lengths shall be the contractor's responsibility unless otherwise specified.

Unless otherwise approved, piles shall be driven with steam, air, diesel powered hammers or a combination of hammers, or by vibration or water jets. Water jets may be used only when specifically authorized by the Engineer. Where jetting is authorized, the jets shall be withdrawn before the specified depth or bearing capacity is obtained and the piles shall be driven with the hammer to the final penetration.

When drop hammers are permitted, the height of drop shall not be more than 8 feet for concrete piles or 12 feet for steel and timber piles, unless otherwise specified.

The driving of piling with followers shall be allowed only when expressly approved by the Engineer.

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Piles shall not be driven within 20 feet of concrete less than 7 days after placement, including concrete placed in cast-in-place piles with or without predriven shells or casings.

The contractor shall not attempt to drive piles beyond the point of refusal, as indicated by excessive bouncing of the hammer or kicking of the pile.

### 3.04 SHEET PILES

The piling shall be driven in a manner that ensures perfect interlocking throughout the entire length of each pile. The piles shall be held in proper alignment during driving by assembling frames or other suitable temporary guide structures. Temporary guide structures shall be removed when they have served their purpose.

Anytime the forward edge of the sheet pile wall is found to be out of correct alignment:

- a. The piling already assembled and partly driven shall be driven to the required depth.
- b. Taper piles shall then be driven to bring the forward edge into correct alignment before additional regular piling is assembled and driven. The maximum permissible taper in a single pile shall be 0.25 inch per foot of length.

### 3.05 ESTIMATING BEARING CAPACITY

When load tests are not required, the bearing capacity of each pile shall be estimated using one of the following formulas, as appropriate:

Gravity hammers:

$$R = \frac{2WH}{S+1}$$

Single-acting steam or air hammers and diesel hammers having unrestricted rebound of the ram:

$$R = \frac{2WH}{S+0.1}$$

Double-acting steam or air hammers and diesel hammers having enclosed rams:

$$R = \frac{2H(W+AP)}{S+0.1} \quad \text{Or} \quad R = \frac{2E}{S+0.1}$$

Where:

R	=	safe bearing capacity, in pounds
W	=	weight of striking parts of hammer, in pounds
H	=	height of fall, in feet
A	=	area of piston, in square inches
P	=	pressure of steam, air, or other gas exerted on the hammer piston or ram, in pounds per square inch
E	=	the manufacturer's rating for foot-pounds of energy developed by double-acting steam or air hammers, or 90 percent of the average equivalent energy developed by diesel hammers having

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S = enclosed rams as evaluated by gauge and chart readings, in foot-pounds  
average penetration for the last 5 to 10 blows of a gravity hammer or the last 10 to 20 blows for steam, air, or diesel powered hammers, in inches per blow

These formulas are applicable when:

- The hammer has a free fall.
- The head of the pile is not crushed.
- The penetration is reasonably quick and uniform.
- There is no sensible bounce after the blow.
- A follower is not used.

Twice the height of the bounce shall be deducted from H to determine its value in the formula.

If case water jets are used in conjunction with the driving, these formulas are used to determine the bearing power from the results of driving after the jets have been removed.

### **3.06 LOAD TESTS**

When load tests are specified, the test loads shall be applied gradually, without impact, and in a manner that no lateral forces are applied to the pile. Load testing shall not be started until 24 hours after driving of the test pile is completed unless otherwise specified in section 14 of this specification. Except as otherwise specified, load tests shall be performed according to the following procedures.

The total test load shall be twice the specified working load and shall be applied to the pile in increments equal to 25 percent of the working load. Settlement of the top of the pile shall be measured to an accuracy of 0.01 inch before and after the application of each load increment and at 2, 4, 8, 15, 30, and 60 minutes after, and then every 2 hours until the next load increment is applied. Additional load shall not be applied until the rate of settlement is less than 0.01 inch in 1 hour.

The total test load shall remain on the pile for a minimum of 24 hours. Settlement shall be measured at 6-hour intervals during this period and at the end of the period, at least twice during removal of the load, and immediately after all of the test load is removed. The net settlement shall be measured about 24 hours after the total load has been removed.

If settlement continues in excess of 0.01 inch per hour under less than the total test load, no additional load shall be applied. However, the load that has been applied shall remain on the pile a minimum of 24 hours, and settlement measurements while the load is on the pile and during and after removal of the load shall be made as if it were the total test load.

### **3.07 CUTTING OFF PILES**

The contractor shall cut the piles at either the specified elevations or to match existing grade as indicated in the drawings. The length of pile cut off shall be sufficient to permit the removal of all damaged material.

### **3.08 DEFECTIVE PILES**

Any pile damaged in driving, driven out of proper location, driven below the specified cutoff elevation, or inaccurately cut off shall be corrected by one of the following methods, as approved by the engineer:

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- a. The defective pile shall be pulled and replaced or re-driven.
  - b. A new pile shall be driven adjacent to the defective pile.
  - c. The defective pile shall be spliced or built up or a sufficient part of the footing shall be extended to properly embed the pile.

Pile shells abandoned in place after driving shall be filled with concrete or sand-cement grout as appropriate to the conditions that are present.

All piles pushed up by the driving of adjacent piles or by any other cause shall be re-driven to final grade.

Any sheet pile ruptured in the interlock or otherwise damaged during driving shall be pulled and replaced.

### **3.09 CORRECTING SURFACE HEAVE**

Any excess material resulting from displacement of earth by pile driving shall be removed. Materials disturbed by pile driving shall be conditioned and compacted to a minimum density equal to adjacent undisturbed material.

**--END OF SECTION 02410--**

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## **SECTION 02820 SEEDING AND PLANTING**

### **PART 1 - GENERAL**

#### **1.01 SCOPE**

- A. This section specifies the requirements for establishing or reestablishing vegetation in the areas indicated on the Drawings and those areas disturbed during construction activities. All areas disturbed by the Contractor, whether or not they are in addition to those quantities on the bid tab and indicated on the Drawings, shall be seeded according to these specifications and as indicated on the Drawings. This section is to be used with the requirements contained within other related sections, including Sections 02220 EARTHWORK and 02950 EROSION CONTROL BLANKET.
- B. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

#### **1.02 REFERENCES**

- 3. The publications listed below form a part of this specification to the extent referenced. The publications are referred to in this section and others by basic designation only.

##### AGRICULTURAL MARKETING SERVICE (AMS)

AMS-01                      (Amended through: August 1988) Federal Seed Act Regulations (Part 201-202)

#### **1.03 SUBMITTALS**

- A. Manufacturer's Literature. Contractor shall submit copies of manufacturer's literature discussing physical characteristics, application, and installation instructions for erosion control material. Engineer's approval shall be required for erosion control materials.
- B. Certificates. Contractor shall submit copies of certificates certifying that materials meet the requirements specified, prior to the delivery of materials. Certified copies of the reports for the following materials shall be included:

Seed. Percent pure live seed, minimum percent germination and hard seed, maximum percent weed seed content, date tested, and if applicable, State certification.

#### **1.04 DELIVERY, INSPECTION, STORAGE, AND HANDLING**

- A. Seed shall be inspected upon arrival at the job site by the Engineer for conformity to type and quality in accordance with Paragraph 2.01 MATERIALS. Other materials shall be inspected for meeting specified requirements and unacceptable materials shall be removed from the job site.
- B. Materials shall be stored in areas that provide protection from damage. Seed shall be stored in a cool, dry location away from contaminants.
- C. Except for bulk deliverables, materials shall not be dropped or dumped from vehicles. Materials shall be handled so as to prevent damage.

### **PART 2 – PRODUCTS**

#### **2.01 MATERIALS**

- A. Topsoil

Topsoil shall conform to the requirements in Section 02220 EARTHWORK.

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B. Seed

1. State-approved seed of the latest season's crop shall be provided in original sealed packages bearing the producer's guaranteed analysis for percentages of mixture, purity, germination, hard seed, weed seed content, and inert material. Labels shall be in conformance to AMS-01 and applicable State seed laws.
2. Seed mixtures shall conform to the 2018 NDOT Roadside Vegetation Establishment and Management guidelines, unless otherwise specified or directed by the Engineer:
3. Seed Types:

**High Plains – FBD Mixture**

Species	Min. Purity (%)	Lbs. of PLS / acre
Canada wildrye (Mandan, Nebraska native)	85	4
Slender wheatgrass	85	4
Thickspike wheatgrass (Critana)	85	4
Western wheatgrass (Arriba, Barton, Flintlock, Rodan, Rosana)	85	4
Little bluestem (Camper, Cimarron, Pastura, Nebraska native)	60	2.5
Blue grama (NE, KS, CO, MN, SD)	30	0.75
Buffalograss (Bison, Cody, Sundancer, Texoka)	80	2
Sideoats grama (Butte, Pierre, El Reno)	75	4
Sand dropseed (Sporobolus cryptandrus)	90	0.3
Purple prairie clover (inoculated)	90	1
Blue flax (Linum lewisii)	85	1.5
Rocky Mountain bee plant (Cleome serrulatea)	85	0.5
Upright prairie coneflower (Ratibida columnifera)	85	1
Mexican red hat (Ratibida columnifera, red)	85	1
Oats (Jan to Aug) or Wheat (Sep to Dec)	90	14

FBD – Foreslope, Ditch & Backslope  
PLS – Pure Live Seed

4. Weed seed shall not exceed 0.5 percent by weight of the total mixture. Wet, moldy, or otherwise damaged seed shall be rejected. Mixture shall not include reed canary grass, smooth brome, and other invasive species.

C. Mulch

Mulch shall be straw mulch suitable for its intended use. Mulch shall be free from weeds, mold, or other deleterious materials

D. Water

Water shall not contain elements toxic to plant life.

E. Erosion Control Blanket (ECB)

ECB shall be as specified in Section 02950 EROSION CONTROL BLANKET.

**PART 3 - EXECUTION**

**3.01 SEEDING AND PLANTING TIMES AND CONDITIONS**



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- A. Seed shall be sown for planting from August 1 to September 15, unless recommendations of the seed supplier indicate that seeding can be completed outside these dates. If conditions allow, dormant planting may occur from November 1 – March 14. Seeding outside these dates or dormant seeding shall be approved by the Engineer prior to seeding.
  - B. Seeding operations shall be performed only during periods when beneficial results can be obtained. When drought, excessive moisture, or other unsatisfactory conditions prevail, the work shall be stopped when directed. When special conditions warrant a variance to the seeding operations, proposed times shall be submitted to and approved by the Engineer.

### **3.02 SITE PREPARATION**

- A. Grading

The Engineer shall verify that finished grades are as indicated on Drawings, and the placing of topsoil and the smooth grading has been completed in accordance with Section 02220 EARTHWORK. Any deviations shall be corrected prior to seeding.

- B. Tillage

Soil on slopes gentler than 3-horizontal-to-1-vertical shall be tilled to a minimum depth of 4 inches. On slopes between 3-horizontal-to-1-vertical and 1-horizontal-to-1-vertical, the soil shall be tilled to a minimum depth of 2 inches by scarifying with heavy rakes, or other method. Rototillers shall be used where soil conditions and length of slope permit. On slopes 1-horizontal-to-1-vertical and steeper, no tillage is required.

- C. Finished Grading

- 1. Preparation. Areas to be seeded shall be filled as needed or have surplus soil removed to attain the finished grade. Drainage patterns shall be maintained as indicated on the Drawings. Areas to be seeded that have been compacted by construction operations shall be completely pulverized by tillage prior to seeding. Soil used for repair of erosion or grade deficiencies shall conform to topsoil requirements specified in Section 02220 EARTHWORK. New surfaces shall be blended to existing areas.
- 2. Debris. Areas to be seeded shall have debris and stones larger than 3 inches in any dimension removed from the surface.
- 3. Protection. Finish graded areas shall be protected from damage by vehicular or pedestrian traffic and erosion.

### **3.03 SEEDING AND PLANTING**

- A. Prior to seeding, any previously prepared seedbed areas compacted or damaged by interim rain, traffic, or other cause, shall be reworked to restore the ground condition previously specified. Seeding operations shall not take place when the wind velocity will prevent uniform seed distribution.

- B. Equipment Calibration

Equipment to be used and the methods of seeding shall be subject to the inspection and approval of the Engineer prior to commencement of seeding operations. Immediately prior to the commencement of seeding operations, the Contractor shall conduct seeding equipment calibration tests.

- C. Applying Seed

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1. Drill Seeding. Seed shall be uniformly drilled using a drill approved or recommended by the seed supplier, to an average depth of 1/2 inch and at the rates specified using equipment having drills not more than 6-1/2 inches apart. Row markers shall be used with the drill seeder.
  2. Rolling. Immediately after seeding, except for slopes 3-horizontal-to-1-vertical and steeper, the entire area shall be firmed with a roller not exceeding 90 pounds for each foot of roller width. Areas seeded with seed drills equipped with rollers shall not be rolled.

D. Mulch

1. Mulching shall be performed on the same day as seeding. The Contractor shall use prairie hay fixed in place with mechanical anchoring on all slopes less than 3-horizontal-to-1-vertical. All slopes greater than or equal to 3-horizontal-to-1-vertical shall require hay mulch fixed in place with erosion control netting.
2. Mulch shall be spread uniformly at the rate of 2 tons per acre. Mulch shall be spread by hand, blower-type mulch spreader or other approved method. Mulching shall be started on the windward side of relatively flat areas or on the upper part of a steep slope and continued uniformly until the area is covered. The mulch shall not be bunched.
3. Immediately following spreading, the mulch shall be anchored to the soil by a scalloped-disk land packer designed to force mulch into the soil surface, or other suitable equipment approved by the Engineer. Mulch that is not anchored to the soil will be rejected.

**3.04 EROSION CONTROL**

Erosion control blanket (ECB), where indicated or required, shall be installed in accordance with manufacturer's instructions. Placement of the ECB shall be accomplished without damage to installed material or without deviation of finished grade.

**3.05 RESTORATION AND CLEANUP**

- A. Existing vegetated areas, pavements, and facilities that have been damaged from the seeding operation shall be restored to original condition at the Contractor's expense.
- B. Excess and waste material shall be removed from the planting operation and shall be disposed of off the site. Adjacent paved areas shall be cleaned.

**3.06 PROTECTION OF SEEDED AREAS**

Immediately after seeding, the area shall be protected against traffic or other use by erecting barricades and providing signage as required, or as directed by the Engineer.

**3.07 SEED ESTABLISHMENT**

Establishment of seed is included under General Condition #29 Guarantee of Work. The Contractor is responsible for establishment, monitoring, and watering the seeded area(s) as needed.

**-- END OF SECTION 02820 --**

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## **SECTION 02850 AGGREGATES**

### **PART 1 - GENERAL**

#### **1.01 SCOPE**

- A. This section specifies requirements for placing aggregate surfacing and base courses as specified and indicated on the Drawings. This section is to be used with the requirements contained within other related sections, including 02220 EARTHWORK.
- B. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

#### **1.02 REFERENCES**

- A. The publications listed below form a part of this specification to the extent referenced. The latest available edition, at time of issuance of these Specifications, shall be used. The publications are referred to in the text, in this section and other sections as applicable, by the basic designation only.

STATE OF NEBRASKA DEPARTMENT OF TRANSPORTATION (NDOT)

NDOT                      Standard Specifications for Highway Construction – 2007 Edition and subsequent updates.

#### **1.03 DEFINITIONS**

- A. Degree of Compaction

Unless otherwise specified, degree of compaction is a percentage of the maximum dry density obtained by the test procedure presented in ASTM D 698 abbreviated below as a percent of laboratory maximum dry density.

### **PART 2 - PRODUCTS**

#### **2.01 GRAVEL**

- A. Gravel for surfacing shall conform to the requirements specified in Section 1033 and Table 1033.07 in the NDOT Standard Specifications for Highway Construction.

#### **2.02 CRUSHED CONCRETE**

- A. #2 crushed concrete will be supplied by the URNRD at the location indicated on the Drawings.

#### **2.03 CRUSHED ROCK**

- A. Crushed rock shall conform to the requirements of Section 1033 and Table 1033.09 NDOT Standard Specifications for Highway Construction.

#### **2.04 GEOTEXTILE**

Geotextile shall be as specified in Section 02990 RIPRAP.

#### **2.05 WATER**

- A. Water used to wet material to obtain favorable moisture contents shall be clean and free

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of deleterious materials.

### **PART 3 - EXECUTION**

#### **3.01 SUBGRADE PREPARATION**

- A. Subgrade shall be reshaped to the typical cross section indicated in the Drawings. Scarifying, drying, reshaping, and recompacting shall be conducted as necessary to conform to the typical cross sections indicated in the Drawings and to comply with the compaction requirements specified.
- B. Subgrade preparation shall include adjusting grade lines to meet intersections, pavements, or any other physical features designated by the Engineer.
- C. In all areas to be surfaced, the upper 12 inches of the subgrade shall conform to the compaction requirements specified.
- D. Subgrade shall be compacted to a minimum of 95% of laboratory maximum dry density at a moisture content of optimum  $\pm$  2 percent.

#### **3.02 PLACEMENT OF AGGREGATE**

- A. Construction of aggregate stream crossing shall include placing 6 inches of #2 crushed concrete over geotextile on a prepared subgrade to form a base and the application of a 4-inch gravel surface over the #2 crushed concrete base to the widths and cross sections indicated on the Drawings.
- B. #2 crushed concrete shall be spread uniformly upon prepared subgrade. #2 crushed concrete shall be placed in 4-inch maximum lifts. Following placement, aggregate shall be spread into a uniform layer and compacted as specified below.
- C. Once the #2 crushed concrete base is in place, gravel material shall then be uniformly spread, followed immediately by compaction using an approved roller and water as required. Gravel surfacing shall be compacted with at least three full coverages of the designated roller or another compaction method approved by the Engineer.

#### **3.03 COMPACTION**

- A. Compaction Effort.

Aggregate surfaces shall be compacted with a minimum three full coverages of a 10-ton compression type roller or one full coverage of a 50-ton compression type roller for each 6-inch thickness of layer or fraction thereof, or another compaction method approved by the Engineer. Rolling shall be continued until further rolling does not increase the density of the base material. Other compaction methods shall be approved by Engineer prior to use.

- B. Moisture Control.

Contractor shall maintain workable moisture contents prior to and during compacting operations. Uniform moisture content shall be maintained throughout each lift. Contractor shall be responsible for furnishing water, as required, to achieve specified compaction.

- C. Compaction Equipment.

Equipment used for compaction of fill materials shall be appropriate for the job and adequate to obtain the specified densities. Contractor shall repair or replace any damaged structures or work resulting from compaction operations, at no additional cost to the Owner.

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D.      Compaction Testing

Compaction testing for aggregate crossings and other areas shall not be required unless, at the discretion of the Engineer, satisfactory compaction results are not being obtained by Contractor's construction methods. Contractor shall be responsible for the costs of all compaction testing reasonably requested by the Engineer.

E.      Irregularities

Any irregularities or depressions that develop during and subsequent to compaction activities shall be corrected by loosening the material at these places and adding, removing, or replacing material as required until the surface can be made smooth and uniform.

**3.04   TOLERANCES**

A.      Subgrade

A finished subgrade that is reasonably smooth, compacted as specified, and free from irregular surface changes shall be provided. The degree of finish shall be that ordinarily obtainable from blade-grader operations, except as otherwise specified. Finished subgrades shall be within a tolerance of 0.1 foot except where dimensions or grades are indicated or specified as a minimum and shall be completed to maintain slopes and drainages as indicated on the Drawings.

B.      Aggregate Surface

Aggregate surfaces shall generally conform to slope of the subgrade, be uniform and level. The thickness of the finished surface shall be as indicated on the Drawings.

**-- END OF SECTION 02850 --**

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## **SECTION 02950 EROSION CONTROL BLANKET**

### **PART 1 - GENERAL**

#### **1.01 SCOPE**

This section specifies requirements for furnishing and installing erosion control blankets. This section is to be used with the requirements contained within other related sections, including 02220 EARTHWORK and 02820 SEEDING AND PLANTING.

#### **1.02 PRE-QUALIFICATION OF MANUFACTURERS/SUPPLIERS**

- A. Erosion control blanket manufacturers/suppliers shall be pre-approved by the Engineer, prior to installation. Unless otherwise approved, manufacturers/suppliers shall, at a minimum:
  - 1. Have five years of experience as an erosion control blanket manufacturer/supplier.
  - 2. Have three years field experience with projects having similar applications of erosion control blankets.

#### **1.03 SUBMITTALS**

- A. All submittals shall be in accordance with Section 01300 SUBMITTALS.
- B. Submittals shall include those listed below as well as any specified elsewhere in these specifications.
  - 1. Manufacturer's and/or supplier's certification that products meet specifications.

### **PART 2 - PRODUCTS**

#### **2.01 EROSION CONTROL BLANKET**

- A. Erosion control blankets shall conform to the following material specifications:
  - a. The top and bottom blanket nets shall be heavyweight UV stabilized polypropylene with an approximate weight of 3.0 lbs. (±0.5 lbs.) per 1000 sq. ft.
  - b. The blanket itself shall be 70% (±5%) straw fiber with an approximate weight of 0.35 lbs. /sq. yd. and 30% (±5%) coconut fiber with an approximate weight of 0.15 lbs. /sq. yd.
  - c. Product longevity shall be approximately 18-24 months.
  - d. Approved products: North American Green SC150 or approved equal.
- B. Anchoring

Blanket staples shall be as recommended by the manufacturer but at a minimum shall be 8" x 1" x 8", 11 ga. wire staples.

#### **2.02 SUPPLIERS**

- A. Pre-Approved Suppliers:
  - 1. ACE Eaton Metals, 4740 East 39 Street, Kearney, NE 68847-9789. Phone: (308) 237-5173.
  - 2. Other approved by Engineer.

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## **PART 3 - EXECUTION**

### **3.01 INSTALLATION**

- A. Install erosion control blanket where indicated on drawings.
- B. Installation of erosion control blanket shall be according to manufacturer's instructions or the minimum requirements in paragraph B.1, whichever is more stringent.
- C. Minimum Requirements

Erosion control blanket shall be installed on the finished surface as shown on the Drawings. The top edge of the blanket shall be anchored in a 6" deep x 6" wide trench. Staple edge of blanket to side of trench. Staples shall be spaced at approximately 6". Backfill and compact trench after stapling. Blankets shall be rolled downslope, and adjacent blankets shall have a 3" to 4" overlap. Seams between blankets shall be stapled with an approximate 6" spacing between staples. Bottom edge of blanket shall be anchored 12" deep as shown in the Drawings. Staple spacing on face of blanket (non-seamed areas) shall be 3' horizontally (along side slope) and 3' vertically (downslope) for a density of approximately 1 staple/sq. yd.

**-- END OF SECTION 02950 --**

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## SECTION 02990 RIPRAP

### PART 1 - GENERAL

#### 1.01 SCOPE OF WORK

- A. This section specifies requirements for furnishing and placing riprap as indicated on the Drawings. This section is to be used with the requirements contained within other related sections.
- B. Contractor shall provide all labor, materials, equipment, and incidentals required to complete the work specified in this section.

#### 1.02 REFERENCES

- A. The publications listed below form a part of this specification to the extent referenced. The latest available edition, at time of issuance of these Specifications, shall be used. The publications are referred to in the text, in this section and other sections as applicable, by the basic designation only.

##### AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 3786	Hydraulic Bursting Strength of Knitted Goods and Nonwoven Fabrics-Diaphragm Bursting Tester Method
ASTM D 4354	Sampling of Geosynthetics for Testing
ASTM D 4355	Deterioration of Geotextiles from Exposure to Ultraviolet Light and Water (Xenon-Arc Type Apparatus)
ASTM D 4491	Water Permeability of Geotextiles by Permittivity
ASTM D 4632	Grab Breaking Load and Elongation of Geotextiles
ASTM D 4751	Determining Apparent Opening Size of a Geotextile
ASTM D 4833	Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products
ASTM D 4873	Identification, Storage, and Handling of Geotextiles

##### STATE OF NEBRASKA DEPARTMENT OF ROADS (NDOT)

NDOT	Standard Specifications for Highway Construction – 2007 Edition and subsequent updates
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#### 1.03 DEFINITIONS

- A. Degree of Compaction  
  
Unless otherwise specified, degree of compaction is a percentage of the maximum dry density obtained by the test procedure presented in ASTM D 698 abbreviated below as a percent of laboratory maximum dry density.

#### 1.04 DELIVERY, STORAGE, AND HANDLING

- A. Geotextiles



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1. Geotextiles shall be labeled, handled, and stored in accordance with ASTM D 4873 and as specified herein. Each roll shall be wrapped in an opaque and waterproof layer of plastic during shipment and storage. The plastic wrapping shall not be removed until deployment. Each roll shall be labeled with the manufacturer's name, geotextile type, lot number, roll number, and roll dimensions (length, width, gross weight). Geotextile or plastic wrapping damaged as a result of storage or handling shall be repaired or replaced, as directed. Geotextile shall not be exposed to temperatures in excess of 140 degrees F unless recommended by the manufacturer.
  2. No hooks, tongs, or other sharp instruments shall be used for handling geotextile. Rolls shall not be lifted by use of cables or chains in contact with the geotextile. Geotextile shall not be dragged along the ground.

#### **1.05 SUBMITTALS**

Submittals shall be made as specified in Section 1300 SUBMITTALS.

### **PART 2 - PRODUCTS**

#### **2.01 BROKEN CONCRETE RIPRAP**

- A. The URNRD has a supply of processed broken concrete riprap for use on this project at the location indicated on the Drawings.

#### **2.02 SALVAGED BROKEN CONCRETE RIPRAP**

- A. Broken concrete rubble located within the project site shall be removed and salvaged such that the material is reasonably well graded from largest to the smallest sizes.
- B. Salvaged material that meets the following specification shall be used first as part of bid item 8 with the remaining quantity coming from the URNRD stockpiles of processed material.
  1. No individual piece will have a volume greater than 3.5 cubic feet.
  2. No more than 10 percent of the riprap pieces shall have a volume of less than 30 cubic inches.
  3. Fifty percent of the riprap shall be composed of pieces with a volume less than 1,220 cubic inches.
  4. Each piece shall have no dimension greater than 3 times its least dimension.
- C. Control of the sizing shall be by visual inspection to verify that the concrete rubble is well graded and does conform to the maximum and minimum sizes specified.
- D. Salvaged
- E. Salvaged material that does not meet the specifications under Part B shall be hauled to and disposed of at the URNRD stockpiles of processed material.

#### **2.03 GEOTEXTILE MATERIAL**

- A. Geotextile material shall be of the type specified or shown on the Drawings or, when not shown on the Drawings, a product from the NDOT list of approved materials.
- B. Filter fabric shall be a continuous sheet of non-woven geotextile fabric consisting of long chain polymeric filaments or yarns such as polypropylene, polyethylene, polyester, polyamide, or polyvinylidene-chloride formed into a stable network such that the filaments or yarns retain their relative position to each other.
- C. The filter fabric shall be inert to chemicals commonly encountered in natural water and soil conditions.
- D. Except where otherwise specified or indicated on the Drawings, geotextile filter fabric for use beneath riprap shall be as listed below:

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1. Approved products
    - a. Mirafi 180N (TenCate Geosynthetics)
    - b. Geotex 801 (Propex, Inc.)
    - c. Terratex N07 (Hanes Geo Components)
    - d. Other applicable product from NDOT approved products list.
  - E. Submit manufacturer's specifications and certifications for material. The certificate shall also state the length and width of fabric supplied on each roll.
  - F. During all periods of shipment and storage, the filter fabric shall be protected from direct sunlight, ultraviolet rays, temperatures greater than 140 degrees F, and kept in its protective covering. If the filter fabric protective covering is damaged or removed, the filter fabric shall be immediately covered with an opaque tarp or moved to an indoor storage facility.
  - G. At the time of installation, filter fabric shall be rejected if it has been removed from its protective covering for over 72 hours, or has defects, tears, punctures, or shows deterioration or damage incurred during manufacture, transportation, or storage.
  - H. With prior approval of the Engineer, torn or punctured sections of filter fabric shall be repaired by placing a filter fabric patch over the damaged area prior to placement of material on filter fabric. The patch shall be large enough to overlap a minimum of two feet in all directions.

#### **2.04 SECURING PINS/STAKES**

- A. Securing pins used to secure geotextile shall be of the size and type recommended by the manufacturer unless otherwise specified.
- B. If used, wooden stakes shall be cut from standard 2x4 lumber, to length as recommended by geotextile manufacturer's instructions. Stakes shall be cut diagonally across the board flats to produce a triangular configuration. Wooden stakes shall be pressure treated.
- C. Unless otherwise recommended by the manufacturer, securing pins shall be steel or fiberglass formed as a "U", "L", or "T" shape or contain "ears" to prevent total penetration. Steel washers shall be used on all but the "U" shaped pins.

### **PART 3 - EXECUTION**

#### **3.01 INSPECTION**

- A. Prior to placement, verify that materials to be installed meet Specifications.
- B. Verify foundation and subgrade preparation has been completed as specified and approved by the Engineer.
- C. Verify geotextile fabric installation has been completed as specified and approved.

#### **3.02 GEOTEXTILE INSTALLATION**

- A. Surface/Subgrade Preparation
  1. Surfaces on which geotextile is to be placed shall be compacted and graded to the lines and grades as specified in Section 02220 EARTHWORK and as indicated on the Drawings. Remove all sharp or protruding objects from subgrade surface. The soil surface shall be graded reasonably smooth (no depressed, void, soft, or uncompacted areas) and free of loose rock and clods, holes, depressions, projections, or other foreign matter.
  2. The prepared soil surface shall be inspected by the Engineer prior to placement

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of the geotextile.

**B. Placement**

1. Install on the approved surface at the locations and in accordance with the details specified and indicated in the Drawings.
2. Install in accordance with manufacturers recommendations.
3. Geotextile shall not be placed until it can be anchored and protected with the specified covering within 48 hours.

**C. Repair**

1. Should the geotextile be torn or punctured or otherwise damaged, or the overlaps disturbed or displaced, Contractor shall repair damage and correct disturbances. Repairs shall be made in accordance with manufacturer's instructions.
2. If damage to the geotextile results in damage to the subgrade, as evidenced by subgrade pumping, intrusion, or grade distortion, the subgrade around the damage or displaced area shall be removed and restored to the original approved condition.

**3.03 PREPARATION OF SURFACE/SUBGRADE**

Slopes shall be trimmed to uniform grades as shown in the plans. All depressions shall be filled with suitable dry material which shall be thoroughly tamped or otherwise compacted to insure stability. Soft, unstable materials shall be removed and replaced with suitable material which shall be thoroughly tamped or otherwise compacted to insure stability. This work shall be executed carefully so that the finished earth surface will conform to the grades and slopes of the neat lines of the bottom surface of the riprap as shown on the plans. No raised places, bumps, or depressions will be permitted. Work shall be accordance with Section 02220 EARTHWORK.

**3.04 PLACEMENT OF RIPRAP**

- A. Approved material shall be dumped or otherwise placed in a manner as to produce a reasonable solid mass of material within the limits indicated on the Drawings or specified by the Engineer. All material shall be placed and distributed so that there are no large accumulations of either the larger or smaller sizes of riprap.
- B. Height of drop onto geotextile shall be limited to 18 inches.
- C. Any appreciable variation from the specified thickness of the riprap shall be corrected by redistributing the material.
- D. Salvaged riprap shall be used first with the remaining quantity coming from the URNRD stockpiles.

**3.05 TOLERANCES**

**A. Subgrade**

A finished subgrade that is reasonably smooth, compacted as specified, and free from irregular surface changes shall be provided. Finished subgrades shall be within a tolerance of 0.1 foot except where dimensions or grades are indicated or specified as a minimum and shall be completed to maintain slopes and drainages as indicated on the Drawings.

**B. Riprap Surfaces**

Riprap surfaces shall conform to slope of the subgrade, be uniform and level. Finished surfaces shall match surrounding surfaces. The thickness of the finished surface shall be

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as indicated on the Drawings. Any appreciable variation from the specified thicknesses or the specified finished elevations shall be corrected by the Contractor.

**-- END OF SECTION 02990 --**



Technical Specifications Prepared By:



Flatwater Group Project No. URNRD-2017-01  
July 2018

For the

**Upper Republican Natural Resources District**